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A framework for ethical data use to improve personalised customer experience in the financial industry in South Africa

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A thesis submitted in fulfilment of the requirements for the Master's Degree in Information Management in the Economic and Management Sciences Faculty of the University of the Western Cape

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January 2022

DECLARATION

I declare that “**A framework for ethical data use to improve personalised customer experience in the financial industry in South Africa** ” is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Zola Sillies

January 2022



ABSTRACT

The financial services industry deals daily with vast amounts of data. In this study, the researcher intends to investigate if data is used ethically for the purpose of analytics within this industry. The aim of this study is to determine if financial institutions have the means to manage ethical behaviour when analysing data that has been collected. As such, this study explores the awareness and governance around the ethical use of data within financial services. It also investigates how the relationship between customers and data analytics impacts their experiences, by exploring concepts of trust, transparency, and privacy of customer data. The study proposes a conceptual framework to support the ethical use of data, specifically in the financial services sector. This study uses a preliminary literature analysis that provides insight into the topic of the ethical use of data for analytics, as well as an analysis of existing data ethics frameworks literature to develop a proposed data ethics framework. Through an interpretive paradigm, this study aims to guide the use of customer data across financial services institutions. Using a qualitative approach, this study uses an open-ended interview guide to collect data from employees of financial institutions. Subsequently, the data is analysed using a Thematic Analysis approach, which involves identifying themes from patterns presented in the data. Moreover, the findings from this study are measured against the developed conceptual framework to determine if there was a gap between the case study (the financial services organisation) and that of the proposed conceptual framework. The findings from this study suggest that the financial services organisation should improve their level of awareness within their organisation. It is evident that the ethical use of data was not clearly defined within their policies. In addition, the findings reveal that the financial services organisation's data strategy principles should be inclusive of ethical data use as they only had a data strategy that focused on the implementation of cloud strategies and kept high level concepts regarding data use. Lastly, this study concludes with recommendations made for future research.

A framework for ethical data use to improve personalised customer experience in the financial industry in South Africa

Zita Kim De Villiers

KEYWORDS

Data Analytics

Data Ethics

Personalised Customer Experience

Customer Analytics

Data Ethics Frameworks

Artificial Intelligence Ethics

Financial Services Industry



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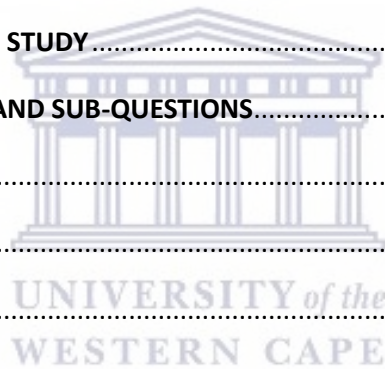
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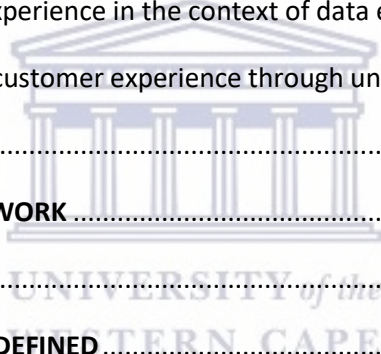
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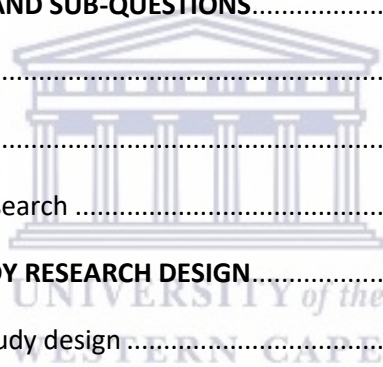
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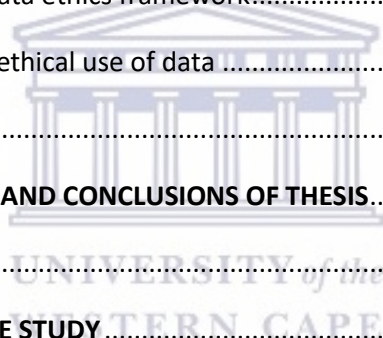
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LIST OF ABBREVIATIONS

Abbreviation	Full Description
IT	Information Technology
IS	Information Systems
AI	Artificial Intelligence
EU	European Union
POPI	Protection of Personal Information
GDPR	General Data Protection Regulation

DEFINITIONS OF KEY CONCEPTS

Concept	Description	Source
Digital economy	Digital economy refers to the influence of digital technology on patterns of consumption and manufacture. Specifically, it is goods and services offered to consumers.	(Armstrong, 2020)
Framework	In this study, framework refers to “a network, or a plane, of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena, provides an empirical basis for future recovery-oriented research and practice”.	(Leamy et al, 2011:445)
Data Governance Framework	In this study, data governance can be defined as the procedures and policies adopted by organisations to assist with managing their data. It can therefore be utilised to develop a framework to manage information and data within the organisation.	Abraham et al. (2019)

Customer Data	Customer data can be defined as the personal and behavioural information about a customer. The information is collected by organisations to make better decisions, improve communication, and understand their customer better.	(Deshpande, 2020)
Regulations	Regulation refers to the implementation of certain rules that is legally binding and created by government, which intends to shape the behaviour of firms and individuals.	(Orbach, 2016)
Ethical behaviour	In this study, ethical behaviour refers to the ethos of human values that defines the character of an individual, based on their morals. These values and morals of an individual influences the decisions that the individual makes.	(Krishnaveni & Raja, 2020)
Dark Data	Dark Data can be defined as the information organisations gather, process and store. However, it fails to use it for the purpose it was intended for. Dark data can thus compromise organisations information assets.	(Gartner, 2021)
Customer Analytics	Customer analytics can be defined as gathering personal data of a customer and using that to identify patterns in customer behaviour. From the data collected, organisations can identify various insights about customers to optimise the experience of the customer.	(Sauro, 2015)
Organisation/ financial services	Financial Institutions can be defined as an entity that provide various financial services and products to customers.	(Donohoe, 2021)

CHAPTER 1: THESIS INTRODUCTION

1.1. BACKGROUND AND RATIONALE FOR THE STUDY

The use of data for analytics is significant for many organisations, especially customer data, as these institutions utilise the data to improve their relationship with their consumers through observing trends and related patterns (Kopanakis, 2018). Having access to such vast amounts of data creates challenges for these financial institutes to compete within the digital economy, particularly when trying to improve the experiences of consumers, as these institutes need to stay relevant in terms of their technology use whilst keeping in mind their institution's regulations (Ball, 2017). Therefore, organisations need to ensure that when data is collected, consumed, or shared with external third parties, it is subjected to the right rules. Furthermore, transparency around the ethical use of data is important as it enables organisations to improve their decision-making while simultaneously enabling customers to feel safe when providing their data (Richards & King, 2014).

According to Luciano and Mariarosaria (2016), many of the issues arise when data needs to be analysed for organisational use. Hence, if data is not utilised ethically, it could result in problems for organisations such as penalties, large fines, and damage to the organisation's overall credibility (Zeiger, 2019). This could potentially threaten the legitimacy of the organisation as well as its interactions with shareholders and consumers. Thus, organisations need to be ethical with their use of data (Herschel & Miori 2017). Furthermore, many financial institutions are also questioning how the use of artificial intelligence (AI) can be governed within their organisation, by trying to identify how to best leverage their technology to align with their financial institution's ethics and brand (Finextra, 2018).

According to Federwisch (2015), the issues of data usage within the financial services industry impact both the organisation and consumers. Many consumers are under the impression that the financial services industry does not use data ethically due to the misconception that this sector is large. Similarly, Alveraz (2017) also suggests that for organisations to gain the trust of customers they need to be able to build and maintain trust. Wyman (2018) further claims that due to the advancement of technology, organisations can improve how they collect data from customers. Furthermore, organisations are collecting rich sets of data such as consumers' personal, financial, social, and location data which poses security concerns. At times, consumers remain naïve as they are unaware that such data is being collected and what the data sets could be used for. Therefore, the data being collected could be manipulated to steer consumers' behaviour without their knowledge of this (Swapna, 2018).

Utilising customer data unethically causes many challenges for the organisation, such as regulatory fines and financial losses. Organisations thus need to make sure that they have various practices in place to ensure ethical collection and use of customer data as it is the “oil of the digital age” (Funk, 2019). Moreover, to provide customers with personalised experiences, these organisations need to ensure that they provide their consumers with services that are frictionless across all of their devices, channels, and platforms (Smith, 2018). Consumers expect these institutions to utilise their data ethically and to protect it. Furthermore, data can transform the relationship between a customer and the organisation (Esendex, 2018). In light of this, the current study intends to understand how the ethical use of data for analytics could enhance customer experience.

This research explores and contributes to the body of knowledge which focuses specifically on data analytics, data ethics, and the Information Technology context. The researcher specifically focuses on how the use of data analytics within financial services can be used to improve personalised customer experiences, by ensuring that the utilisation is ethical. Furthermore, the researcher intends to explore if financial institutions within South Africa require a combined data ethics framework or if their current frameworks take into consideration the proper ethical use to provide customers with personalised experiences digitally. Thus, for this research project, data ethics is viewed in the context of the digital customer personalisation experience and the use thereof.

1.2. PROBLEM STATEMENT

The need for consumers to be aware of the use of their data is increasing rapidly due to changing digital market environments. Additionally, financial institutions are realising that consumers are becoming more discerning in terms of services and products provided. This poses concerns within the industry about adherence to regulatory requirements and the consistent implementation thereof, given the range of products that these institutions offer. There is agreement in the literature that governance in this industry, particularly concerning the rules and standards on technology, algorithms, and data integrity, need to be strengthened. The problem identified in this study is that there is a lack of governance frameworks within financial services in South Africa, specifically regarding the ethical use of customer data. In addition, the awareness within these organisations regarding employee conduct when using customer data to improve personalised customer experiences, is uncertain. Lastly, the way in which the researcher identified these problems could be mitigated is through the proposed conceptual framework: (1) social privacy contract, (2) ethical conditions, and (3) cultural change. Chapter 3 provides a detailed description of the proposed framework.

1.3. AIMS AND OBJECTIVE OF THE STUDY

The aims of this study are to:

- establish ethical conduct around the use of data for customer analytics within financial services,
- investigate how customer experience can be personalised digitally through data analytics, and
- establish whether customer experience is affected by the ethical use of data in analytics.

The objectives of the study are to:

- determine if financial institutions have defined frameworks/ policies in place that govern the ethical use of data,
- develop a conceptual framework that can be utilised to assess the organisation level of the ethical use of data analytics within financial services in South Africa, and
- use the conceptual framework as a guide that measures if these organisations ensure the ethical use of data when improving personalised customer experiences.

1.4. MAIN RESEARCH QUESTION AND SUB-QUESTIONS

The main research question addressed in this study is:

What are the factors affecting ethical data use when improving personalised customer experience within financial services?

The three sub-questions that were formulated and used as a guide for the data collection process are:

1. What are the current data policies on the use of data for customer analytics?
2. What is considered ethical behaviour around the use of data for customer analytics?
3. How does data ethics impact analytics when providing personalised customer experience in the financial industry in South Africa?

1.5. RESEARCH METHODOLOGY

This study is situated within an interpretive qualitative research paradigm. Pham (2018) states that the interpretive qualitative research paradigm focuses on obtaining a deeper understanding of the current phenomenon, taking into consideration the various complexities instead of generalising an understanding for the entire population. Paradigms can thus be defined as different ways in which the world is viewed and how it forms the foundation of the research being undertaken (Davies & Fisher,

2018). Furthermore, this paradigm focuses on the context of the qualitative findings, which are extracted through a co-construction between the researcher and research participants (Guba & Lincoln, 1994). However, Frechette et al. (2020) indicate that even though qualitative research rests on a different paradigm, which is the constructivist paradigm, interpretive phenomenology is different in its research tradition through its distinctive understanding of being (presence- participant or researcher).

Aspers and Corte (2019) state that qualitative research is considered an iterative process, which enhances the comprehension of the scientific community. Similarly, Holloway and Wheeler (2010) adds that the qualitative approach suggests that social phenomena and other human experiences are context situated, which indicates that they cannot be free from location, mind, or time of the human factor. Moreover, Günbayi and Sorm (2018) claim that complete neutrality and objectivity are unfeasible to gain, as the values of the research participants become represented in the research.

Due to the qualitative nature of this study's research questions, the best approach was to appropriately select an interpretive qualitative research paradigm. This study, emerging from a Social Sciences discipline, aimed to gain an in-depth understanding of the ethical use of data within financial services and the complexities associated with understanding data analytics, regulations, and how this impacts the customer experience. Furthermore, this study is set out to contribute towards existing literature executing a qualitative approach. The qualitative research approach is detailed further in Section 4.5.

1.5.1. Research Design

There are many research designs used in qualitative research, such as case studies, ethnography, experiments, and surveys (Lincoln and Guba, 1985; Robson, 1993; Silverman, 2011). These research designs each have their own paradigms, approaches, and purposes, and due to the different nature of each, scholars have identified various ways in which the qualitative studies can be executed (Cohen et al. 2011; Gaus, 2017). Moreover, Hammarberg, Kirkman, and de Lacey (2016) comment that qualitative methods are utilised to answer various questions relating to meaning, perspective, and experiences. This method provides the researcher with insight into the problem, where the researcher can identify trends in opinions and thoughts and provides a basis to dive deeper into the phenomenon.

The research design used for this project was a case study. According to Babbie & Mouton (2001), an ethnographic research case study design is qualitative, and provides the researcher with an in-depth description of case studies less than 50. Similarly, Rule and John (2011), add that case study designs is a popular approach as it enables the researcher to construct and develop an in-depth understanding

of a particular entity, event, or situation. Applying the understanding of the use of case studies, the researcher was able to gain an in-depth understanding of the organisation's data analytics and ethics in the context of its actual environment. This enabled the researcher to further understand what the organisation currently had in place for data governance and how they manage ethical use of data within their organisation whilst trying to improve the experiences of their customers. A detailed description of the case study design is provided in Section 4.6.

1.5.2. Research Site

The research site that was used for this study was a financial services organisation based in Cape Town, South Africa. The organisation has a large Information Technology (IT) business unit, which made it easier for the researcher to obtain access to the different levels of employees and to include a range of opinions from a managerial to a specialist level. The organisation that was utilised as the research site is considered well-renowned in the financial services industry. An in-depth description of the research site is provided in Section 4.7.1.

1.5.3. Research Participants

The study used a non-probability, purposive sampling method, which is also known as selective or judgement sampling (Floyd et al., 2018). Purposive sampling entails selecting participants subjectively, where those selected are based on the judgement of the researcher (Ayhan, 2011). The main outcome for purposive sampling is to focus on specific attributes of a population that can best answer the research questions (Rai and Thapa, 2015). Etikan and Bala (2017) add that the purposive sampling technique can provide the researcher with the best information to achieve the set objectives for the research study. Moreover, Bhardwaj (2019) states that those selected for the study through this technique will have appropriate knowledge and understanding of the subject matter.

In light of the above, purposive sampling was deemed most suitable for this study as it is based on personalised customer service experience within the financial services industry. As such, these analysts are most suitable to answer the questions for this study as they deal with customer data and organisational data. These analysts also have knowledge regarding the ethical use of data as they work with data on a daily basis. Lastly, these analysts are able to address any issues regarding whether or not data is utilised ethically to improve their customers' experiences. A detailed description is provided in Section 4.7.2.

1.5.4. Data Collection Instruments

The data collection instrument that was used for this study was semi-structured interviews. These interviews were directed using an interview schedule, which is a set of questions that have been formulated by the researcher to guide the interview process (Luenendonk, 2016). Questions were formulated based on the main and sub-research questions and were guided by the literature that is detailed in Chapter 3 (Conceptual Framework). Furthermore, the data ethics framework informed the researcher of the type of questions to develop, as it was the basis for determining if the selected organisation for this research was meeting the objectives of the study. Further detail is provided in Section 4.7.3.

1.5.5. Data Analysis Process

The interview questions prompted participants to provide detailed, descriptive responses and, as such, the data gathered from this study was qualitative. The interview questions that were used in this study can be found in Appendix C. Richards and Hemphill (2018) state that qualitative data analysis is the process that supports the researcher to obtain a nuanced and in-depth understanding of the identified phenomenon. Elliott (2018) adds that as part of the qualitative data analysis process, coding is a fundamental aspect as the researcher analyses qualitative text data by grouping them and taking them apart to identify what they yield before constructing the data in a meaningful way.

Furthermore, the researcher conducted a thematic analysis to analyse the data in this study. According to Caulfield (2019), a thematic analysis is used as a method to analyse qualitative data and is usually applied to interview scripts and various sets of texts, where common themes are identified such as, ideas, patterns and various meanings within the data. Mortensen (2020) further states that another advantage of using this method is that it is considered flexible, which suggests that it could be utilised in both explorative and deductive studies. A detailed description is provided in Section 4.7.4.

1.6. ETHICAL CONSIDERATIONS

Ethical considerations concern the well-being of participants (Bryman & Bell, 2007). Permission to conduct the study was obtained by receiving ethical clearance. All information received from participants was treated ethically by taking the following considerations into account.

a) Voluntary participation and consent

According to Dankar et al. (2019) having informed consent refers to full disclosure of the intended nature of the study and the required involvement of the participant. Bhupathi and Ravi (2017) agree

that participants need to have an in-depth understanding of the information regarding the risks, benefits, and procedures that may occur during the study. For this study, all participants were notified that their participation was completely voluntary and that they may withdraw at any point, without any consequences. Participants were also not deceived or persuaded into providing any information that they are not comfortable sharing and were required to provide their explicit consent before participating in the study.

b) Confidentiality

According to Crow and Wiles (2008), confidentiality and anonymity of participants are significant to the ethical practices within social research. Researchers aim to reassure participants that their data cannot be traced back in any form. Stiles and Petrila (2011) further state that maintaining the confidentiality of the participants and their data is mandatory to any research process. For this study, the researcher ensured that all information received from participants remained confidential and anonymous. As such, the names of the participants and the organisation were not disclosed.

c) Honesty, integrity and trustworthiness

According to Korstjens and Moser (2018), confidence needs to be placed in the research findings. Specific care was taken during this study to ensure that the data received from participants was correctly interpreted. Petrova et al. (2016) adds that building a trustworthy relationship between the participant and researcher is essential when conducting qualitative research, as this contributes towards authenticity. For this study, the researcher ensured that they uphold their core values of integrity, honesty, and trustworthiness throughout this study. The researcher also ensured all participants had a clear understanding of the intent of this research, which is solely for academic purposes.

d) Validity

Validity is referred to the accuracy of the research data (Yilmaz, 2013). Furthermore, “qualitative validity means that the researcher checks for the accuracy of the findings by employing certain procedures, while qualitative reliability indicates that the researcher’s approach is consistent across different researchers and different projects” (Rose and Johnson, 2020: 4). For this study, the researcher ensured that conclusions made in the study correlates to questions that were initially posed to participants. Additionally, the researcher ensured that the research methods used within the study corresponds with the research questions being posed.

1.7. SIGNIFICANCE OF THIS RESEARCH

The financial services industry has been under pressure to ensure that businesses are compliant with government regulations. At the same time, data analytics and technology has disrupted the financial services industry, making it more challenging for this industry to keep abreast. Furthermore, the use of data analytics in the context of ethics has always been top of mind for this industry. This study is therefore relevant as it unpacks the different factors affecting the ethical use of data and how data analytics is impacted with all the regulatory effects when trying to improve the experiences of their customers.

This study furthermore contributes towards a data ethics framework that could be adopted by financial services organisations, as the framework development is constructed in a way that covers all principles deemed relevant for using data ethically to improve the experiences of their customers digitally. The study aims to guide the financial services industry on how to improve ethical customer data governance.

1.8. THESIS STRUCTURE AND CHAPTER LAYOUT

Within this thesis, there are 6 chapters. A brief overview of these 6 chapters is provided below.

Chapter 1: Introduction

The introductory chapter provides the context for the study and why the researcher deemed this topic significant. The chapter highlights the background to the research problem, the problem statement, the aims and objectives of the study, the methodology that was used, and the ethical considerations.

Chapter 2: Literature Review

The literature review provides context into data analytics, data ethics (the importance and challenges thereof), and the ethical use of data analytics within financial services industry. The chapter ends with an overview of the impacts of data analytics ethics on customer experience.

Chapter 3: Conceptual Framework

Chapter 3 details the importance of data ethics frameworks, the challenges of not having a data ethics framework, the current data ethics frameworks in South Africa and internationally, and the gaps between local and international frameworks. Additionally, the chapter details the data ethics

frameworks that was excluded from the proposed framework and the reasons for this. Finally, the chapter provides detailed context on the principles selected for the proposed framework.

Chapter 4: Research Methodology

This chapter covers the research methodology executed for the research conducted. It provides insight into how the researcher selected the research methodology, by understanding the various research paradigms. The chapter further details the data collection methods and the approach to the analysis that was used to transform the data into meaningful information, which is detailed in the preceding chapter.

Chapter 5: Analysis and Interpretation of data

The data that was collected from this study is discussed in this chapter. With the method used for the data collection instrument, the researcher unpacks the results in a meaningful manner. The findings are depicted in a way that is matched against the principles identified in the conceptual framework (proposed in Chapter 3), and against the objectives and research questions of this study. Lastly, the researcher was able to determine gaps identified in the case study organisation.

Chapter 6: Recommendations and conclusion of the thesis

The final chapter concludes this thesis by providing the limitations of the study, with recommendations on how future research can be conducted.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

This chapter will examine and outline the available literature relating to factors affecting the ethical use of data analytics to improve customer experience. It will provide a discussion of the concept and challenges of data analytics. The chapter will also present an overview of the state of the ethical use of data ethics and discuss the concept of data ethics in the chosen industry for this study and how it is overall managed.

The researcher will detail the importance and challenges of personalisation, resulting in an overview of ethical practices utilised as a basis for this study. Thereinafter, defining the ethical use of data currently for this study, and providing an overview of the challenges and importance of data ethics within Financial Service Industry. Lastly, the challenges of improving customer experience through unethical use of data will be pointed out.

2.2. OVERVIEW OF DATA ANALYTICS

2.2.1. Concept of Data Analytics in Financial Services Industry

According to Chiusano, Cerquitelli, Wrembel et al. (2021), data analytics can be defined as the process of analysing data through analytical processing techniques and algorithms. Since big data analytics enable organisations to obtain valuable knowledge, which stemmed from the era of the fourth industrial revolution (Vassakis, Petrakis, and Kopanakis, 2018), it permitted great change for digital technology. Therefore, this context defines data science as the collection of primary principles that promote knowledge and information gaining. Similarly, Sanchez-Pinto and Churpek (2018) confirm that these principles provide support and guidance through analysis. Moreover, Chakravaram, Srinivas, and Ratnakaram (2019) suggest that data science enables organisations to make better decisions using analytics, where this approach to data analysis can be considered forward-looking and exploratory. Furthermore, data analytics can be interpreted as the mechanism utilised in data science (Goyal et al. 2020). Data analytics thus be defined as a process of analysing data to draw results about the various information it contains with the use of specialised systems (Khan, 2017).

According to Wang, Kung, and Bryd (2018), the history of data analytics can be linked to the data science research area. The term big data was first used in 1997, by David Ellsworth and Michael Cox, who presented a paper at an Institute of Electrical and Electronic Engineers (IEEE) conference, discussing the challenges and the visualisation of data for computer systems (Cox and Ellsworth, 1997). Press (2013) adds that data analytics emerged as a key area responding to the need of

businesses to make sense of a vast amount of data. Although making sense of data has been discussed by many, the evolution of data analytics emerged once users understood how to best utilise data analytics to their advantage. Institute Data (2020) reports that the overall rise of data analytics within the financial services industry only started making significant headway just after the financial depression occurred. Furthermore, Marr (2015) adds that analysing and storing data goes as far back as starting with simple tasks of tallying sticks. Schmidt, Drews and Schirmer et al. (2018) affirm that big data is growing rapidly due to the major shift within the various technologies used to analyse the data. Therefore, over the years, many organisations have embraced the concept of data analytics as it aids them with making informed decisions (Miyazaki, 2015).

Currently, data analytics can assist financial institutions in providing products and services through predictive analytics. It can provide these organisations with insight and context regarding their consumers (Zsurzsan, 2017). Anshari et al. (2019) explain that various social platforms can assist these organisations in understanding and obtaining information about their customers, such as preferences and expectations. However, these institutions need to ensure that they use data analytics to their benefit in an ethical way.

Financial institutions can be considered one of the first users and champions of data analytics. Having data analytic functions is perceived by these institutions as a commodity, as it enables them to draw better insights regarding their industry (Bansal, 2019). According to Institute Data (2020), the financial services industry was forced to deal with the change in the current digital climate and to improve their processes due to the way in which data analytics developed within this industry. Another way in which data analytics has been making headway within the financial services industry was by utilising these analytics to their advantage to yield revenue increases by looking at their customer's financial situation, information, and spending patterns (Singla, 2020).

Keary (2019) notes that data analytics within the financial services industry provide these businesses with a means to better their fraud and privacy protection strategies by being able to detect unusual activity through their customer data. Sinha (2018) adds that due to these businesses recording millions of transactions daily, data analytics enable them to have a platform to process this data. Ajmani (2020) further explains that by using sophisticated analytical techniques, businesses will be able to predict customer behaviour, develop strategies and provide a safer customer experience overall.

Data analytics can further aid these businesses to create better business models. Through their customer analytic capabilities, these businesses can establish better business models that would compete with other financial institutes (Garg et al. 2017). Ajmani (2020) adds that data analytics can

be considered a crucial factor for what the modern financial services industry offers and could enable them to provide their products more efficiently through technology.

Lastly, Fintech businesses are actively embracing the use of data analytics and the overall benefit it provides in terms of their customer experiences and their services (Ajmani, 2020). Prieto and Hussain (2016) add that the introduction and use of data analytics can bring many opportunities, improved customer experience through digitalised products and services, improved levels of customer insight, better privacy, and fraud detection capabilities. It is also important to note that data analytics has contributed tremendously to the shift in technological and behavioural change. Not only does data analytics provide financial institutions with opportunities, but it also enables this industry to adapt to the new digital landscape (Grygoriev, 2020).

2.2.2. Challenges of data analytics in financial services industry

Some of the challenges of data analytics are related to the collection and processing of data. These two stages could impact individuals' privacy as they might not be aware of what the data is being utilised for (Marjani et al., 2017). Similarly, Kruse, Wunderlich, and Beck (2019) adds that challenges relating to the processing and collection of data could be due to a lack of quality training, which prohibits further Artificial Intelligence (AI) adoption, and which ultimately prevents financial services from being able to utilise AI enhanced products or solutions. Moreover, Kochupurakal (2020) states that not having awareness or understanding of the analytics used to collect and process data could mean that "good data quality is the biggest hindrance in implementing big data analytics" (Ravi and Kamaruddin, 2017:24).

Webb (2018) further suggests that with the vast amount of data that is available, it becomes challenging to identify which data should be focused on while ensuring that it is done ethically. Therefore, for organisations to overcome these challenges associated with data analytics, they need to ensure that they adopt a framework to ethically use data within the organisation.

The ethical use of consumer data has been a significant focus for a while. UK Finance (2019) reports that the financial services industry still needs to evolve fully in terms of data protection, regulations including confidentiality, and various privacy rules. Although data analytics has become a vital part of everyday life, with the use of high-profile systems to assist with human interaction, these systems still require governance in terms of ethical guidelines, policies, and principles. Furthermore, Ray (2019) claims that even though one of the biggest priorities for financial institutions is to know their customer, especially in the digital age, it is evident that collecting too much data and not making sense

of it could create a challenge. Therefore, these financial institutions need to ensure that they collect data that are relevant to improving the customer's experience.

Keary (2019) states that a concern faced by the financial services industry relates to the fact that data analytics is not always stable, due to data analytic programs sometimes struggling to differentiate between false-positive transactions and fraud. This could occur when the customers are using their financial products (Credit Cards) to checkout (Vassilev, Donchev, and Tonchev, 2021). As a result, these customers will be scrutinised because of stringent security measures.

Another challenge for these institutions is that due to the rapid speed of technology advancements and customer expectations, it is difficult to leave those huge amounts of data idle. Therefore, many of the institutions make use of various big data techniques, whereas many are still lagging and unable to compete (Lochy, 2019). In support of this view, Gyarmathy (2020) claims that the main challenge is trying to leverage off the best customer data. Securing the necessary processes, infrastructure capabilities and resources can however be a challenge for smaller financial institutions. This ultimately results in these institutions not being able to handle the demands of data analytics software.

Ajmani (2020) argues that analytics is a challenge for these financial institutions, and states that during the year 2020, many of these institutions were collecting data but not using it, which is referred to as "dark data". This means that these organisations collect data for regulatory compliance reasons that might become useful in the future. Furthermore, storing "dark data" could potentially be dangerous for these institutions as it saves identifiable personal data for future scenarios.

Prieto and Hussain (2016) confirms that even though these financial institutes collect vast amounts of data through big data technology and analytical methods, they need to ensure that they have specific purposes of and intent with the data that they receive. Lastly, Sun et al. (2020) concur that even though these analytical techniques provide better insights into customer behaviour and patterns, the goal of data collection should solely be based on why it was collected.

2.2.3. Challenges of personalisation through data analytics in financial services industry

In many instances, financial services aim to be the best at personalisation of customer experiences of product offerings, but at the same time, they want to ensure that they are lawfully achieving this. Analytics Insights (2020) reports with all the changes occurring in how data can be collected, customer expectations have started to become a significant factor, especially as these interactions are becoming entirely digital. Customers expect high quality, customer-centric experience across all channels.

Therefore, these institutions need to ensure that they leverage all customer data in the best way possible (Lochy, 2019).

According to Wakefield (2021), COVID-19 poses a great opportunity for financial institutions to become digital and to create significant changes in the way that they operate, especially considering the rate at which technology accelerates. However, these financial firms are still struggling in response to the disruption as they were not necessarily prepared. As a result, these firms need to invest in technologies and platforms that deliver personalisation and improve customers' experiences (Waters, 2018). Furthermore, Analytics Insights (2020) reports that another potential challenge for these firms have to do with a large amount of unstructured data being collected and used within big data technologies, which can become difficult to interpret, and which may become time-consuming.

Although there is demand for personalisation, many financial firms need to tread carefully as customers are still protective of their data (Marous, 2018). Moreover, organisations need to ensure that they make every effort for their customers to understand that privacy is a core factor. This has challenged the privacy needs of the customer to be mitigated, as these privacy issues lie at the heart of what will break the trust of the customer in the business. These firms should also ensure that their data governance and policies around privacy are extensively executed (Boudet et al., 2019). Linchpin (2021) suggests that when privacy issues and information breaches occur, regulations and compliance necessities create more boundaries as a result coupled with the consumer's needs that are constantly changing. Therefore, these firms must comprehend and anticipate their customers' expectations.

2.3.OVERVIEW OF DATA ETHICS

2.3.1. Data ethics defined

The concept of data ethics can be defined as the study of moral issues that are related to data, which includes all facets such as, sharing, using, recording, and processing (Floridi and Taddeo, 2016). Hasselbalch and Tranberg (2016) further describe data ethics as an "action-orientated analytical framework" that is concerned with decision making in the "big data society" (Hasselbalch, 2019). In addition, Novak and Pavlicek (2021) define data ethics as a branch that focuses on decision making relating to data (recording, processing, use and sharing, and algorithms (Artificial Intelligence), to support and formulate morally good outcomes (right values/ conduct).

Moreover, another concept relating to data ethics is computer ethics. Moor (1985: 266) describes computer ethis as the "analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology." Johnson

(1985) adds the way to understand the relationship between computer technology and ethics, is by acknowledging the close relation of computer technology and human action. Moor (1985) further states policies should be implemented to assist individuals and, their actions when using computer technology, where both social and personal policies are taken into consideration to ensure the ethical use of computer technology. Furthermore, Stahl (2021) states although computer ethics continues to be a focus, the dynamics regarding the ethical use of digital technology have changed significantly from 2010, when Artificial Intelligence gained traction internationally.

Moreover, when organisations consider both data ethics and consumers in having a personalised experience, the main aim would be to ensure that they build a relationship with those customers. By doing so, customers will feel more at ease when giving their personal information and will trust that their information will be protected. Therefore, if consumers understand why they are being asked specific questions, they are more likely to trust the organisation (Techradar, 2019). Having said that, customers do realise that their data is being collected by them leaving a digital footprint. Many organisations can influence the products served and their experiences (Acxiom, 2019). Furthermore, Richards and King (2014) concur that many elements of data ethics need to be considered, such as privacy around the use of personal data, and transparency. If these elements are not considered, it could compromise the reputation of the institution (Jacikevicius, 2016).

2.3.2. Data ethics within financial services industry

The challenges that organisations face regarding data ethics are often linked to the collection and use of large amounts of data obtained. Although data collected enables organisations to complete their analysis and use the information to their advantage, it could lead to the same data being compromised due to poor ethics (Herschel and Miori, 2017). Furthermore, the complexity around collecting and analysing the data can become significantly challenging for organisations if not done correctly (Liebert, 2018). This could put the organisation in a position where their data gets misused, which could impact the overall state of the organisation. Herschel and Miori (2017) also state that big data is utilised to manipulate and target various individuals to behave in a particular way. Therefore, organisations should be able to anticipate the ethical challenges that they could encounter to ensure that they behave appropriately (Schiele, n.d.).

Furthermore, organisations need to ensure that they have the appropriate means to utilise data ethically when providing consumers with a personalised experience. Companies must also have various rules and protocols in place for using and storing the data collected. Furthermore, those protocols need to be explained to everyone involved in the organisation, especially those who work

with the data (Techradar, 2019). Moore (2019) explains that many of these organisations operate with the misconception that privacy and personalisation are two conflicting facets. However, if they can overcome this, they will have opportunities to create better experiences for the customers. Similarly, Shockley et al. (2012), and Deng and Mollah (2018) claim that knowing how analytics can improve their use of customer data using technology can aid these organisations to better collaborate to improve the customers' overall experiences.

Data Ethics (2020) reports financial firms have become somewhat accustomed to managing large amounts of data, which ranges from Business Intelligence (BI), employee and customer data. The industry is revolutionising itself further by data-generating capabilities and technologies. In addition, Campbell (2020) shows that with technology developing at a rapid rate, many businesses can invest in better regulations within their organisations as well as in improved data capabilities as financial institutions need to ensure that they have frameworks supporting how they manage their data ethically.

Technological advancement adds new dimensions to what is meant by data ethics, where the ideology of data ethics becomes technology agnostic. Therefore, as data ethics is becoming one of the most important factors in businesses, there is a need for them to always consider the significant consequences associated with not using data ethically (Brahmbhatt, 2019). Furthermore, Business Analytics Institute (2020) reports that data ethics within the financial services industry is not just a matter of establishing a policy or code of what is acceptable or not. It is also important to set the proper boundaries of what business practices should be regarding satisfying customer needs, regulations, and any emerging technologies.

2.3.3. Managing the ethical use of data within financial services industry

According to Hofer (2018), the importance of introducing a means to manage data ethics within an organisation could result in positive outcomes for the organisation, as this would ensure that they have sustained conduct around the ethical use of data. Horton (2019) supports this view by stating that a system of morals and ethics would need to be considered as a guide for behaviour, which would impact how organisations consider the way in which data should be utilised. Thus, organisations must ensure that their policies include all of the relevant elements regarding the ethical use of data. Although new technology is always emerging and posing new issues, organisations need to ensure that they implement policies that are flexible to allow for adoption. Lumen (2011) further details the importance of organisations introducing some sort of data ethics program as this acts as a guideline for decision making and ethical behaviour within the organisation. In line with this, Paine (2011) states

that adopting an approach that takes into consideration laws and ethical behaviour will guide the pattern of conduct within the organisation.

Furthermore, when it comes to managing the use of data within a financial institution, using data to improve personalised experiences for the customer will become a big area of focus. However, how these organisations approach the use thereof will only be a success if both the customer and business are considered. Although businesses can obtain vast amounts of data from consumers, the amount of data that consumers are willing to hand over has significantly changed since the Cambridge Analytica issue (Techradar, 2019). These companies now need to ensure that they create an approach, which allows consumers to opt-in, in terms of the data they provide. Furthermore, it is evident that the use of customer data joined with various AI systems must be open to regulatory scrutiny for ethical standards to be established (UK Finance, 2019).

Lochy (2019) adds that firms are now forced to collect their data in a controlled manner so that the required regulatory reporting can be developed from this. Janiszewska-Kiewra et al. (2020) state that larger firms should ensure that they have sufficient data protection guidelines and governance in place, especially since these firms are exposed to more data risk. Although many firms do not have specific rules around customer data management, they must establish a good data protection program to enable their ability to use data ethically and to their advantage.

Therefore, for financial firms to successfully manage ethical use of data, they would need to ensure that data ethic principles are reviewed regularly to ensure that they remain effective and relevant. In addition, data ethics strategies need to be created and executed (Brahmbhatt, 2019). Furthermore, for these policies to be effective, firms need to ensure their standards are reviewed regularly and evaluated continuously (Janiszewska-Kiewra et al., 2020). Lastly, Sheehan (n.d.) concurs that for the overall success of all of the established data ethics policies, the correct ethical digital leadership is required. This will not only display real commitment but also enable the firms to have a competitive edge. In support of this view, Brahmbhatt (2019) indicates that for data ethics to be embedded into financial institutions, day-to-day management with leadership is important.

2.3.4. Importance of data ethical personalisation

The importance of data ethical personalisation can be defined as collecting data from customers in an ethical manner, which ultimately improves their overall experience (Ashman et al., 2014). It looks at how data can be collected in an ethical manner, which does not harm the reputation of the business, but also ensures that the customer is being taken care of. According to Tranberg (2016), two significant factors need to be considered. Firstly, the customer needs to have the ability to opt-in, which means

that the customer should be able to actively say yes for data usage. Secondly, the customer needs to have full control of their data, which means that businesses need to ensure that this is possible for their customers.

Bavati (2020) states that for businesses to succeed at personalisation, they need to ensure that they collect data from a variety of sources. Furthermore, when these businesses use this data appropriately, it would enable them to reap several benefits for both the business and customer. Moore (2019) explains that businesses should stop viewing privacy and personalisation as conflicting factors but as opportunities to do better. In addition, Tranberg (2016) agrees that businesses should always ensure that they carefully manage all personal data of their customers.

From an ethical perspective, personalisation is considered significant as it raises privacy concerns to a certain extent. However, Treiblmaier et al. (2004) claim that despite this, personalisation enables businesses to track user behaviours and markets better. Loverus (2020) confirms that the overall goal of personalisation is to increase conversations and customer engagement by improving their offerings and relevance.

2.4. THE STATE OF ETHICAL USE OF DATA ANALYTICS WITHIN FINANCIAL SERVICES INDUSTRY

2.4.1. Defining the ethical use of data within financial service industry

The Institute of Chartered Accountants in England and Wales (2020) reports that the ethical use of data within the financial services industry is vital. When big data is not used ethically, organisations could be penalised and could face various risks and dilemmas when trying to fulfil the needs of their consumers. According to Swapna (2018) consumers are under the impression that financial institutions do not have any ethical awareness around the use of data, as terms and conditions are not always explicit to customers.

Cabirta (2019) suggests that these organisations' data ethics principles should consider non-maleficence, customer autonomy, justice, and beneficence. The internal governance and ethical factors are also significant to address. UK Finance (2019) further reports that organisations struggle with operating according to their ethical values, whilst at the same time being able to display how their strategies, governance, and decision making have been influenced by their ethical principles. Therefore, these organisations must ensure that they address all ethical challenges, as it could result in regulatory, legal, and societal issues.

Data can be considered the world's most valued resource, with the technological capabilities relating to the collection and processing of data, which may improve the overall day-to-day lives of people. However, with the expansion and rapid advancements in technology, the development of a good data ethics governance framework thereof, in many cases, is not able to match the rapid pace (West et al. 2020). O' Leary (2016) explains that there needs to be a strong tie between data ethics policies and rules with the approach in which technology is conducted and keeping in mind the social impact of technology and the ethical use thereof. Furthermore, Choma (2015) supports this by adding that even though data provides tremendous opportunities, ethics keeps raising controversial questions, and ethical issues are hardly ever given precedence, especially within this industry.

2.4.2. Unethical use of data in financial services

The challenges around the unethical use of data could impact the financial institution greatly. The industry has lost many consumers' trust as they are becoming increasingly aware that they do not completely know who uses their data and for what purpose (Van Rijmenam, 2018). According to Mazar (2016), although various trends in technology have been the reason for reshaping this industry, these institutes might still struggle with compliance around the use of data. Beaumier and Reese (2020) also comment that the financial services industry still requires an "ethics upgrade". This is evident in the fact that even though financial services companies might have well-defined processes, they may still fail to address various risks regarding ethical behaviour in their product life cycle, as some products do not have the required governance. Additionally, Choma (2015) suggests even though the digital climate is constantly changing, laws need to keep the same pace. In many instances, legislation might not be as adaptive, which leaves room for some institutions to manipulate data for their benefit. Therefore, the financial services industry needs to ensure that they are always managing ways to foster public trust.

Furthermore, transparency and privacy are issues that require compliance around the use of data, however, the policies currently do not have enough focus on data ethics and ethical behaviour (Freudmann, 2016). Thus, more emphasis needs to be placed on the ethical use of customer data, as this does not only impact the organisation, but the overall experience of the consumer. Once these organisations realise the ethical challenges and cyber security issues they might encounter, they will need to address these issues with responsibility and diligence to preserve privacy and proper use of data (Alvarez, 2017). These financial institutions can no longer afford to take risks, especially after the 2008 global crisis. Instead, they must find a way to overcome their ethical challenges regarding data usage and ensure that transparency remains a big factor by informing the public of the use of their information (Choma, 2015).

Finally, although many advances are being made in the digital world and many businesses are reaping the benefits, they need to ensure that the risks are mitigated and that factors such as low-level interpretability, ethical use, data security, and biases are managed. All these challenges of ethics remain in an infancy stage, suggesting that many businesses are still trying to navigate through understanding all facets relating to data but at the same time, creating guidelines and governance to support this (Siau and Wang, 2020). Whilst trying to improve their overall ethics and combat all challenges, these businesses need to constantly look for new models and solutions to enable them to not only analyse data ethically but simultaneously develop accurate customer insights (Choma, 2015).

2.5. ENSURING PERSONALISED CUSTOMER EXPERIENCE IN FINANCIAL SERVICES INDUSTRY

2.5.1. Personalised customer experience defined

Personalised customer experience can be defined as a way of meeting the consumers' needs in an efficient way, where the interactions are easier and faster, and which significantly improves their satisfaction (Davis, 2018). The entire customer experience is based on the customer's perceptions and interactions with the organisation or brand (Oh et al., 2012). Customer experience is usually managed through the customer journey (Lemon and Verhoef, 2016; Voorhees et al., 2017; McColl-Kennedy et al., 2019; Holmlund et al., 2020), inclusive of various touchpoints, where each represents both direct and indirect interactions between the organisation and customers (Kuehnl et al., 2019).

Ameen et al. (2020) claim that customer experience focuses on five elements: cognitive, emotional, physical, and sensory, and social elements (Ladhari, Souiden, and Dufour, 2017). Similarly, Keiningham et al. (2017) confirm that these five elements influence how customers will perceive their experiences.

Ensuring a personalised customer experience is important as this enables the financial services industry to gain competitiveness by understanding their customers' needs (Belás and Gabčová, 2016). This can only be achieved by thoroughly understanding the customer journey. Thus, these institutes try to utilise the raw data collected to ensure that their customers receive positive personalised experiences, through the latest technologies (Lemon and Verhoef, 2016). Roman and Emmons (2018) agree that one of the most significant ways of ensuring that customers' experiences are personalised is by ensuring that the correct tone is set by the organisation from the beginning.

Lindecrantz et al. (2020) note that personalisation only targeted limited offerings to customers, but now extends to the overall experience of the customer. This suggests that the customer can receive multiple personalised touchpoints throughout their customer journey. Clinehens (2019) confirms that

personalisation not only enables you to know details about your customer, but also to use that information in such a way that you can understand their behaviours, offer products, and send the right messages to these consumers, which ultimately has a positive effect on the organisation's revenue.

It is evident that personalisation within the financial services industry is not a new trend (Marketing Evolution, 2021) as institutions have always been focused on delivering customers with products and services, whilst ensuring that they have great personal experiences. These institutions have used this technique to their advantage to increase revenue and drive results as it enabled them to deliver solutions to their consumers. Feschyn (2017) further states that by adopting technological capabilities and a fully data-driven approach, these institutions can greatly succeed as they are not only being profitable but enhancing their customers' experiences.

2.5.2. Personalised customer experience in the context of data ethics

AI Technologies that are supported using data analytics is increasingly being embraced by organisations to improve the expectations of customers (Ameen et al. 2021), which alters how these organisations interact with their customers (Evans, 2019). Using technological advancements, consumer behaviour can influence each stage of personalisation that they receive (Bavik et al., 2017, Yallop and Seraphin, 2020).

Many consumers are becoming aware of whom they share their data with, and more consumers can hold these organisations accountable for the use of their data. These consumers feel the need to trust the organisations to whom they provide their data (CX Best Practices, 2019) and are now more willing to provide institutes with their data if they are aware of what it is being used for. As such, most organisations utilise personal data to maximise their experiences, as they are more willing to provide it. Andre et al. (2018) explains that data analytics on the one hand can contribute towards making consumer decisions more efficient, practical, and easier. On the other hand, it can make consumers feel that they do not have a sense of autonomy, which could be detrimental to both the organisations and customer's well-being.

Furthermore, Barckhahn (2018) suggest that organisations need to ensure that they have the correct ethical data strategies in place when utilising customer personal data and when wanting to improve their experiences, even if it is making sure that the organisation adopts an ethical data framework regarding data use to ensure that data does not get misused.

According to Olmez (2018), the financial services industry must ensure that they provide the customers with a journey where they are taken care of. This is evident due to consumers craving

personal experiences, where their needs are understood. However, if these institutes fail to do so, it leads to their consumers seeking a better experience elsewhere. Similarly, Braun and Garriga (2018) note that one of the greatest challenges is to ensure these data-driven offerings are considered trustworthy, especially in the current digital age. Therefore, every customer experience needs to be treated as personalised moments and not as an everyday business transaction (Dietz, 2017). Egetoft (2019) suggests that by delivering these customers with personalised experiences, it will not only improve revenue but also provide these institutes with tailored insights.

In addition, Fernández (2019) claims that if financial institutions use all AI tools to their advantage, not only will it improve their offerings but provide significant relief for any other costs they could incur, such as regulatory compliance. Furthermore, Mogaji et al. (2020) argues that when organisations engage with their customers ethically, they will become loyal to the overall brand. This improves the overall engagement with customers, enabling these customers to have access to more financial products and services, which ultimately enables AI to collect more data and make better recommendations. National Credit Regulator (2020) reports that this will allow financial institutes to establish a more customised end-to-end customer experience.

Bansal (2019) indicates that the data received by these financial services institutes can be utilised for action based on the insights collected. Mogaji et al. (2020) confirm that through these insights, customers who successfully experience the financial services AI-enabled digital marketing, will not only feel a sense of fair treatment but also develop a sense of financial well-being. Furthermore, National Credit Regulator (2020) reports that for this to be achieved, these financial institutions must ensure that their databases are not fragmented, so that they can achieve a 360-degree customer profile.

With the progression of personalisation in the digital economy, Bansal (2019) states that financial services institutes need to ensure that they strive for solutions that ultimately enable them to achieve transparency of their data, increased efficiency, and new ways of innovating the customer journey. Institute Data (2020) reports that with the influx of data that these institutions receive, it will continuously provide them with opportunities to keep improving their personalisation techniques and tools. Lastly, Townsend and Wallace (2017) states that with the rapid shift in the digital world, financial services institutions have endless opportunities and tools, which can enable better personalisation. However, to date, there are no consistent methods of ethical behaviour around using other platforms for collecting data.

2.5.3. Challenges of improving customer experience through unethical use of data

Challenges around improving customer experience by ensuring that data are utilised ethically must be taken into consideration by financial service institutes. According to Vishnoi (2019), consumers' needs are constantly changing with technology, which suggests that these institutes struggle with all of the changing technology within this industry. They also experience challenges with aligning their policies with the ethical use of data and customer experience. Keary (2019) further states that transparency and unethical data analysis is continuously providing a challenge for the modern organisation.

Morazan (2019) suggests that when these institutions obtain consumers' permission to use their data, they should use it for a specific purpose only. Furthermore, based on how these organisations use the data collected, it will have an impact on the customers' overall experience which could affect their trust. While there are certain regulations in place to assist with the exploitation of personal customer information, the extent to which those procedures and processes are governed under those regulations when using customer data is at the discretion of an organisation. These financial institutes need to understand that the perception of consumers is that if they do not understand what their data is being used for, they will not want to share it.

Pogrebniak (2019) states that although personalisation trends keep improving over the years, the element of privacy concerns are rising, which begs the question of what yields more importance to customers- personalisation or privacy? Customers want the best products and services offered. However, they are threatened by the kinds of personal insights that a business may gain from them. Marketing Evolution (2021) reports that financial services need to consider better solutions that can aid in more personalised experiences, upholding public trust and ensuring compliance. This suggests that these financial institutions need to adapt their thinking and focus on the customer while remaining competitive in the industry.

According to Brodski et al. (2019), fragmented databases could result in difficulty for institutions to organise and establish a perfect profile of their customers. This ultimately has an impact on the products and services they offer, as customers with different needs might be offered the same types of products and services. In addition, Loverus (2020) states that even though customers do not mind providing their data, the minute they feel invaded, they become less willing to provide it. This type of behaviour creates a paradox for businesses, where they will need to balance customers' sense of comfort whilst providing them with relevant products. Similarly, Bavati (2020) notes that even though customers are in most cases willing to provide their data to businesses, they not only want to know

that they will be provided with products that are relevant to their needs, but also that their data is not being abused in terms of how these businesses personalise their marketing to them as customers. Fernández (2019) further states that despite the significant advantages that AI has to offer, one of the main risks stem from the results of these tools, such as bias in the data and further unpacking the reasoning that each of these algorithms took to obtain those specific results.

While personalisation can be considered a significant marketing tool for many businesses, all customers would have personalised experiences in a perfect world. However, Loverus (2020) states that personalised content collected can at times be considered unethical or unsuitable and that there will always be a battle between privacy and personalisation. Furthermore, although web personalisation and using customer data might be a constant challenge, it is not always clear when ethical boundaries have been crossed. Therefore, these institutions should always ensure that they perform their due diligence and keep their data privacy laws in consideration (Bavati, 2020).

2.6. SUMMARY

This chapter provided an overview of data analytics, detailing the importance and challenges of data ethics, and of personalisation through data analytics. Following this, the chapter introduced data ethics and discussed the role that it plays and how it is managed within the financial services industry. Concepts relating to the ethical use of data were also detailed. The chapter concludes by relating data analytics and data ethics to customer experience. With the basis of the literature defined, the next chapter introduces the conceptual frameworks reviewed in this study.

CHAPTER 3: CONCEPTUAL FRAMEWORK

3.1. INTRODUCTION

The previous chapter provided insight for the development of a data ethics framework, which took into consideration what is required for ethical data use. Therefore, this chapter will provide a brief overview of what a conceptual framework is, followed by the importance of having a framework within an organisation. The chapter will also discuss current frameworks, legislations, and models locally and internationally, with relevance to the financial services industry. Following this, the gaps between frameworks developed locally and internationally will be reviewed. Lastly, the proposed conceptual framework will be discussed, taking into consideration the principles used and detailing other frameworks not deemed appropriate for the study.

3.2. DATA ETHICS FRAMEWORKS DEFINED

Data in the twenty-first century is considered an asset. The revolution around data collection, analysis, storage, and sharing has significantly improved due to technological advancement (West et al., 2020). Therefore, there is a need for a data ethics framework, especially due to the huge amounts of data gathered by organisations. Data ethics provide organisations with opportunities to better manage their data usage (Taylor and Dencik, 2020). Moreover, Siau and Wang (2020) state that because AI ethics is in its infancy stage, there needs to be a consideration for ethical principles such as the guidelines, rules, regulations, and policies.

Furthermore, it is important to note that technology on its own is ethically neutral, however, its use could have ethical implications. Therefore, having an ethical framework, which speaks to ethical guidelines and protocols of data use is important (Kluge, 2020). In doing so, having a defined ethical framework improves the overall ethics within the organisation, as it forces change management in the culture of the organisation (Totam and Shlomo, 2015).

A data ethics framework allows organisations to create awareness of current legislation, ethical data use, codes of conduct, and understanding data collected (Skelton, 2020). Furthermore, from a South African perspective, challenges such as data handling and processing were identified due to the lack of policies regarding the use of digital technology. As a result, the POPIA (Protection Of Personal Information Act) was enacted (Abdulrauf, 2020).

With the POPIA compliance requirement in South Africa and many countries creating data regulatory provisions, many financial services organisations operate with a vast amount of customer data in their

day-to-day operations, requiring them to protect customer data and provide transparency on their data use. It is therefore important to have an established data governance framework in place so that those who do not use data ethically are prosecuted (Sekgweleo, 2019).

The Cambridge Analytica scandal highlights the dangers of data misuse, and for this reason, concepts of data ethics need to be embraced (Albourn, 2019). With the unethical use of data creating a sense of shortage in public trust, it is vital for organisations to not only understand their data but to ensure that their data processes are ethical (Information Age, 2019). According to Argandona (2020), although digital technologies are considered a disruptive element in the financial industry with various dimensions that need to be considered, the ethical dimension must ensure that both the organisation and customers take full accountability for their data.

The ability to analyse data much faster through new technology increases the issues relating to transparency, identity, confidentiality, and privacy. However, even though most organisations utilise a privacy policy, it does not mean that they are exhibiting data ethic practices within their organisation (Albourn, 2019). Information Age (2019) reports that even though the vast shift of analytical data and big data management has aided various organisations, the issue regarding the data ethics and privacy is still raising concerns. Therefore, organisations need to establish a data ethics framework to help aid the challenges they might face.

According to Mogai et al. (2020), through AI Financial technology (Fintech) an inclusive view of all customer data can be generated to provide personalised experiences and offerings. However, these financial institutions need to ensure that their data collection strategies include key ethical considerations. Therefore, for these institutions to thrive, they need to ensure that they have consent from all parties, that they have aggregated and anonymised data, and that data is not being sold to a third party. Xafis et al. (2019) concur that organisations should look at a framework as a tool that enables them to manage all areas relating to data use within an organisation.

3.3. IMPORTANCE OF HAVING A DATA ETHICS FRAMEWORK

With the rise of big data and AI, these systems are always required to make decisions relating to individuals. When data is collected, it is subjected to strict regulatory and ethical requirements. However, managing the data can become challenging. Therefore, a means to combat these challenges is to develop a good data governance framework (Janssen et al., 2020). Similarly, Dawson (2010) cited in Xafis et al. (2019) that having a framework enables organisations to navigate through any challenges relating to data. Moreover, West et al. (2020), argue that the rapid pace of technology advancement has not been matched with a robust data ethics framework. Therefore, the need to review existing

data ethic frameworks regularly is important. Furthermore, Fay (2019) claims that when developing a framework, there should always be measures of flexibility due to the continuous changes in the global digital environment.

In addition, O’Leary (2016:9) describes data ethic frameworks as “the analysis of the nature and societal impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology”. Moreover, Stahl (2018) claims that having a data governance framework is significant for the success of any business, especially when it comes to being legislative compliant. Similarly, Lee et al. (2018), agrees that having a defined framework and understanding how it assists with mitigating risks, can set the business up for success.

3.4. CURRENT DATA ETHICS GOVERNANCE STRUCTURES IN SOUTH AFRICA

Many African countries are realising the importance of data governance, especially with the increase of threats, given how data is revolutionising (Osakwe and Adeniran, 2021). However, Belle et al. (2018), Ilori (2020), and Ademuyiwa and Adeniran (2020) suggest that the current mechanisms in place regarding data regulation in Africa are inadequate when it comes to addressing data threats. Additionally, Osakwe and Adeniran (2021) state that the rate at which Africa introduces data strategies and policies is much slower than the constantly growing international digital and data patterns. Given the above, the focus for data governance is placed on South Africa for the purpose of this study.

3.4.1. Personal Information Act of 2013 (POPI)- legislation

The Personal Information Act, known as the POPI Act or POPIA, is a legislation in South Africa that is considered the equivalent of the European Union GDPR. This legislation sets conditions for responsible parties (controllers) to lawfully process the personal information of individuals (Michalsons, 2020). Before the Protection of Personal Information Act (POPIA) implementation in 2013, data usage was largely unregulated in South Africa (South African Institute of Chartered Accountants, 2021). Other regulations such as the Right to Privacy, which is a core concept of the Constitution of South Africa and, the Criminal Procedure Act, enabled some privacy laws around data usage but not to the full extent (Daversin and Musoni, 2020). Furthermore, Botha, Eloff and Swart (2015) claim that POPIA was established to encourage the right to better practices regarding the privacy of personal information.

POPIA mentions two factors such as: data controllers (the responsible party) and processors (those who operate with the data and their conduct). The responsible party determines the use of the personal data collected, whereas the operators process the data collected (Moodley and Kleinsmidt,

2020). POPIA is a regulatory framework aimed at ensuring South Africa implements a law that protects the data within the country. The overall purpose of the act is to protect individuals from any harm whilst protecting their personal information. To achieve this protection, the Act takes into consideration three elements namely, the data subject, the responsible party, and the operator (Michalsons, 2020).

The development of POPIA is closely modelled to the elements of the GDPR framework, trying to achieve eight elements relevant for the South African industries. Unlike other, similar legislations such as the Financial Intelligence Centre Act No.1 of 2017, POPIA deals directly with all types of industries (public and private) and requires compliance for all organisations dealing with South African data. Therefore, with all the current disruptions of new technologies in the different industries affecting personal information collection, POPIA is the closest to what all organisations will need to implement for them to be compliant (Kandeh, 2018).

The POPI Act of 2013 includes eight different elements that need to be taken into consideration for the protection of customer information, as displayed in the table below.

Table 1: Factors of POPI Act 2013 derived from the South Africa POPI Act (2013)

FACTOR	EXPLANATION
ACCOUNTABILITY	The responsible party must ensure that they have created an environment that enables the lawful processing of personal information.
PROCESSING LIMITATION	The processing of personal information should come from the data source directly, with this data only being processed if the purpose matches the reason for the overall collection.
PURPOSE SPECIFICATION	All personal information collected should be done lawfully and what the mandate of the data use will be should explicitly be known.
FURTHER PROCESSING LIMITATION	To use data for further processing, the overall process must be linked to the initial collection of the data.
INFORMATION QUALITY	All information must be accurate.

OPENNESS	All individuals should be aware of what data is being collected from them.
SECURITY SAFEGUARDS	The responsible party should ensure various measures are in place to ensure that the integrity of the information is upheld.
DATA SUBJECT PARTICIPATION	All individuals that supplied data have the right to make corrections to all data provided by them.

The POPIA principles will create a vast change in South African organisations, as it will become mandatory for all South African organisations to comply with the above factors.

Furthermore, a significant amount of time, change, and effort is required from organisations to ensure that they are POPIA compliant in their daily businesses (Kandeh, 2018). POPIA is on par with that of various international regulations. Based on survey data, only 34% of companies within South Africa are ready to comply with POPIA (Sophos, 2019). It can therefore be suggested that if organisations in South Africa are not 100% ready to comply with POPIA, it could create great issues, especially as it would be contravening POPIA regulations (Zenda et al., 2020). Mzekandaba (2021) points out that regardless of whether organisations are not able to comply, be it accidental or intentional, they will be liable for various penalties, such as being fined up to R10 million with a prison sentence.



3.5. INTERNATIONAL DATA ETHICS GOVERNANCE STRUCTURES

There are different data protection regulatory frameworks which various countries provide in guiding the collection, handling, and use of data. In this section, existing frameworks are reviewed across various countries. There are more data ethic frameworks available internationally than in South Africa. Below are the frameworks, models, approaches and regulations developed to combat data ethics.

3.5.1. General data protection regulation

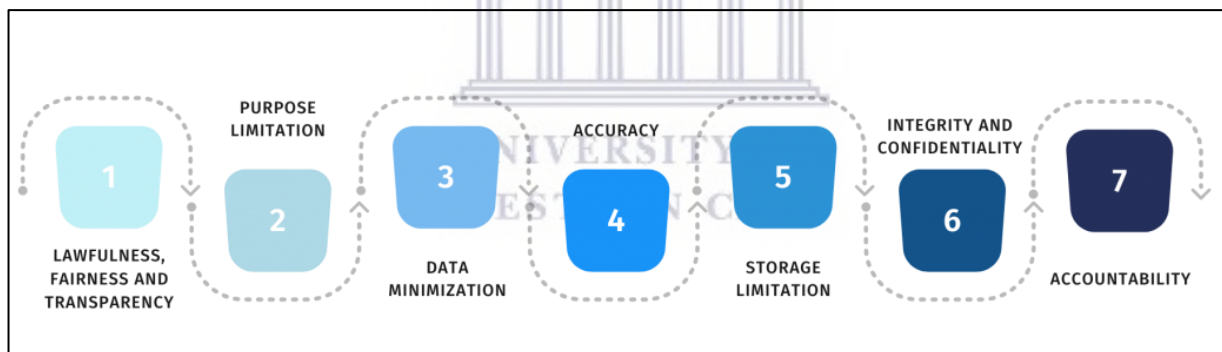
The European Data Protection Regulator was created to enforce protection relating to the processing of personal information (Wilhelm, 2016). The General Data Protection Regulator (GDPR) has modernised law within Europe regarding the protection of personal information of people. The implementation of the GDPR has replaced older data protection rules, some of which were drafted in the 1990s (Burgess, 2020). This framework has been developed in such a way that it enables all citizens

to have better control of their data, enables accountability and transparency of data, and provides strict guidelines for users of data(Albourn, 2019).

The GDPR framework enables lawful processing of data by ensuring that the individual has given their consent before providing them with services. Consequently, the individual is protected (Simmons, 2020). Zenda et al. (2020), state that this framework focuses on the individual, making sure that their interests are always protected when processing their information. Furthermore, to ensure that the negative impacts from technological advances on personal data are managed, the GDPR ensures that any personal data transferred from one organisation to another in the European Union and to any organisation outside of the European Union providing data-related services or business, must be fully compliant with the GDPR.

According to Eloff (2018), the GDPR is just as significant within South Africa and is likely to be adopted as a best practice worldwide, as it is seen as the best means to protect information. This framework considers all elements regarding customer data such as protection as well as the ethical use of data (Frankenfield, 2019). Below is a figure containing all seven principles of the GDPR Framework.

Figure 1: GDPR Principles (Data Privacy Manager, 2020).



3.5.2. The Enterprise Data Management Model (EDM)

Another international data governance model called the Enterprise Data Management Model (EDM) was taken into consideration. This model that was adapted by Yang et al. (2019) (see figure 2 below). It was developed to enable the protection of data whilst still being able to maximise value from that data.

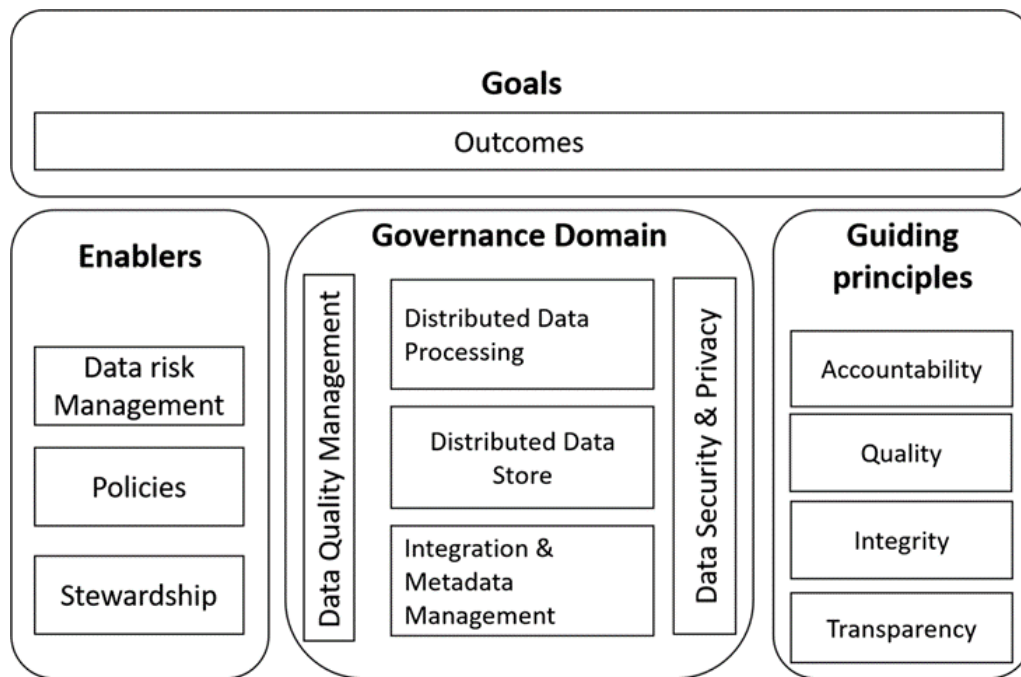


Figure 2: EDM Model adapted By Yang et al. (2019)

The goal of the data governance framework is to guide the organisation to make better decisions regarding their data usage through the utilisation of innovative technology, which would ultimately have an impact on the overall culture in an organisation. According to Breault (2019) by implementing a governance framework, it enables organisations to establish a single version of the truth for the organisation and third-party vendors. Once organisations can establish a single version of the truth, the quality, accuracy, and consistency of the data in the organisation will improve. In addition, Tierney (2019) notes that many organisations only have a short period to implement their data governance in their need to comply with regulation requirements, resulting in data governance issues. This is due to these organisations reacting too late to any problems that could arise. Therefore, to minimise any issues that could arise, organisations should ensure that they have a proper framework in place. Moreover, Watts (2020) states that a data governance framework will enable organisations to have better outcomes as their decision making would be improved due to the improved data quality.

Definition of EDM terms:

Enablers: the enablers refer to the rules, policies, and procedures related to providing a foundation of standards, where the maximum value is obtained through data utilisation, whilst still following proper procedures. Procedures and rules cover key elements such as data collection, storage, and archiving. Risk mitigation and prevention are developed based on the risks that could occur. According to Kelly (2020), having policies and procedures in the organisation guides the behaviour of employees and helps keep their actions within the defined level of acceptance, which enables the organisation to

achieve its strategic objectives. Dunham (2020) further states that by having stringent standards and policies implemented within an organisation, they can better protect their information assets, such as avoiding unauthorised use and modification of data.

Guiding principles: the principles focus on elements such as integrity, data accountability and transparency. Organisations should ensure that their guiding principles are easy to understand. Overall, the principles support how the organisation will manage and process data and guide the use of the enablers. Smith (2016) notes that having guiding principles as beacons and references enables all employees to remain motivated and to effectively manage data as an asset of the organisation. Furthermore, Ainsworth (2021) states that guiding principles is one of the most important ways to manage data. Therefore, organisations need to ensure that they develop a strategic approach to data management, as building a solid data framework is the foundation of any organisation's success.

Governance Domain: the governance domain considers the objectives of the data governance that organisations should focus on. This includes five core elements, namely, data security, data quality, privacy and security, and data protection. Schaeffler (2018) further states that having a governance domain that covers your organisation's data enables the organisation to depict what and how their data must be managed.

Griffin (2008) claims that the EDM can be considered a comprehensive data governance model. Once organisations implement this model, they can make better decisions, increase data efficiency, accountability and ownership of data, and mitigate regulatory issues. Brous et al. (2016) further state that organisations need to develop an enterprise data model to help aid problems regarding data misuse. This should be relevant for all organisations to assist with data governance in their organisations.

3.5.3. LGPD (lei geral de proteção de dados pessoais) – Brazil

The data protection law in Brazil was inspired by the European GDPR (Pessoa et al., 2021) and looks at personal data with a broad view and in line with the GDPR principles of personal data (Tantleff et al., 2020). It was established in 2018 for people and organisations to follow (Tantleff et al., 2020). If an organisation or person does not adhere to the measures, sanctions could be placed on them.

Sombra (2020) states that the LGPD has 10 principles of measure, including necessity, purpose, transparency, open access, security, accountability, and liability. Through the establishment of these measures, the LGPD aims to increase transparency and empower individuals who are providing their data.

Robinson (2020) highlights that the LGDP is the first law to offer comprehensive principles and guidelines that regulate the processing and use of personal data. Considering the current digital economy and the continuous expansion of data use, organisations will be forced to adapt and comply with the LDGP.

3.5.4. The Digital Republic Law-France-2016

At the end of the year 2016, France introduced The Digital Republic Law, which focused on digital rights in the context of public service of data. It could be digitally amended by citizens, making it the first law coproduced by citizens (Premat, 2018). It was adopted based on the General Data Protection Regulation (GDPR) (Tambou, 2018) and focused on the measures presented in table 2 below.

Table 2: Digital Republic Law Measures (Proust, 2016)

Measure	Explanation
Higher fines	This measure seeks to impose higher administrative fines for those who do not comply.
Enhanced Rights for individuals	This measure seeks to improve the rights of people under the Data Protection Act.
Additional Information	This measure seeks to inform all data subjects on the period of data being held and how it will be stored.
Privacy- Post Mortem	This measure seeks to provide data subjects the right to decide what happens with their data after their death.
Right to be Forgotten	This measure seeks to provide the data subjects with the right to request their data must be deleted.
Marketing Correspondence	This measure seeks to ensure that all correspondence with data subjects remains confidential.
Data Portability	This measure seeks to provide all consumers with the right to recover all data relevant to that individual.
Online Platform Providers	This measure seeks to ensure that obligations by platform providers have been adhered to when offering customers personalised products.

Restriction on Data Storage	This measure seek to be able to store and transfer data outside of the EU.
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3.5.5. The California Consumer Privacy Act (CCPA)

California also passed an Act in 2018, referred to as The California Consumer Privacy Act (CCPA), which protects data online in terms of privacy and information that can be considered easily identifiable to an individual (Albourn, 2019). Under this Act, the residents of California are empowered with specific rights, which may not be infringed, such as the right to opt-out of having their data sold to third parties, the right to delete information, the right for disclosure regarding the data, and the right to be notified (State of California Department of Justice, 2021).

3.5.6. Social contract privacy approach

Privacy as a contract can be defined as a mutually beneficial agreement between an individual or community and the data being shared. The social contract approach is based on the existing Integrative Social Contracts Theory (ISCT) within business ethics (Martin, 2016). Within the context of business ethics, social contract theory focuses on Donaldson and Dunfee's (1999) and Heugens et al.'s (2006) context around business ethics. With relevance to privacy, Donaldson and Dunfee (1999) describe two types of principles within the social contract. The first is that a macrosocial contract enables an environment in which rules can be developed regarding privacy. The second is that creating and negotiating the microsocial contract includes the expectations around the use of data (Martin, 2011) and how that data would be manipulated (Albergotti, 2014).

In addition, Martin (2016) states that the social contract privacy approach focuses on the type of information received, who might have access to information, and the usage of that information. It is important to note that the social contract has been introduced and shared theoretically by Culnan and Bies (2003) and only empirically by Martin (2012). Lastly, it is crucial to note that privacy as a social contract focuses on the interest of individuals, the information they share, and their expectations. Therefore, the use of the social contract guides how to navigate the privacy of individuals (Martin, 2016).

3.6. Gaps identified in current data ethics frameworks/legislation vs. International data ethics frameworks/ legislation

3.6.1. POPIA vs. GDPR

Africa has always been behind in terms of its development and establishment of data protection laws in comparison to the rest of the world (Abdulrauf and Fombad, 2016). For Africa to be in the league of the international data protection laws, they would need to combat the current issues regarding data protection (Zenda et al., 2020). However, Africa displayed improvement to their current data protection of people through the implementation of the African Union Convention Cyber Security and Personal Data Protection (African Union, 2014). Amazouz (2018) indicates that the convention was established to create standards and procedures around the data security issues faced in Africa and to ensure that the legislations that were developed were able to create awareness and cooperation within the digital economy.

In South Africa specifically, citizens are protected by the Constitution of the Republic of South Africa (RSA Government, 1996) and the Consumer Protection Act (RSA Government, 2009). Zenda et al. (2020) states that with the changes in the current digital climate in South Africa, there is an urgency for the implementation of POPIA (RSA Government, 2013). However, Burger (2021), indicates that navigating through data protection and privacy laws should be executed by experts to ensure that the regulations and governance is accurate and has a sense of a future-focused approach. Another concern is that although POPIA takes into consideration elements of the GDPR, there are still some clear differences, which the South African regulations do not consider. Yet, the GDPR is used as a guideline to enforce certain laws for data protection (POPI Act Compliance, 2021). This is seen in the major change in implementing POPIA in terms of consent, where previously, obtaining consent was not needed for collection of personal data. However, consent is now required, and this might be a challenging shift for businesses in South Africa (POPI Compliant, 2021).

When comparing POPIA with the GDPR, the principles do not present a significant difference as POPIA largely replicated the GDPR principles (Balajee, 2020). However, there are minor differences between these data protection laws. According to Russell (2020), automated decision-making is covered differently by both laws. POPIA covers this principle in more detail than GDPR, and while POPIA provides only an opportunity to make representations, GDPR provides three specific principles that relate to automated decision making, such as expressing the point of view, appealing the decision, and obtaining human intervention.

Medium (2018) shows a comparison between POPIA and GDPR. From the table, it is evident that these data protection laws overlap, which suggests that if companies can become POPIA compliant, they will be considered perfectly compliant as they introduced concepts from both POPIA and the GDPR Framework.

Table 3: POPI vs. GDPR (Medium, 2018)

PoPi vs. GDPR Comparative Table		POPI	GDPR
PoPI Conditions/ Minimum Thresholds	Accountability		X
	Processsing limitation	X	X
	Purpose specification	X	X
	Further processsing limitation	X	X
	Information quality	X	X
	Openness	X	X
	Security safeguards		
	Data subject participation	X	X
Other Areas	DPO* Required	X	X
	Breach Notification	X	X
	Cross border data transfer limitation	X	X
	Eletronic Marketing	X	X
	Online Privacy		X

There are further differences between the two data protection laws. POPI Act Compliance (2021) reports that the GDPR only focuses on protecting the information of individuals and not that of organisations, whereas POPIA extends its protection law to that of all legal entities. Secondly, there is a big gap between the developments of privacy programs. The GDPR promotes privacy by design as opposed to privacy as a function, whereas POPIA focuses on best practice possibilities for security and privacy. Furthermore, the GDPR requires individuals to provide their consent for any information, written or electronic, processed about them (GDPR, 2016). On the other hand, POPIA requires individuals to provide consent for marketing purposes (written), which gets monitored by the Information Regulator (Bruyn, 2014). In addition, Burger-Smidt (2016) and Theys (2021) adds that unlike the GDPR, POPIA does not require obtaining consent from individuals if personal data is collected based on legal reasons. Lastly, Medium (2018) concurs that the GDPR has specific requirements for any breaches that need to be reported within 72 hours from discovery. However, with POPIA, there is no specific timeline regarding when the breach needs to be reported.

3.6.2. GDPR vs. LGDP



The other international legislations were compared to determine if there are any differences in principles, regardless of the fact that most of them were derived from the GDPR. Internationally, there are some gaps within the LGPD because it only covers certain elements to protect the citizens of Brazil (DLA Piper, 2021). Simmons (2020) adds that even though the LGPD was established by using the principles and guidelines of the GDPR, the LGPD does not enable businesses to process sensitive data under the law as identified under the GDPR law for legal activities about public data and non-profit entities.

3.6.3. GDPR vs. CCA

The California Customer Protection Act was established based on the GDPR. However, this Act focuses on the rules relating to accountability, the scope of application, and the extent and nature of data collection limitations (Marini et al., n.d.) Ramirez (2020) suggests that in terms of data protection, the CCPA does not impose or explicitly define data privacy principles, however, it does enable customers to take any legal action if they feel that a breach of their data has occurred. Lastly, one of the biggest gaps in the CCPA is that it does not protect a large group of data user types like the GDPR does (De Cooman, 2021).

Data protection laws are tailored to what works best for each country. There are however elements from all of these laws that could be applied to each country. Based on the above, most of the data protection laws rely on the guidance of the GDPR as it is considered the most stringent law worldwide. Although many countries select principles to define their protection laws, all seven principles of the GDPR framework (see Figure 1) should be acknowledged and defined across all data protection laws worldwide.

Furthermore, the Act takes into consideration a broader view of what comprises personal data than the GDPR. A challenge of the Act is security as any individual can demand organisations to provide them with the information they have saved of them and with whom that data is shared. In addition, it allows the consumer to sue organisations even if there was no breach detected (Korolov, 2020). Although there might be disadvantages of the California Consumer Privacy Act, Green (2020) explains that it is the first act in the country in the US that covers privacy around personal data, and that no other state within the US can provide its consumers with the protection that the GDPR offers. Zenda et al. (2020) further argues that because there are different governments in the US states and these governments regulate different policies around privacy, there are variations between the states, which ultimately makes it difficult to respect the laws of privacy in that state.

3.7. DATA ETHIC FRAMEWORKS/ LAWS EXCLUDED

To develop a proposed framework from the literature identified, certain frameworks were excluded. The LGDP was excluded as it was adopted based on the GDPR (Pessoa et al., 2020). Both covers similar measures, with the GDPR being the dominant one. The Digital Republic Law from France focuses mainly on digital rights and could be amended by citizens (Permat, 2018). This law also focused more on the overall public interest, with the foundation of being inspired by and adopting principles from the GDPR (Tambou, 2018). Therefore, the Digital Republic Law from France was also excluded. Furthermore, the California Act of 2018 focuses on online data protection, where the rights of the citizens regarding their data are enforced (Alboun, 2019). The principles from this Act were excluded because they cover the basics of both the POPI Act of 2013 and the conditions of the GDPR.

The overall selection for the proposed framework took an approach of what governance financial services institutions should have within a data ethics framework. The combined principles of the GDPR Data framework, POPI Act Principles, EDM Model and Social Contract Privacy Approach related more to what the researcher required in terms of measuring the case study that was chosen for this study and the level of data ethics governance in the organisation.

3.8. PROPOSED ETHICAL FRAMEWORK FOR FINANCIAL SERVICES INSTITUTIONS

After a detailed discussion of the existing literature regarding data ethic frameworks and models, the proposed framework took into consideration the POPI Act of 2013, the conditions of the GDPR framework, the Social Contract Privacy Approach (Martin, 2016) and the EDM Model (Yang et al., 2019), all of which the researcher deemed as significant for this research.

Most organisations are currently trying to adapt their processes to ensure that they are compliant with the POPI Act of 2013. However, organisations collecting personal information and utilising it for personalised experiences need to ensure that the proper guidelines are being considered. The proposed conceptual framework was developed (see figure 3), and considered the following:

1. Conditions of the GDPR data framework and Conditions of POPI Act of 2013
2. Social Contract Privacy Approach (Martin, 2016)
3. EDM Model (Yang et al., 2019)

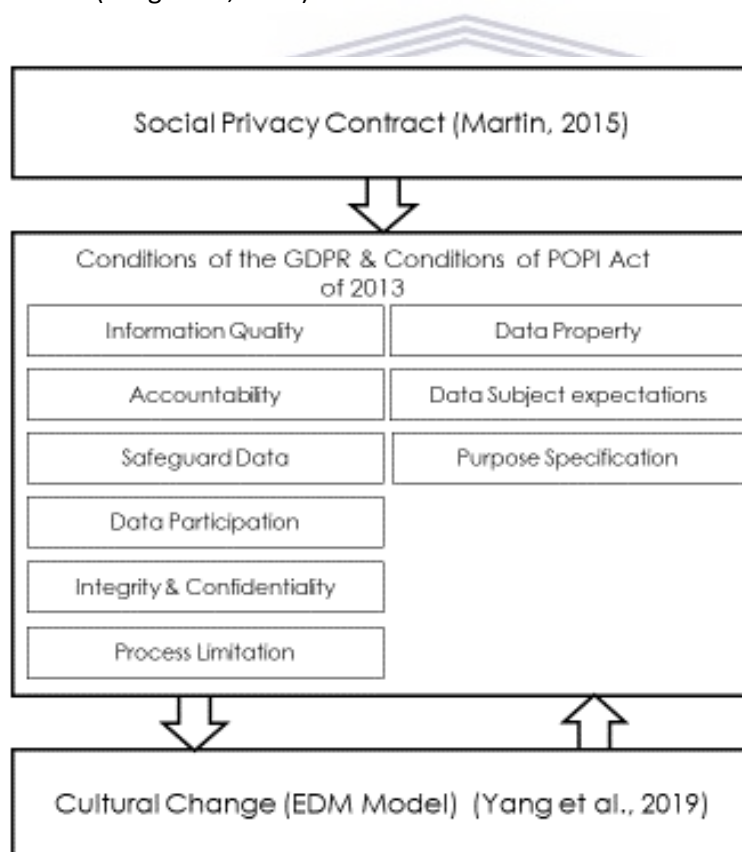


Figure 3: Proposed Data Ethics Framework

For the development of the above, various elements and principles from existing laws and frameworks were selected to create a framework that would achieve compliance when processing personal data (Refer to Section 3.4 and Section 3.5). The proposed data ethics framework includes elements from

both the POPI Act (2013) and the GDPR law. Due to POPIA using the GDPR as a basis for their regulations, both data protection laws are taken into consideration. Although the GDPR is more stringent, if organisations are complying with the principles of the GDPR, they are likely to be POPIA Compliant (O' Donnell, 2021).

Furthermore, the proposed data ethics framework takes into consideration all principles (as mentioned in Section 3.4 and Section 3.5) of both POPIA and the GDPR ethics Framework (Gov.UK, 2018). The principles include purpose specification, information quality, openness, process limitation, data participation, accountability, safeguard data, awareness of legislation and code of conduct, and required skill set. According to McKenzie (2018), the GDPR also agrees that this framework can be closely linked to POPIA, which is mandatory for all businesses in South Africa to comply with. While some of POPIA's provisions are relevant to those businesses registered within South Africa, the GDPR is just as significant as it applies to all businesses in Africa that make use of any personal data. Furthermore, for South Africa's trade relationships, both the GDPR and POPIA must be taken into account.

Thus, the principles that have been included are accountability, process limitation, purpose specification, information quality, openness, safeguard data, data participation, integrity, and confidentiality. For the proposed data ethics framework, these eight principles were adopted and added. All principles from POPIA with the addition of one element from the GDPR data ethics Framework (Gov, UK. 2018) have been considered as significant for this framework. Overall, the proposed data ethics framework adopts the element of POPIA that not only protects any natural person but that of all legal entities (Mckenzie, 2018).

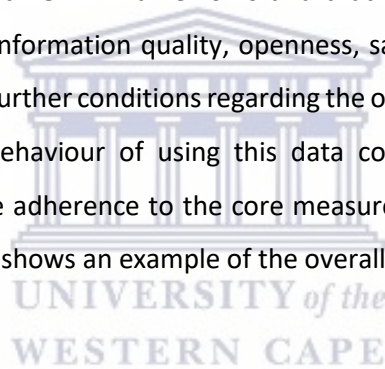
Furthermore, based on the information privacy theory, it is evident that the social privacy contract approach (Martin, 2016) can be defined as a social contract, where there is a mutual understanding between two parties that governs the use of personal data, and where consent is provided. It is also important that businesses understand that meeting all consumers' expectations relating to the privacy of their data will have a significant impact on how their trust in the business improves and how easily they are willing to share their data (Cases et al. 2010). Implementing the social contract theory provides businesses with an advantage point from an ethical perspective, specifically relating to consent from all parties (Martin, 2016).

Lastly, the addition of the social contract for privacy does not only enable businesses to better govern their ethical behaviour, but also provides a mutually beneficial agreement on how that data should be shared and utilised (Culnan and Bies, 2003). Moreover, implementing this alongside the conditions of

POPIA and GDPR will encourage the firm to not only respect consumers and their privacy, but will also positively impact their behaviour around data.

The addition of the EDM model (Yang et al., 2019) focuses specifically on the goals, where the implementation of a framework enables change management to take place on the culture of that organisation. The proposed data ethics framework included this element due to a need to relate to the individuals that work with data and how these principles would impact them. By being able to manage the change of the flexible data ethics framework, it would allow individuals to continuously be aware of the measures and principles regarding data ethics.

Furthermore, for the proposed framework to work, it would need to start with the consumers understanding what the organisations expectations around their data usage are, which ultimately suggests the element of the social contract. The social contract would be binding through consent from the customer. Moreover, the processing of the personal information would be in line with the eight principles extracted from both GDPR frameworks and that of POPIA (accountability, process limitation, purpose specification, information quality, openness, safeguard data, data participation, and integrity and confidentiality). Further conditions regarding the overall privacy requirements would ensure that the overall ethical behaviour of using this data complies with that of the current regulations. Furthermore, with the adherence to the core measures, awareness in the organisation would be required. Figure 4 below shows an example of the overall data ethics framework journey in execution.



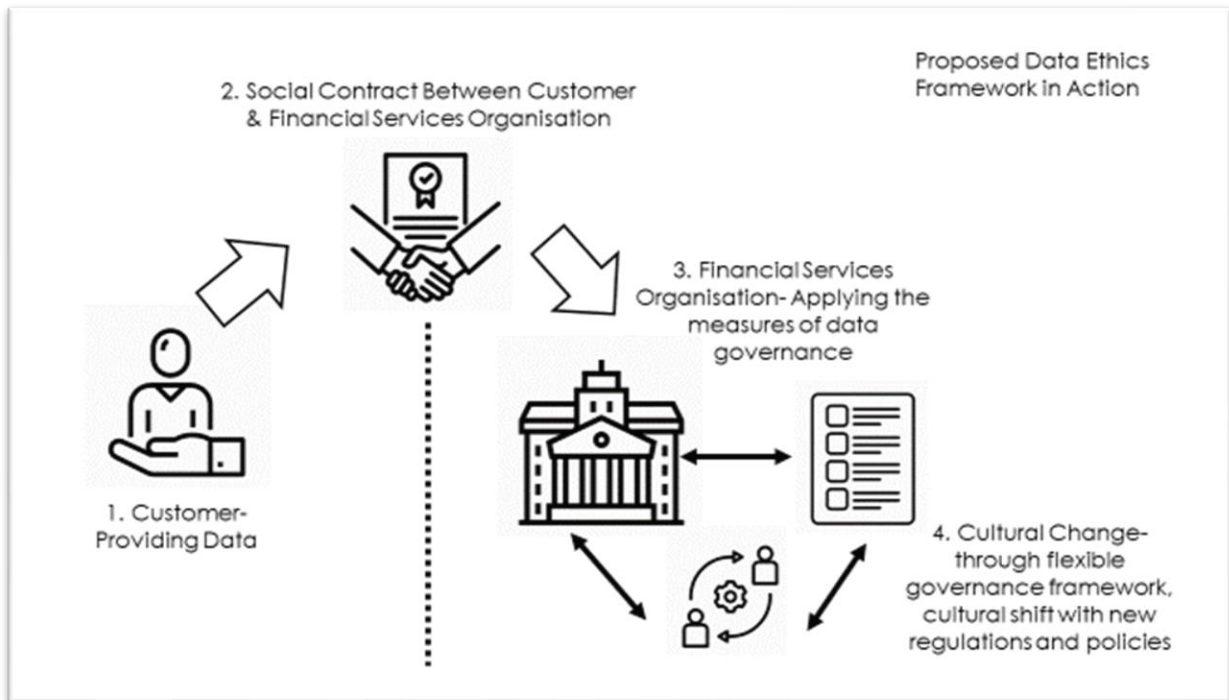


Figure 4: Proposed Data Ethics Framework Journey

In light of the above, it is evident that with the combination of all these frameworks and laws, the proposed data ethics framework will not only be highly successful in ensuring that all businesses are compliant but also in enabling them to extend those regulations internationally. By taking the above principles into consideration, it covers not only what the GDPR would accept as compliant, but more so provides a mutual understanding between all parties that share, utilise, and process personal information. Bowman (2020) states that South Africa could see further amendments being made to the Act in the future as it is currently not entirely viewed as protective in terms of the GDPR framework.

3.9. SUMMARY

This chapter examined the various frameworks and models relating to data ethics in current literature. In doing so, a proposed data ethics framework was developed, which was used as a basis to analyse and interpret the findings in Chapter 5. Various frameworks, legislations and models were reviewed to develop a conceptual framework. As such, the researcher was able to establish a framework that took into consideration principles that impacts not only the customer, but the organisation as well. In doing so, a proposed data ethics framework was developed and established to contribute towards existing literature and improve data use conditions within financial services. The next chapter details the research methodology executed for the study. In addition, the chapter links the use of the proposed framework with research instrument development for this study.

CHAPTER 4: RESEARCH METHODOLOGY

4.1. INTRODUCTION

The previous chapter discussed existing literature relating to the existing data ethics frameworks available locally and internationally. From this, a proposed data ethics framework was developed that was used to guide the analysis and interpretation of the data in Chapter 5. Furthermore, this chapter will discuss various research paradigms in an attempt to provide a detailed rationale for taking an interpretive approach in this study. It will also provide an overview of the research approach and design that was taken in this study, which shows why the use of a case study was beneficial for this study. Lastly, a detailed discussion and description of the data analysis process is provided.

4.2. AIMS AND OBJECTIVES OF THE STUDY

Based on the problem statement identified in Section 1.2 and the literature evidence provided in Chapter 2, the study aimed to:

- establish ethical conduct around the use of data for customer analytics within financial services,
- investigate how customer experience can be personalised digitally through data analytics, and
- establish whether customer experience is affected by the ethical use of data in analytics.

With the use of the above aims and the evidence identified in Section 1.3, the study objectives were to:

- determine if financial institutions have defined frameworks/ policies in place that govern the ethical use of data,
- develop a conceptual framework that can be utilised to assess the organisation level of the ethical use of data analytics within financial services in South Africa, and
- use the conceptual framework as a guide that measures if these organisations ensure the ethical use of data analytics when improving personalised customer experiences.

4.3. MAIN RESEARCH QUESTION AND SUB-QUESTIONS

The main question that was constructed to address the research problem is:

What are the factors affecting ethical data use when improving personalised customer experience?

The sub-questions that were formulated and used as a guide for the data collection process are:

1. What are the current data policies perspectives on the use of data for customer analytics?
2. What is considered ethical behaviour around the use of data for customer analytics??
3. How does data analytics enable personalised customer experience in the financial industry in South Africa?

4.4. RESEARCH PARADIGM

When conducting research, the study needs to be situated within an appropriate paradigm. Rehman and Alharthi (2016) describe a paradigm as a theoretical framework and belief system with assumptions about four main principles, which include ontology, epistemology, methodology and methods. In detail, it can be described as the way of understanding the current reality of the world and studying those realities. Grix (2004) states that ontology and epistemology can be considered as the foundation of any research. The four principles are described below.

- a) **Ontology** can be defined as the beliefs that people have about reality (Richards, 2003). During the research, the question of ontology leads the researcher to enquire about the kind of realities that exist (Patton, 2002).
- b) **Epistemology** is concerned with the nature and forms of knowledge and how that knowledge is collected and communicated to individuals (Cohen et al., 2007). The epistemology question that is answered in research forces the researcher to evaluate “the possibility and desirability of objectivity, subjectivity, causality, validity, generalisability” (Patton, 2002:134).
- c) **Methodology** can be defined as an approach that guides the researcher to execute the study (Rehman and Alharthi, 2016).
- d) **Methods** refer to how data will be collected and analysed in the study. The method chosen for the study is influenced by the research design (Rehman and Alharthi, 2016).

Furthermore, research paradigms can provide an understanding of world views. According to Krauss (2005), many qualitative researchers can execute their research under different epistemological assumptions through a quantitative approach whereas many qualitative researchers can also execute research under various ontological assumptions. Furthermore, it is important to note the various theories relating to the research paradigms, which are positivism, interpretivism, and critical theory (Kivunja, 2017). However, Tasjakkori and Teddie (2003) claim that a fourth paradigm called the pragmatic should also be considered.

The positivist paradigm can be defined as a world view to research (Kivunja and Kuyini, 2017). It is considered the most useful paradigm for understanding research through a world view, as it interprets observations and results through a means that is measurable (Fadhel, 2002). Research for this paradigm focuses on a deductive approach, where hypotheses are formulated through scientific measures, and where these outcomes and results can be validated with statistical proof (Cohen, Manion and Marrison, 2000).

The interpretivist paradigm seeks to understand the world, specifically the social world, through a subjective experience (Gunbayi and Sorm, 2018). It further seeks to detail the realm of subjectivity and the consciousness of an individual, where fundamental meanings are found, based on the social reality we live in (Burrell and Morgan, 1979).

The critical paradigm focuses on social injustice challenges and seeks to address the social, economic, and political issues relating to this (Kivunja and Kuyini, 2017). It focuses on how the researcher may interact with the participants (transactional epistemology) and on an ontology of a historical realm (Martens, 2015). In addition, this paradigm respects cultural norms and can entirely focus on relations within these social structures (Guba and Lincoln, 1988).

Lastly, the pragmatic paradigm was developed based on accessing the truth about the real world through a single scientific method used by the positivist paradigm (Kivunja and Kuyini, 2017). Alise and Teddlie (2010), Patton (1990), and Biesta (2010) suggest that this paradigm is advocated by relational epistemology (relations which are deemed significant for the research) and a non-singular ontology (there is more than one reality, and all individuals have their perceptions thereof).

This research utilised an interpretive study approach as the researcher aimed to seek a deeper understanding and explanation of the subjective topic, factors affecting ethical data use to improve personalised customer experience. Pham (2018) notes that this research paradigm focuses on obtaining a deeper understanding of a phenomenon, taking into consideration the various complexities instead of generalising an understanding for the entire population. Furthermore, Saunders and Tosey (2012) add that when a researcher is less concerned with collecting law-like generalisations and focuses on comprehending the subjective meanings of a phenomenon, they will be reflecting the philosophy of an interpretive paradigm.

There are other research paradigms, such as positivism, which focus on casual relationships through various quantitative approaches, or on determining explanatory connections (Park, Konge and Artino, 2020). Additionally, the realism paradigm focuses on the idea of freedom of reality from the minds of humans, where the paradigm assumption is based on a scientific method for the progression of

knowledge (Dudovskiy, 2018). There is also the pragmatic paradigm, which focuses on bridging a gap between structural orientation, older approaches, and naturalistic methods (new approaches) (Kaushik and Walsh, 2019). However, for this study, the researcher is more concerned with gathering meaningful insights into a phenomenon through exploring and investigating. Therefore, it is clear that the interpretive paradigm is the most suitable for this study.

Furthermore, one of the methods utilised as a part of the chosen paradigm is a case study. This paradigm enabled the researcher to explore and investigate, whilst at the same time probing participants' views, values, perceptions, perspectives, and thoughts. It also focuses on individual experiences and how those individuals share meanings. Furthermore, this paradigm highlights that social reality is regarded and perceived by individuals according to their ideological stance. This was therefore explored by the researcher to understand how various meanings are constructed. As such, the researcher was able to gain further insights into particular meanings and consequently improve the overall understanding. The next section discusses the research approach that was taken in this study.

4.5. RESEARCH APPROACH

Research methodology is a strategy that describes epistemological and ontological principles, which guides how the research should be executed through the use of practices, procedures, and principles that govern research (Schulze, 2003). Selecting a research methodology relies on the kind of paradigm selected, which guides beliefs of reality and humanity (ontology), theory of knowledge, the overall research (epistemology), and how that knowledge is gained (methodology) (Nayak and Singh, 2021).

Kumar (2018) points out that the intent of a research methodology is to answer research questions through the use of appropriate research methods and approaches. Moreover, research methodology in the context of Information Systems (IS) can be defined under various areas, such as management, technology, strategy, and political science (Edwatte, Ingirige and Amaratunga, 2011). In addition, Harling (2002) suggests that the research methodology must have appropriate methods for the research problem in order for accurate results to occur.

In addition to the research process, it must be decided whether an inductive or deductive approach should be taken. According to O'Reilly (2009) in deductive research, a hypothesis is derived from an existing theory through which the empirical world is explored. Data is then collected to test the hypothesis. On the other hand, an inductive approach is when the researcher has little to no preconceptions, enabling theory to develop from the data collected.

Furthermore, Trochim (2006) claims that an inductive approach moves from specified to generalisation, whereas a deductive approach starts with the generalisation and ends up being specified. In addition, inductively, arguments are based on observations and experiences, while deductively, arguments are based on rules, laws or principles that are widely accepted. Furthermore, deductive research takes a top-down approach, starting from a theory to a hypothesis to data, which adds to, aligns with, or contradicts the theory. In contrast, inductive research takes a bottom-up approach, using the perspectives of participants to create broad themes and produce a theory which interconnects the themes (Creswell and Clark 2007:23).

Additionally, Lock (2007) and Nola and Sankey (2007) states that the deductive approach starts with a theory, from which a hypothesis is derived, then tested, and revised. On the other hand, the inductive approach makes empirical observations about a phenomenon and forms theories and concepts that are based on them (Lock, 2007). It is important to note that Aristotle, the first philosopher of science, suggested that the inductive approach was required to establish valid theories and that the deductive approach was required to test and improve theories (Harriman, 2010). In other words, deductive and inductive are considered to be complementary. However, progression in the philosophy of science formed a divide between the two approaches (Woiceshyn and Daellenbach, 2018).

Research methodology is an important factor as it clarifies all of the required steps to meet the objectives of the research (Iacono, Brown and Holtham, 2009; Kilani, 2016). Alrawabdeh (2014) notes that research methodology follows either a quantitative or qualitative approach. According to Soiferman (2010), these approaches are not mutually exclusive and can address the same question, but the method of execution is different.

Quantitative research can be defined as the use of statistical analysis to make correlations between variables that are known and what can be acquired through research (Trochim, 2006). With this method, it is possible to depict results using visual representations via graphs, plots, tables, or charts. Moreover, conclusions are derived based on logic, arguments, and evidence (Trochim, 2006). Soiferman (2010) states that quantitative analysis ensures that the interpretation of data is supported by guidelines to measure the statements made to evaluate the validity of the instrument.

Qualitative research, on the other hand, can be defined as a study that is conducted in a natural setting. The researcher gathers the remarks of participants and analyse them by identifying shared themes (Creswell, 2005). Soiferman (2010) states that the qualitative method focuses on finding answers to questions, which usually involves a time-consuming data analysis process.

In light of the above, deductive qualitative research was followed for this study. This approach was found to be most suitable because firstly, deductive qualitative research takes into account the departure point and the theoretical applications discussed in the literature (Chapter 2) and applies these propositions to the collection and analysis of data (Boyatzis, 1998; Fereday and Muir-Cochrane, 2006; Hyde, 2000). Secondly, the appeal of deductive qualitative analysis is highly recommended with the use of case study research (Yin 2014).

The research process that was followed include the steps below:

a) Selecting a topic

Topic selection for research is usually based on a need, an incentive or it is profit-driven (Wang, 2018). The topic selected for this study was identified as the researcher wanted to understand data analytics and how that ties into the ethical behaviour of that data, whilst improving customer experiences.

b) Searching and reviewing existing literature

According to Pati and Lorusso (2018), doing a review of the literature enables the researcher to provide, review, interpret, and report multiple findings from various publications. The review of the literature provided insight into different themes regarding factors affecting the ethical use of data analytics. It detailed content, such as, data analytics, data ethics, ethical use of data and lastly, how all of this impacts the customer experience.

c) Formulating research questions

Posing research questions and sub-questions is an important step as it provides direction in the research. Research questions are ultimately crucial for defining the modes of enquiry and scope of the overall research (Thuan, Drechsler and Antunes, 2019). All research questions and sub-research questions were developed with the intent to explore the interest of the study.

d) Research design

The research design of a study guides how participants are selected (how), what variables to include in the research (what), the collection and analysis of data, and how to address the overall problem (how) (Dannels, 2018). The study made use of a case study research design approach and a qualitative research method. Additionally, it made use of a non-probability purposive sampling strategy, which is further discussed in section 4.7.2, to select the research participants.

e) Data collection

According to Gonzalez (2017), data collection is a process carried out during research. For this research, semi-structured interviews were conducted via Microsoft Teams to collect data. Doyle

(2018) explains that a semi-structured interview can be described as a technique that does not follow a formalised approach, where strict lists of questions are asked. Instead, it focuses more on open-ended questions, which allows the interviewee and interviewer to engage in a discussion.

f) Data analysis

A qualitative data analysis process was executed for this study. According to Lacey and Luff (2001), qualitative data analysis follows an array of steps to analyse the data that was collected and to obtain meaningful and rich information. For this study, a thematic data analysis approach was used, and is further discussed in Section 4.6.4.

g) Conclusion

The study concludes with the findings and interpretations of the data that was collected. Recommendations have also been documented for financial services institutions regarding their data ethic governance and lastly, suggestions for future research have been discussed.

4.5.1. Critique of qualitative research

When selecting the appropriate research approach, criticisms should also be considered. However, before discussing criticism faced using the qualitative research method. A challenge many scholars agree on was trying to find a suitable and clear definition for qualitative research (Ritchie, Lewis, Nicholls, and Ormston, 2013; Rahman, 2020). Moreover, Strauss and Corbin (1990) state that qualitative research provides findings that have not utilised any statistical or quantification techniques. It can be defined as research about people's emotions, behaviours, experiences, and feelings, which indicates that it focuses on multiple realities as opposed to statistical research outcomes (Rahamn, 2020).

According to Silverman (2010), a criticism of qualitative research approaches is that it sometimes focuses merely on experiences and meaning, and unintentionally leaves out contextual information. However, Tuohy et al. (2013) and Wilson (2014) states that the phenomenological approach provides insight and interpretation of the participants and their experiences. Furthermore, Anfara et al. (2002) and Anney (2014) states that internal and external validity, reliability and objectivity should be addressed in qualitative research, as these issues are primarily addressed in quantitative research. Moreover, Roth and Unger (2018) claim that there are ethical issues that raise concern in qualitative research, as it includes demanding ethical responsibilities from the researcher. Moreover, generalisability regarding samples used for the research becomes an area of concern, especially if smaller samples are used (Thomson, 2011; Harry and Lipsky, 2014). Lastly, qualitative research is a

long and difficult journey, with stringent requirements for the analysis on the one hand and elusive data on the other (Berg and Lune, 2012; Rahman, 2020).

On the contrary, publications in support of qualitative research have emerged since Guba's (1981) and Guba and Lincoln's (1982), research which emphasises how the qualitative method can be considered trustworthy (Anney, 2014). Furthermore, Raham (2020) explains that the qualitative research approach can fully comprehend the experiences of individuals in specific settings (Interpretivist). Similarly, Denzin and Lincoln (2011) claim that qualitative research should be viewed as an interdisciplinary field that takes into consideration interpretive techniques, research methods, and a broader range of epistemological perspectives of understanding human experiences. Furthermore, Maxwell (2012) states that the use of qualitative research approaches enables the researcher to have a flexible structure as it is an interactive approach, where the design can be constructed and re-established to a greater extent. Moreover, Mohan (2012) concurs that the use of a qualitative research approach should be executed as it enables the researcher to understand the complexities in human experiences. In light of the arguments made in support of qualitative research, the researcher decided that this approach is most suitable, despite its criticisms.

4.6. RATIONALE FOR A CASE STUDY RESEARCH DESIGN

Selecting a research design is a critical part of any research. It provides a guidance (Sileyew, 2019) and defines the study type of the research, which may include correlation, semi-experimental, descriptive, review, experimental, and meta-analytic. Furthermore, for a qualitative research design, researchers utilise ethnographic and anthropological methods to study the research participants (Watson and Lowhorn, 2007). Furthermore, Trochim (2006) states that selecting the correct research design is imperative, as it is the glue that solidifies the entire research study. In addition, Dannels (2018) claims that regardless of the sophistication used for the analysis, the study's conclusions could still yield as insignificant if the incorrect research design was used (Miles and Huberman, 1994).

For the research design of this study, a case study was used. According to Yildirim and Simsek (2013), a case study is a research design that can be used within qualitative studies. Arseven (2018) explains the crucial steps that need to be followed when executing a case study approach. These steps include identifying the research problem, having a defined unit of analysis, having an appropriate sampling technique to identify research participants, developing a data collection tool, analysing data and lastly, making analytic generalisations that are based on the existing literature. Moreover, Flyvbjerg (2011) argues that case studies were one of the first types of research designs that were used for qualitative research and that most of what is known today about the empirical world are due to the use of case

study research designs. However, Starman (2013) views a case study as a scientific approach or method, as opposed to a design. On the other hand, Kohlbacher (2006) argues that a case study cannot be explained through the methods utilised, but rather through the interest and theoretical application of the study.

According to Hafiz (2008), the qualitative case study approach enables the researcher to explore the topic of interest through the utilisation of various data sources. Furthermore, Yin (2003) and Stake (1995) each propose a way in which the case study can be executed. According to Yin (2003), the four key principles that need to be considered for a case study are the how and the why questions of the study, manipulation of variables that cannot occur, ensuring that contextual conditions that are significant to the study are covered, and lastly, being aware when the relation between the context and the research is not clear (Kohlbacher, 2006). Stake (1995), on the other hand, considers a case study to be entirely qualitatively focused and takes a philosophical view, where the research underpin a constructivism paradigm (Appleton, 2002).

In this study, the researcher followed the case study approach as explained by Yin (2003), where the four key principles guided the research. More specifically, the study aimed to identify the factors affecting the ethical use of data within the selected organisation (case study) and to make informed generalisations from the data collected and with the use of theoretical literature (conceptual framework).



4.6.1. Challenges of the case study design

With the use of case studies, there are challenges to using this type of research design. According to Starman (2013), case study designs yield many challenges, such as being context knowledge-driven as opposed to theoretical knowledge-based. Secondly, case studies cannot contribute value towards scientific research, as it may be difficult to generalise one case study. Thirdly, it is difficult to establish general theories and propositions based on one specific case study (Flyvbjerg, 2006). Fourthly, case studies are often considered difficult to conduct, are too lengthy and consist of too much documentation (Yin, 1984). Lastly, Malterud (2001) shows that findings that result from the use of qualitative case studies are not considered facts that generalise a population, but are merely notations, theories, or descriptions relevant to a specific setting.

Furthermore, to combat some of the criticisms made against case studies, Zainal (2007) explains that case studies may be lengthy and consist of a tedious amount of documentation that could lead to poor and ineffective data management. Addressing this challenge would be to separate the study and include other methods to obtain the validity of the study. Furthermore, Tellis (1997) states that if all

parameters are established regarding the research, even a single case study would be deemed as acceptable on the condition that it met the defined objectives. As such, this research tried to combat the criticism of using a case study by ensuring that the objectives were clearly set and that by using the case study method, the objectives could be met.

4.7. DATA ANALYSIS

4.7.1. Research site and time horizon

Fifteen working individuals within a financial services organisation participated in the study. These participants work at the research site required for the study. The research was conducted from the year 2020 to 2021. Semi-structured interviews took place via MS Teams during December 2020. The responses of the research participants, their identities, and the organisation they work at remained anonymous and/or confidential. The organisation was not disclosed in reporting the findings of this study and numbers were assigned to each participant to protect their identity, for example, participant 1, participant 2, etc.

4.7.2. Research participants

Non-probability, purposive sampling, also referred to as judgement sampling (Foley, 2018), was used for this study. Non-probability sampling suggests the probability that the subject selected is not random and that, the results of criteria selection is bias within the research study. The type of non-probability sampling techniques include purposive/ convenience sampling, snowball sampling and quota sampling (Acharya et al., 2013). Purposive sampling can be defined as the selection of subjects based on the judgement of the researcher or on the representative sample idea needed for the research (Vehovar, Toepoel and Steinmetz, 2016).

Furthermore, the use of non-probability sampling can provide accurate results like that of probability sampling. However, there are two factors to ensure accuracy for non-probability sampling. According to Sarstedt et al. (2018), for non-probability sampling to yield accurate results, the sample of the population should not be correlated with any variables within the study and, must be accounted for through adjustments prior and thereafter data collection.

According to Etikan et al. (2016), through the purposive sampling strategy, the researcher can select a sample without needing to consider underlying theories and without focusing on having a certain number of samples. Simply put, the researcher can decide what variables should be known and can find research participants that can provide information based on their experience and knowledge on the subject matter (Bernard, 2002). Furthermore, Patton (2002) notes that non-probability sampling

is typically used within qualitative research to recognise and select the information that is rich in knowledge. Similarly, Cresswell and Plano (2011) agree this can only be achieved by ensuring that the selection of the sample are skilled, well informed and experienced, and that these are in line with the interest of the study.

The population sample of this study was the financial services Customer Analytics departments, which consists of the Customer Analytics Analysts, Customer Experience Analysts and Data Analysts. The participants selected for this study are subject matter experts. Therefore, the researcher decided that these analysts are best suited for this study. The data were thus collected from these individuals.

This sampling technique was best suited for the study as the researcher selected the group based on their knowledge, and especially because the researcher was targeting a specific population group that has highly skilled individuals. This group could not have been selected if another non-probability or probability sampling technique was used. Although there are many other sampling techniques, such as quota sampling, convenience sampling, self-selection sampling and snowball sampling, it is evident, that purposive sampling was the most appropriate technique due to the nature of the group that the researcher intended to target.

Below is a table which captures participants' information, particularly their job function, years of experience, and age. This provided context as to why these research subjects were selected.

Table 4: List of participants

Participants	Job Function	Years of experience	Age
Participant 1	Senior Customer Analyst	8 years	30 years old
Participant 2	Senior Customer Analyst	9 years	36 years old
Participant 3	Senior Customer Analytics Analyst	5 years	36 years old
Participant 4	Senior Data Analytics Analyst	10 years	39 years old
Participant 5	Data Analytics Manager	8 years	46 years old
Participant 6	Customer Experience Analyst	7 years	31 years old
Participant 7	Senior Customer Analyst	9 years	35 years old
Participant 8	Customer Analytics Manager	8 years	36 years old

Participant 9	Senior Customer Experience Analyst	9 years	33 years old
Participant 10	Customer Experience Manager	11 years	45 years old
Participant 11	Customer Analyst	5 years	32 years old
Participant 12	Customer Analyst	9 years	36 years old
Participant 13	Senior Customer Analytics Analyst	6 years	30 years old
Participant 14	Senior Customer Analytics Analyst	13 years	38 years old
Participant 15	Data Analytics Analyst	4 years	30 years old

4.7.3. Data collection instruments

The data collection instrument that was used for this research was an interview schedule. According to Luenendonk (2016), an interview schedule can be defined as a set of questions that have been formulated by the researcher, which is used to guide the interview process. Similarly, Prescott (2011) states that utilising an interview schedule allows a certain extent of control with a defined amount of freedom to establish the interview. Furthermore, Barrett and Twycross (2018) note that an interview schedule is developed before the interviews, as it takes into account a substantial review of the literature of the defined study.

Based on the knowledge gained from the literature reviewed in Chapter 2 and the principles that were selected from the proposed conceptual data ethics framework developed in Chapter 3, the interview questions were developed. The interview schedule is shown in Appendix C.

The proposed data ethics framework (conceptual framework) informed the design of the interview schedule and was thus developed through the following steps:

- a. Identifying the number of participants for this research
- b. The time duration of interviews required
- c. Developing the questions that were asked
- d. The preparation of how the interview would flow

Furthermore, the interview schedule contained nineteen open-ended questions. The questions were answered by working professionals within the Information Technology (IT) and Customer department, with different business units such as Data Analytics, Customer Analytics and Customer Experience.

Each question encouraged these participants to provide their insight, their perspectives, and their knowledge of data analytics.

The interview questions cover an array of themes that were informed by the conceptual framework, such as:

- roles and current access to customer data, measures, and controls in place to facilitate data privacy, quality, biases, and errors,
- understanding of ethical behaviour concepts relevant to data analytics, frameworks, policies, and governance within their organisation,
- legislations that affect their industry and understanding data ethic laws from both the customer and analyst perspective, and
- how analytics improves their business and how their roles contribute towards their organisation's overall data strategy.

Before the themes could be established, the questions for the semi-structured interviews were developed based on the conceptual framework. As such, the researcher was able to identify how this organisation ensured that its customer data is being utilised ethically. In addition, the researcher was able to identify if any additional factors needed to be considered when investigating the factors affecting the ethical use of data. Moreover, having the conceptual framework as a basis for question development enabled the researcher to formulate questions in a manner that the research sub-questions could be answered.

It is evident that this type of instrument was best suited this type of study as it enabled the researcher to find greater insights regarding the factors that affect the ethical use of data, when trying to personalise customer experiences. Furthermore, it enabled the researcher to probe all participants to provide meaningful answers by allowing them to elaborate on their answers and provide further context. The researcher was therefore able to make informed conclusions due to the research instrument being developed correctly.

4.7.4. Qualitative analysis

The data gathered for this study was qualitative and can be found in Appendix D. The data from this study was analysed through a qualitative lens to assist the researcher with the empirical data analysis. Wong (2008) describes data analysis in qualitative research as the process of arranging, analysing and systematically searching through notes, interview transcripts or all other non-textual data that the researcher might have accumulated to improve their overall understanding of the phenomenon being explored.

Furthermore, Connors (2018) explains that there are crucial steps to conducting a qualitative analysis. These include gathering feedback from all participants, coding all collected information into themes, identifying various trends and patterns in the collected data, looking for all meaningful information and lastly, interpreting and reporting on all findings.

According to Khan (2008) and Easterby-Smith (2008), processing raw data is considered the first step in data analysis. Similarly, Akinyode and Khan (2018) add that processing of raw data includes data logging, which consists of documenting every form of data collection, views, insights, feeling, ideas, and assumptions about the subject matter.

The second step in the data analysis stage is coding the data. Creswell (2007) and Creswell (2012) describes coding as the process of breaking up and classifying the text data into comprehensive themes. In addition, Attride-Stirling (2001) describes coding as the process of tagging content relevant to a specific theme.

The third step in data analysis is identifying trends in the data. Braun and Clarke (2006) state that the codes created are mapped against context to create themes. These themes capture significant information regarding the data and regarding the initial research questions asked, with meaning attached to it (Castleberry and Nolen, 2018).

Lastly, the meaningful data will be incorporated into a report, where all findings are interpreted. According to King (2004), the final step of data analysis can be defined as a continuation of the overall analysis and interpretation. In addition, Kiger and Varpio (2020) state that the final report should tie up all the codes and themes into meaningful descriptions of the research that was conducted.

In line with the steps provided above, the software used to analyse the data in this study was Atlas-Ti (ATLAS. Ti, 2018). This software tool greatly assisted the researcher in coding the data into themes once all the information was coded. It enabled the researcher to run various reports, which made it easier to write up the overall findings from the data collected.

The researcher intended to have face validity with this study, which is the degree to which a result measures what it intended to measure (Williams, 2018). This was achieved by establishing rapport with the research participants. The researcher also ensured that the study conducted was reliable by ensuring that the participants listed as the unit of analysis were the only individuals exposed to the open-ended questions.

Furthermore, the researcher made use of thematic data analysis on the open-ended research questions and the data received. Caulfield (2019) explains that a thematic analysis is a method used to analyse qualitative data and is usually applied to interview scripts and various sets of texts. The researcher thus examined the data collected to identify common themes, such as, ideas, patterns and topics of various meanings that occurred repeatedly in the data. Mortensen (2020) further states that an advantage of using this method is that it is considered flexible, suggesting that it could be utilised in both explorative and deductive studies.

The themes of the study were influenced by the data ethics frameworks utilised to frame the questions being addressed within this study. The data ethics framework was utilised by the researcher as core input, due to the themes identified being relevant to what factors any financial services organisation should consider when working with customer data. The researcher thus identified relationships between the information received from participants and the occurring themes of the current data ethics frameworks. Additionally, the data was presented in the respective themes, by using the qualitative tool Atlas-Ti. As such, the researcher was able to obtain a report providing an overall view of all data being classified together into their respective themes.

4.8. SUMMARY

This chapter provided a discussion of the research process executed in this study. Detailed descriptions and justifications were provided for why certain decisions and strategies were selected for the study. Utilising data that was provided in 2020 enabled the researcher to obtain meaningful insights into what is currently happening within financial services organisations. The data collection tool used for the study aimed to ensure that reliability and validity could be measured. This could be established as the conceptual framework that was used to guide the research interviews ensured that the questions being asked were based on what literature currently exists, as discussed in Chapter 2. All research objectives and aims were clear, and the researcher was able to achieve those outcomes in this study. Lastly, table ... depicts a summary of the methodology choices detailed in this chapter.

<p>Research Paradigm</p>	<p>This research utilised an interpretive study approach as the researcher aimed to seek a deeper understanding and explanation of the subjective topic, factors affecting ethical data use to improve personalised customer experience. Pham (2018) notes that this research paradigm focuses on obtaining a deeper understanding of a phenomenon, taking into consideration the various complexities instead of generalising an understanding for the entire population.</p>
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<p>Research Method</p>	<p>the methods utilised as a part of the chosen paradigm is a case study. This paradigm enabled the researcher to explore and investigate, whilst at the same time probing participants' views, values, perceptions, perspectives, and thoughts. It also focuses on individual experiences and how those individuals share meanings. Furthermore, this paradigm highlights that social reality is regarded and perceived by individuals according to their ideological stance. This was therefore explored by the researcher to understand how various meanings are constructed.</p>
<p>Research Approach</p>	<p>A deductive qualitative research was followed for this study This approach was found to be most suitable because firstly, deductive qualitative research takes into account the departure point and the theoretical applications discussed in the literature (Chapter 2) and applies these propositions to the collection and analysis of data (Boyatzis, 1998; Fereday and Muir-Cochrane, 2006; Hyde, 2000). Secondly, the appeal of deductive qualitative analysis is highly recommended with the use of case study research (Yin 2014).</p>

In the following chapter, an in-depth analysis and interpretation of the data produced in this study is provided.

CHAPTER 5: ANALYSIS AND INTERPRETATION OF DATA

5.1. INTRODUCTION

This chapter will present the empirical data that was collected and analysed for this study. The research questions as well as the relevance of the core components of the proposed conceptual framework will be addressed in this chapter. Throughout the chapter, the findings will be linked to a core component of the conceptual framework and to the literature reviewed in order to grasp a full understanding of the data. Thereinafter, the chapter will consider the additional core components discussed in the data that was not established as part of the conceptual framework.

5.2. FACTORS AFFECTING THE ETHICAL USE OF DATA

As stated in the previous chapter, the data was collected through semi-structured interviews via Microsoft Teams. Participants who deal with personal data in the organisation on a daily basis were interviewed. Additionally, the interview questions were developed based on the core elements of the conceptual framework to determine the factors affecting the ethical use of data within the organisation.

This chapter documents the responses of participants using the conceptual framework. The data received from the participants have been allocated to the relevant code, based on the proposed conceptual framework. These questions were posed to determine if all core elements of the proposed conceptual framework had been implemented or if it had been considered important.

Under each category, responses are discussed, interpreted, and analysed against the literature reviewed. The codes consist of ten different themes, namely, information quality, accountability, safeguard of data, privacy contract, data participation, integrity and confidentiality, process limitation, data property, data subject expectation, and cultural change. The codes were created based on what the conceptual framework was intended to investigate for this particular case study (organisation). Furthermore, only responses relating to the codes defined will be presented in the discussion, with the outliers being discussed thereafter.

To avoid repetition, the codes have been assigned numbers 1-10, making it easier for the discussion to flow without the use of repeated concepts. Please see Table 5 below.

Table 5: Codes Assigned to Themes

Core Concept	Code	Origin
Information Quality	Principle 1	(South Africa POPI Act, 2013)
Accountability	Principle 2	(General Data Protection Regulation, 2016)
Safeguard data	Principle 3	(South Africa POPI Act, 2013)
Privacy- social contract	Principle 4	(Martin, 2016)
Data participation	Principle 5	(General Data Protection Regulation, 2016; South Africa POPI Act, 2013)
Integrity and Confidentiality	Principle 6	(General Data Protection Regulation, 2016)
Process Limitation/ Purpose Specification	Principle 7	(General Data Protection Regulation, 2016; South Africa POPI Act, 2013)
Data Property	Principle 8	(General Data Protection Regulation, 2016; South Africa POPI Act, 2013)
Data subject expectations	Principle 9	(South Africa POPI Act, 2013)
Cultural Change	Principle 10	(Yang et al., 2019)

5.3. QUALITATIVE DATA ANALYSIS

A total of fifteen participants took part in the semi-structured interviews. In total, nineteen questions were developed based on the proposed framework to gauge whether the organisation was using data ethically. These questions are attached as Appendix C. The researcher coded the raw data from the interviews into meaningful themes based on the conceptual framework developed. A report is attached as Appendix D, which provides the codes used and the grouping of raw data into the respective themes. The data was analysed using the software ATLAS.Ti. From this report, the researcher was able to provide an overview for each principle listed above in Table 5.

5.3.1. Information quality

According to Sarfin (2021), information quality is crucial to any organisation, as it examines whether data can serve the intended purpose. Laumer et al. (2017) claim that information quality is measured through relevance, personalisation, security, accuracy, consistency, and ease of understanding. Furthermore, Azemi et al. (2018) state that information quality is an important factor for organisations, as it provides a competitive advantage, through improving their decision-making processes.

There is a clear consensus that all analysts working with data “are very good at understanding [their] data” (Participant 1,2,5,6,8,11,12 and 14). The data from this study revealed that all participants have a clear understanding of information quality, and how this impacts them in their role when using customer data. According to Lillrank (2003), for information quality to be successful, the expectation is that the information is understood by the user and if not, the quality of information is not considered good.

All participants indicated that there is a strict process to ensure that their data is free from biases and errors as it was identified that there are strict rules around how their data is structured and maintained in their Data Warehouse. Rarely do the analysts receive an error in their data as it is checked before utilisation. This is evident as participant 2 states:

“the data has been checked already by the IT team. [In addition], quality checks are also conducted on the data to ensure data is free from bias. There are reports we can also refer to that high level indicates what we should look out for. This enables us to refer back if we are uncertain about something in the data sets”.

Therefore, the data goes through a validation check, which ensures that analysts are working with data that has been quality approved. This enables accurate analytics to be conducted on the data received. In the event that analysts are faced with errors in the data, they can flag the errors before using the data for analytics and draw conclusions that might impact any strategy recommendations. According to Kinney (2000), information quality should have measures in place to ensure that the data is truthfully displayed (credible and reliable).

One of the main ways of guaranteeing that the information has passed the quality check, is by verifying that,

“the quality, integrity and sustainability of that data [are] in place, [which] is also done through the governance forum” (Participant 4).

This organisation has an additional measure to ensure information quality, which is through a data quality forum, and which includes all analysts in the organisation. According to Vishnu and Saggurti (2021), a data quality forum consists of individuals that are equipped in data analytics research, where these individuals provide insight into data quality tools and how to enhance data quality through the execution of best practice tools within the industry.

Another way in which data remains free from bias and error in this organisation is by the employee role level within the organisation. This indicates that decisions for strategies can only be made on a role level. In addition, when creating data strategies, the analysts ensure that they view data from a holistic view rather than at a granular level (Participant 5). According to Walsh (2015), a holistic view of data enables information to be used more consistently and efficiently throughout the organisation. This suggests that making decisions based on a holistic data set enables this organisation to have no biases in their strategy recommendations. Moreover, another participant mentioned that their team keeps up to date with current news and that by doing so, it enables them to be aware of any new data variables that might emerge as discriminatory (Participant 13). As such, the data goes through a facilitated peer review/ governance forum for quality checks (Participant 8). Additionally, if new variables emerge based on trends in South Africa, they will be addressed immediately in the forums, so that no anomalies are found in the datasets.

Due to organisations becoming more dependent on information, having quality information is significant for the success of any organisation (Hartono et al., 2010). Additionally, Davis and Golicic (2010) note that not only does quality information contribute towards the overall success, but it also provides support with decision making, which yields an added value for the organisation. Based on participants' responses, they understand what it means to have quality information and are aware of

how their firm ensures that the data used to make decisions to develop strategies are from reliable sources.

5.3.2. Accountability

The concept of accountability has emerged from various social sciences, including studies about governance in organisations (Mayernik, 2017; Bovens, 1998). However, the concept of accountability has emerged as a significant theme in data protection regulation, organisation practices, and policies, which are considered essential to privacy management (Falk, 2016). Additionally, accountability takes into consideration the compliance that individuals need to follow and how they answer to a regulator (Golden Data Law, 2019). Therefore, the focus of accountability is defined as governed behaviour (accountable) with regards to sensitive customer data (Jaatun et al., 2020).

Participants 1-15 indicated that they have a clear understanding of what it meant to be held accountable for the sensitive customer data being used. They also understand the consequences of not using data ethically. The main themes that resulted from taking accountability for data misuse were employee dismissal, brand damage, fraudulent activity, fines/ penalties from the regulator, all of which ultimately impact the overall customer experience. This indicates that participants are aware of what it means to be accountable for customer data that they use and are aware of the consequences of data misuse. Some of the feedback on the repercussions for data misuse within the organisation included the following:

“You can lose your job and it can be a criminal offence if found fraudulent” (Participant 1).

“The consequences vary depending on the severity of the situation, it can go from disciplinary hearings to losing your job, which could even go up to being a criminal offence” (Participant 2).

“because we are a value-driven organisation it would be treated in the most severe way, ending up in a disciplinary hearing or depending on the severity it would warrant instant dismissal” (Participant 5).

“the individual needs to take accountability and ownership for their error/ misuse of data. Overall, the individual could end up getting fired if any information were to be leaked” (Participant 9).

“I think the consequences are massive. If you are found to have a breach, apart from the brand reputation stuff, would have a significant impact on the bottom line of the business. You will also be fined if found guilty” (Participant 10).

Moreover, another question was posed to the participants to determine if accountability was a principle included in their organisation’s data strategy. According to SAS (2021), an organisation’s data strategy is a roadmap to guide them on how to harness its data capabilities. It represents business intelligence, big data, and data management and includes an in-depth view of existing data structures with an overview of accountability and ownership of data. Additionally, Solanki (2018) argues that a comprehensive data strategy will foster greater accountability within the organisation. Therefore, when data maintenance and use is governed by a defined strategy, it removes inefficiencies and improves collaboration throughout the organisation. MchAllister (2021) further states that as industries move into the second wave of digital transformation, there will be rapid acceleration towards cloud data strategies, where data governance will remain an element that organisations need.

From the participant feedback that has been analysed, it is clear that they are aware that their organisation has a data strategy and that it is well defined. However, most of the participants couldn’t confirm if it covers the elements of accountability and the ethical use of data, as seen in the extracts below:

“I would say we do have a defined strategy for data in the organisation, however the exact principles, I can’t confirm if the strategy focuses on those elements” (Participant 1).

“I do think we have a data strategy. One of the components should definitely be the ethical use of data. However, I haven’t seen such a document. But I’m pretty sure something like that exists” (Participant 3).

“Yes, however, I haven’t exactly looked at the strategy, but I would assume the strategy covers those elements” (Participant 12).

“I believe we do have a strategy. But I do not know the exact ins and outs of it” (Participant 13).

“I am vaguely aware of a data strategy. But I think our data strategy has matured enough where they have given certain people accountability of the data” (Participant 14).

However, those who work closely with the data, such as those who get the data from the source and make it readily available for analysts, were able to note that those two elements are covered. Five out of the fifteen participants advised that they know with certainty that the data strategy covers those elements, whereas the remaining ten assumed that those elements are covered within the data strategy. Some of the participants' feedback are documented below:

“There is quite a clear strategy, especially for the fact we are moving to digital. And again, everything will be aligned with the ethical use of data. Especially with the shift to being POPIA compliant” (Participant 2).

“So yes, we have a defined data strategy, it is included in our terms of reference of our data and analytics forum” (Participant 5).

“Within the terms of reference, there are elements that not only speak to the ethical use of data and accountability but also the quality and the integrity of the data” (Participant 4).

“The controls around the access of data have stringent rules as well” (Participant 9).

“There are very detailed prescriptions around all of the use of data” (Participant 10).

These extracts indicate that this organisation might have a well-defined strategy, where the relevant topics are covered such as accountability. However, there is a lack of certainty in knowing if those topics are covered.

According to Burton (2020), organisations need to invest in data awareness training, especially if the organisation utilises data. This will help employees feel certain about the data products that they use. In addition, Bownman (2020) states that having a strategy without awareness can lead to the organisation becoming oblivious to developments and changes to the existing strategy. Furthermore, Falk (2020) comments that accountability is an emerging principle that organisations have to take a proactive approach with to ensure that the implementation of appropriate data protection measures are in place.

5.3.3. Safeguard data

Safeguarding data can be defined as protecting the data that is used to exchange information between employees, systems, customers, and third parties (Pick, 2021). Furthermore, it needs to be done in such a way that accessibility and use of data are available for data analysts (Jain et al., 2018).

From the feedback received from the participants, it was identified that there are measures in place to ensure that data is protected. There was also an indication that the organisation has policies available for employees to read up on (Participant 15), which covers how they can best ensure that data is protected through their daily work activities. Moreover, Participant 4 mentioned that there are also additional measures, such as governance forums, to ensure that data is being used ethically. Furthermore, Participant 3 comments:

“Whenever we present something, there are many channels of criteria and sign-off required. So, by giving everyone the correct platform to sign off their data strategies before implementation. We are creating that ethical waterfall before we get to the end product”.

Another finding from the data is that this organisation has an Information Security department, which

“constantly conducts checks to make sure [that] there is not [unethical] behaviour taking place” (Participant 7), and which

“conduct[s] annual audits and checks on everyone that utilises the data and to see what they have been doing with that data” (Participant 15).

This ensures that sensitive data is being protected through stringent measures by analysts using customer information. An interesting finding was that this organisation is a “values-driven” organisation, indicating that all employees have the moral code of being ethical and always ensuring that their customer data is being protected. This is further evident as participant 8 mentions:

“Within the data environment, a data governance forum exists, and it governs how you structure the data and how to protect the data. It’s also subjective and based on our organisation’s values, that analysts will use data ethically”.

Based on participants’ feedback, it is clear that this organisation does have a means of keeping data safe. There are also additional measures ensuring this, such as having a dedicated department which ensures that all data being used throughout the organisation is protected. Finally, this organisation ensures that policies are updated to inform employees how to best protect the customer data that they work with, whilst adhering to the values of the organisation, which include putting the customer first.

5.3.4. Privacy-social contract

Privacy as a social contract can be defined as a contract about how information is shared and used, and is mutually beneficial within a community (Martin, 2016). This contract has been introduced academically by Culnan and Bies (2003) and empirically by Martin (2012). It focuses on the body of privacy, taking into consideration how, why, what, and between whom information flows within the specified context (Martin, 2013).

Moreover, Fogel and Nehmad (2009) state that a social contract as a hypothetical contract, in the context of online communication, is where customers feel safe and protected when providing their data to online channels. Therefore, when customers trust that organisations will use their data appropriately and keep their information safe, they perceive the social contract as being trustworthy (Wang, Min and Han, 2016). However, when customers are concerned and lack trust in organisations data use, they perceive the social contract as less reliable, leading to them not wanting to share their personal information with organisations (Kruikemeier, Boerman and Bol, 2020).

It is evident from the responses of the participants that their organisation provides customers with knowledge regarding their data use. Specifically, in the context of privacy as a social contract, being transparent and providing customers upfront with the contractual obligations enables them to feel at ease. This is emphasised as participant 2 states that,

“customers definitely need to understand exactly what they are opting into regarding certain communications”.

Additionally, participant 4 adds:

“in the case of any social media platform for example that you might sign up to or any company’s products or services. As soon as a customer makes their personal data available to them, the customer needs to know what their privacy policies are. How are they going to protect your data and the use thereof? These policies need to be readily available on their company’s website, blogs, or social media platforms. Also, the customer needs to have access to this information before signing up to any products and services so they can to make informed decisions”.

Moreover, participant 10 states:

“There are so many opportunities for customers to be taken advantage of and for their data to be used against them and harm them. I think it’s a huge risk and many still don’t understand

how dangerous it is for their data to get out there and be used by fraudsters, etc. So, I think it is imperative that customers understand the who, what, why and how of their data being used”.

Furthermore, participant 1 mentions that the terms and conditions are another contractual obligation to their customers to ensure they have data protection. It was established that

“as more people become digitally enabled, especially from a South African perspective, [their] customer base will have the protection of their data become more important to them, therefore organisations need to become more transparent with the customers” (Participant 1).

Awareness regarding data usage and creating a sense of privacy as a social contract are identified from the feedback of these participants. They allude to the fact that customers should be well aware of the overall intent upfront during the onboarding of new customers (application stage) (Participant 8). This way, they are aware of their rights to opt-in or out of promotions, marketing, etc. Another finding is that participants feel that customers are still not fully aware of what organisations use their data for, leaving them open to fraudulent activity.

Furthermore, participant 14 mentions that:

“Most consumers are not as worried about their personal information” (Participant 14).

Even in this instance, customers should be informed upfront about their personal data lifecycle within the organisation.

Research in law, philosophy and information systems have shown that respecting the privacy of data entails understanding the embedded privacy norms about why, what and with whom personal data is shared (Martin, 2016). Additionally, participants’ responses reveal that in their organisation, different channels in which customer data is collected creates privacy as a social contract upfront with their potential new customers. By gaining customers’ trust, these organisations can benefit from the data that they receive and ultimately be rewarded with the loyalty of their customers.

5.3.5. Data participation

Data participation can be defined as receiving consent to use one’s personal information. It can thus be seen as consent based on legal grounds to process personal information under specific data regulation laws (Edwards, 2016). Consent can be given if there is a clear understanding from the

customers' perspective of the consequences and implications of actions (Politou et al., 2018). Philip (2014) agrees that the extent to which customer data is exposed to the benefits and risks can be defined as data participation. Furthermore, having data participation from the customer can enable the organisation to improve its current compliance structures (Fu and Geng, 2019). Thus, before data collection can take place, consent from customers' must be obtained (Fatema et al., 2017).

Participant 5 mentions that their organisation requires consent from all new customers within their onboarding stage. Customers are notified about the terms and conditions of the company before providing any sensitive data. Furthermore, participant 3 mentions that as part of their data participation/consent process, customers have the right to opt-in to marketing and their data being sent to third parties. A finding from the data is that before customers provide consent for their data use, they should have a right to understand the current policies and governance that the organisation has in place to protect their data. An overview of the participants' responses, which indicate their understanding regarding customer consent, are documented below:

"I think consumers should have the right to know and ask any point in time from any organisation they have dealings with. I think consumers are not fixated with the jargon but more so interested in what you are doing with their data. I think customers need to feel assured their data is safe and that it's not being shared" (Participant 5).

"Yes, I definitely think customers should be aware of this" (Participant 7).

"I think from a consumer perspective it is good to know. Especially if you are giving out your personal data and these organisations are using it" (Participant 9).

As digital technology is increasingly being adopted by consumers, consent plays a vital role in ensuring that the use of that data collected can provide opportunities for the organisation to develop their customer engagement, whilst ensuring that their data is kept safe (Anat et al., 2020). In addition, Bleich (2021) states that consent management should be a top priority for organisations in 2021, as customers are concerned about their personal data. Organisations should ensure that they provide customers with the ability to have access to general organisation policies, which cover how the organisation uses their data, and which ensures that it is easy for the customer to understand. In line with this, participant 10 states that it is imperative that customers understand who will use their data, what data will be used, why it will be used, and how it will be used.

5.3.6. Integrity and confidentiality

Data analytics is central to modern online services, specifically those that are data driven. Analytics involves the processing of data that includes sensitive and personal information relating to either the organisation or the customer. Therefore, data integrity and data confidentiality become significant in ensuring that the data is secured (Le Quoc et al., 2019). According to Liu et al. (2017), data confidentiality can be defined as data that is only viewed by authorised individuals, whereas data integrity can be defined as maintaining that data throughout its life cycle. In addition, Chapple (2018) claims that confidentiality considers data, resources and objects that are protected in terms of viewing and access. Thus, integrity focuses on data that is protected from changes that are unauthorised to ensure accuracy in the data.

The responses from the participants indicates that their organisation has strict measures in place when it comes to accessing certain data within their data warehouse. Accessibility is also restricted based on one's role and overall use of the data. This is clear from participant 2's response below:

“So, there is strict control around who can access the data. So, there is authenticated logins that you need to use, and very strong passwords generated by the IT team. They are also able to monitor what we are doing, seeing how much data is moving and who is utilising it”.

Schuster et al. (2014) state that confidentiality and integrity of data must ensure that strict measures are in place, especially to ensure that nothing can be changed by any attackers. There are more measures in place to ensure the overall analytics done to the data is tracked to ensure not only accountability but that data tables used apply reliable data. Participant 1 indicates that the organisation

“has certain restrictions to certain tables in the data warehouse”.

Moreover, participant 3 adds:

“we track every single query that someone runs, so we can ensure nobody is extracting information for unethical purposes. So just because the information is there doesn't mean you are just able to go look up someone's address or gross. We can track every single user, the script they are running and when so that we can validate whether they are doing it for the purpose of which they said they were”.

Therefore, in order to ensure that confidentiality and integrity of data being stored, processed, and communicated is not being compromised, organisations need to ensure that they understand these

concepts as the risks are measured for their potential competence to compromise either one or all of these concepts (Gil, 2020).

Another finding relating to data accessibility is that apart from having strict logins to their data warehouse, it was not as simple to extract the data. If analysts require access to data, they need to go through an approval process in their department before being able to access the data tables that they require. Access to data is also requested on the departmental level, where there are some processes you need to go through to get access to the data. Participant 4 states:

“This entire process is governed through our data and analytics forum. So, we know for this particular department, this team, group, or individual needs access to this particular data. Where it’s just read/ write access it gets controlled. We also need to know the intention behind the requirement of needing the data.”

Moreover, another factor that is taken into consideration is one’s overall role in the organisation, as that informs the type of analytics you would need to conduct on the data. If your role does not require any data usage, access to the data warehouse will not be granted. Participant 15 explains:

“you will have data restrictions, so certain areas will only be able to access certain sets of data”.

This indicates that there are strict measures in place for data access, which will only be granted based on one’s role and if authorisation to use that specific data tables has been granted.

Maintaining the overall lifecycle of the data is another outcome identified. This is controlled and managed by the information security team within this organisation. This department ensures access to data usage that is reviewed quarterly to monitor if any user needs to be removed (participant 5).

Additionally, in terms of maintaining the data in the organisation’s current infrastructure, participant 8 comments that:

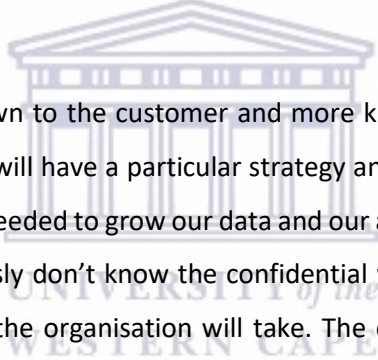
“it is [very] much secured in terms of the infrastructure server built. There will be backups [available], [and] there are firewalls to protect the organisation’s data”.

Therefore, if the overall data lifecycle can be a core focus for the organisation through maintaining access to sensitive data, data integrity can be attained (Brook, 2020).

5.3.7. Process limitation/ purpose specification

Process limitation can be defined as the barrier to how much can be done with data. Data controllers need to specify the reason for data collection and ensure that it is being processed for the purpose it was collected (Von Grafenstein, 2018). Furthermore, commitments made by the organisation to the customer needs to be upheld in terms of the use of their data. Organisations can share data with third parties. However, it requires consent from customers, whilst advising why third parties require their information. Moreover, before organisations share data, some transformation to the data might take place, such as tokenised sensitive data (Fatema et al., 2017). However, Forgó, Hänold, and Schütze (2017) comment that when data is collected, the purpose of data collection might still be unclear for the organisation as they want to collect as much data as they can from their customers.

In this study, all participants alluded to the fact that customers are not entirely aware of all of the data being collected. They might have a general understanding of what is being collected, however, the customer might not know the exact analytics being conducted on their data to personalise their experiences. Participant 2 states:



“the reasons are less known to the customer and more known to the organisation. So, for example, the organisation will have a particular strategy and a roadmap to follow, and it will inform the type of data is needed to grow our data and our analytics. But from the customer’s point of view, they obviously don’t know the confidential workings of an organisation, they won’t know the roadmap the organisation will take. The organisation will however have a roadmap of the type of data they want and what they intend to use it for”.

Moreover, participant 7 adds:

“The customer is aware we have their details. But I doubt they would know the finer detail of what we are doing. So, for example, if I’m looking at a purchasing spend trend, they wouldn’t know the detail of what I’m looking at upfront. From an organisation perspective, agents ask for specific information when speaking to customers. It is stated the information will be used internally and not shared externally”.

Although the customer might not have a clear understanding of the use of their data. These participants mention that their organisation only collects data for specified reasons and will not collect data that is not needed. According to Karvounis (2012), organisations that require the use of sensitive customer data needs to be upfront and transparent with their customers about what they are collecting and about what they are using their data for.

An interesting finding is that even though customers might not know the exact analytics being performed on their data, they are provided with a high-level understanding of the terms and conditions while being onboarded for a product or service (participant 5). According to Morey, Forbath and Schoop (2015), consumers might be poorly informed of the exact data being collected from them, however, they are aware that their personal data is being used. Due to this organisation being in the financial services industry, they need to inform their customers upfront that they will require their consent to obtain additional information from the bureau. This is evident as participant 3 states:

“So, when we collect data, we definitely know what we are going to use it for. In my team specifically, we use it for making decisions based on the analytics we do. From the customers’ perspective when they do the application there are various T’s and C’s, whether they read it or not, I doubt. But I know they give us consent to extract their data from the bureau. They definitely are aware, and they need to provide consent for the purpose of approving/ declining their products”.

Another finding in this study is that due to this organisation working in an industry where they market to customers that are not yet on their books, they rely on data from their parent company. Furthermore, due to this organisation having a good reputation in the financial services industry, customers are more willing to provide sensitive data without considering what it would be used for. Participant 9 provides insight into their current work environment by stating:

“We do target customers that don’t necessarily have a relationship with our company, but with the consent of our parent company. In that sense, we then sometimes, get information from those companies and sometimes those customers might not know when we do market to them, but because of our brand and who the company is affiliated with, people are more willing to trust”.

It is evident that this organisation provides customers with a view on what their collected data will be used for. However, it seems that customers do not know the exact ways in which their data is used. This could provide the organisation with the opportunity to create more awareness around their data usage and to detail their processes to the customers to enable a clear understanding should customers require more information. Participant 6 mentions:

“I don’t think the customer always understand why we collect certain data. When we sign up new customers, we ask them personal information, they don’t think about what we use it for.”

5.3.8. Data property

Data property can be defined as the rights of a subject over their data and the application thereof (Viljoen, 2020). It also takes into consideration protecting the privacy of the data through regulation and policies (Litman, 2000). However, there are no legislations to support property rights over personal data, but there are certain laws that address data as a property to some extent (Stepanov, 2020).

It is evident from the feedback received from the participants that the organisation does not focus on who owns the data (participant 8), but on who has certain privileges to utilise certain customer data. Based on the role of the analyst, it would determine the type of data that their department would “own” to conduct analytics. However, from a data property perspective, the organisation protects their current data infrastructure to ensure that its data property is secured and only accessed by certain roles. For instance, the Customer Analysts would obtain their data from third parties as they require the data for campaigning/ marketing to customers (Participant 1,9 10,11 and 12). Participant 1, who is a Customer Analyst, further comments:

“We would get our data from a third-party provider (Bureau) and internal data that we receive from customers via the call centre”.

On the other hand, a Customer Analytics analyst would utilise data currently saved on the organisation’s data infrastructures. Below are some of the responses from the participants who are Customer Analytics analysts:

“I use the data warehouse, or I use a platform using SAS and that is how I access the data. I use the customer data to build reports based on customer data, understanding their shopping behaviour to provide insights for better offerings to the customer” (Participant 6).

“We have an on-prem server (Oracle), which stores structured data in the likes of tables and that consists of customer information, banking information, sales and bureau information, which constitutes most of the data we work with” (Participant 8).

The third parties that do provide their customer data to this organisation require a fee for providing the information. This could be due to the third party owning the customer data that the organisation is utilising. Participant 3 comments:

“There are various credit bureaus, we extract data from TransUnion. Based on the information we extract from this bureau we conduct analytics on the data we paid for”.

Furthermore, organisations need to recognise the value of data and how it adds significant improvements to their offerings and services to customers, thus, knowing the value of owning their customer data will only contribute towards the overall success of the business (Brkal, 2020). However, a lack of owning data can be detrimental to the organisation, as data is what refines products and services to customers. In essence, customers do not want to find out that their data is not owned by the organisation they provided it to (Roskill, 2021). It is therefore important for any organisation to ensure that they own all the customer data that they collect.

5.3.9. Data subject expectation

Data subject expectation refers to the expectations of the customer providing the data and the experience they will have from providing the organisation with their data (Forbes, 2020). When consumers provide their data to organisations, they require these organisations to use their data in a meaningful manner that would benefit them, and not in any way that would impact them negatively (Mendoza, 2020). Therefore, having the trust of your customers is vital for any organisation to succeed. In addition, Engan (2017) notes that organisations need to be precise, transparent and should explain everything in plain language in order for customers' overall expectations to be met. Therefore, to provide the customer with an expectation that their data will be used for personalisation purposes ensures that they understand that their data will be used to better their offerings and experience.

The feedback of the participants indicates that there is an understanding about using customer data to impact the overall experiences of their customers positively or negatively. Many of the participants allude to the fact that there would be consequences for the organisation if their customers' expectations were not met (participants 1-15). Below are some of the responses of the participants relating to the consequences if found guilty of data misuse:

“Improper use can affect the customer experience negatively. A simple example can be a customer who opted out, but the organisation ignored the opt-out request and continued communicating with the customer, which leads to the customer having a terrible experience. Or for example, they are getting requests that hinge their right to privacy” (Participant 2).

“If we use customer data unethically and we start selling customer data to other industries and they can start marketing because they have your personal information it will have a negative impact on their experiences” (Participant 6).

“If a customer doesn't opt-in for marketing messages but you still send them communication to try and ensure they react. This is going against what the customer told you and you are in

contravention of what they wanted. Secondly, it would deteriorate the customer experience because they might feel that you not upholding their wishes and as a result close their accounts with you and move elsewhere” (Participant 8).

The opposite is true if customers data are used ethically as it will provide customers with positive personalised experiences. Participant 2 states:

“Especially if the analytics are done well, in terms of analytics that helps the customer benefit, so for example, a form of analytics that speaks to what customers dislike and that way the customer can better the products and the overall customer experience”.

Moreover, participant 4 adds:

“Once customers are aware [about] how the data is used, what the intention behind the use is and how secure it is. It will surely give them a sense of comfort and trust with the organisation and ultimately give them a much better experience. Customers’ will know they can rely on the organisation to not divulge their information to anybody. Or to use the data for any other purposes, except for what was declared”.

When customers are provided with transparency, by understanding what they can expect from the organisation, it would lead to a better experience for the customer (Liu et al., 2015).

Another finding is that this organisation ensures that they are provided with constant customer feedback through the surveys that they conduct. From this feedback, they can determine how satisfied their customers were and if their overall expectations were met. Participant 8 provides insight into the survey conducted by customers and how it affects their organisation:

“I think the more accurate your data is, the better you can respond, you can really help customer experiences. So, giving you an example of it in the customer experience space, they are responsible for survey data of customer experience data and what happens in that environment is that customers will often give us feedback and give us pretty poor scores on certain items such as I haven’t received my statements, or I am being overcharged. Based on the data coming in, you will be able to take that information and react to resolve that query and improve the customer's all-round experience”.

According to Merlo et al. (2018), encouraging customers to post their reviews and comments about the organisation, and about their products and services offered will put the organisation in a

favourable position, as they would know how to constantly improve their customer experiences or what to change to do better.

In addition, this organisation ensures that they only market to individuals who have opted in for marketing and that they understand the customer data collected to avoid incorrectly marketing to these customers. This is evident from the responses below:

“Customers are definitely informed upfront. They are asked consent for marketing purposes, so they are aware” (Participant 5).

“If I look at it from a customer’s experience and a personalisation perspective and there are customers we want to market to, and for example, they don’t have kids, but we constantly sending them vouchers for children it would result in poor customer experience. We must use customer experience correctly and align it to their behaviour and their data that speaks to their needs and them personally. This would make them feel that we care and take note of what they need. Data is so powerful, we just need to make sure we position it correctly” (Participant 9).

“It is also important that customers are aware that they can opt-out of marketing from organisations that they do not want to be a part of” (Participant 12).

“If a customer opted in for marketing and bought 10 bottles of milk, our analytics team will use this data to target this customer to be part of a rewards program, vouchers or benefits” (Participant 15).

Therefore, when marketing to customers, it is important to understand marketing from a customer’s perspective and to ensure that no boundaries are being overstepped. Customers do desire to be generalised when being marketed to (Khatibloo, 2019).

5.3.10. Cultural change

The way that change occurs within the organisation will determine how well the overall change will affect the culture of the organisation. Therefore, behaviours and beliefs will influence how individuals act within the organisation (Perucci, 2019). This impacts how well the organisation deals with change and integrates policies and rules (Young, 2020). Whilst change is inevitable, the organisation needs to ensure that when changes are made internally, all employees are aware and are in a position to transform, especially in today’s digital economy (Siewert and Marino, 2019). Moreover, Dinev and Hu (2007) states that having awareness in the organisation is crucial to how successfully rules will be

followed. It also suggests that employees know about the important concepts that their organisation might deem significant. Therefore, one way an organisation can ensure that their employees' behaviours and beliefs are being influenced, according to what the organisation requires of them, is through formal training, ethical code of conduct, regular security updates and notice of policy changes (D'Arcy, Hovav and Galletta, 2009; Parker, 1981). In addition, organisations can utilise other platforms to engage employees to provide awareness around changes in the organisation, especially through training and awareness programs via Sector Education and Training Authority (Bulgurcu, Cavusoglu and Benbasat, 2010). By doing so, the organisation can guarantee that employees will be knowledgeable and be certain of various policies the organisation has in place.

Organisations need to consider the negative impacts of not having an employee culture that is not aware of how systems and processes work. This could result in the organisation becoming vulnerable to both internal security violations and external data attacks (Hu et al., 2011; Warkentin and Willison, 2009). If organisations depict these concepts in their policies, the onus is on the organisation to ensure that they are creating a platform to enable an effective information security infrastructure (Spears and Barki, 2010). Moreover, Knapp (2012) states that organisations need to ensure that their policies are relevant and updated as this will help reduce the risk of any costly incidents through clear guidance of what is expected as appropriate behaviours from employees with regards to information security. In addition, organisations need to ensure that their policies are maintained through regular updates or a need-to basis once policies are updated and signed off. Organisations need to ensure that employee awareness campaigns are conducted. If policy maintenance and awareness are not created, it will impact employee behaviour negatively (Knapp et al., 2009).

In providing insight on whether this organisation had a formal guide to utilise data ethically, eight out of the fifteen participants said no or that they were unsure (Participant 1, 2, 3, 5, 6, 8, 12 and 14). However, the other seven participants (4, 7, 9, 10, 11, 13 and 15) advised that there was some sort of form guide. Some said that it is only for their department, whereas others said that they have not seen an actual guide. Below are some of the responses of those who are not certain of whether or not their organisation has a formal guide to utilise data ethically:

“My direct answer would be no, and I think it ties back to this level of data analytics, just the amount of data we have at our disposal now. If I think back, there hasn't been enough guidelines in this space” (Participant 1).

“Well, they have rules around how to use the data ethically. But when I joined there wasn't a detailed guide essentially. So, there are set standards and rules like you cannot market to

someone who didn't opt-in for that. Those types of business rules do exist, but I personally haven't seen it documented" (Participant 2).

"So, we don't have a formal document indicating this is how you need to use the data, and this is how you can't use it, but we do have a lot of controls in place, so all the models that we build needs to go for model validation that we outsource to another company" (Participant 3).

However, those who said that they have seen some form of formal guide also said that it was only relevant to their department, but not on an organisational level. Below are some of the responses of those who are certain of a formal guide being implemented within their organisation to utilise data ethically:

"We do have a guide yes, as a matter of fact, it is a guide I put together specifically for the data team. It's called the "Terms of Reference". It's a term of reference for our data governance and analytics forum, so that's one guide. But then that also makes use of the various policies that we have in the organisation. This also speaks to how we need to use and govern the use of customer data" (Participant 4).

"In our environment, there is a guide on how to use data ethically, especially since we work with confidential customer data. There are measures put in place to ensure all data used and analysed is done in an ethical manner. It's also largely communicated throughout our environment" (Participant 7).

It was evident that even though some participants were uncertain about a guide on how to use data ethically, they all understood the importance of having one and how it would benefit them in their daily jobs, as they work with sensitive customer data. Participant 10 referenced their organisation utilising the POPI Act as a basis to create their guides and policies. Having one out of the fifteen participants reference legislation indicates that the employees are not completely certain on whether they have a guide and what the principles of it are based on if they do.

In providing insight on awareness of their organisation having embedded policies, the majority said yes. However, some participants mentioned that policies were departmental and that they haven't seen embedded policies on an organisational level. Moreover, it is evident that these policies exist, but do not get communicated throughout the organisation. Participant 1 states:

“We have data policies, but I don’t think it is communicated enough. I don’t think the message is brought across enough”.

In addition, participant 2 mentions that their embedded policies would tie in with the organisation values, as this organisation is value driven. This means that these employees should know what is expected of them. This is emphasised as participant 2 states:

“There are rules and laws that govern what we do and at the same time it is our internal value system that speaks to putting the customer first”.

Participants who mentioned that they are not sure of whether embedded policies exist, referring to data use, also advised that their organisation does have policies that cover other themes relating to data use. Below are the responses indicating this: :

“it’s not something we document but, it’s definitely within our environment to get sign off before implementation. There are various channels to go through such as compliance and legal. There is always representation of these two departments at the forum as they form part of the process of ensuring the ethical use of data” (Participant 3).

“I don’t believe we have embedded processes or policies that speak to the ethical use of data, but not in terms of analytics. However, there are policies regarding the usage of data such as access control and marketing controls” (Participant 5).

“To my knowledge no, I don’t think there’s anything in place. I have not seen anything and nothing to my knowledge has been scoped for those particular types of documents” (Participant 8).

Moreover, as seen from the extracts below, participants mention that although there might not be embedded policies, compliance testing conducted covers the material that employees should be aware of.

“There are general policies about information sharing and the surveys we need to do based on fraud awareness etc. [and] that is how they try to create awareness” (Participant 6).

“We have a process where every year we do compliant tests as the entire business needs to do this which covers fraud, data and so much more. Those compliance tests that we do cover the content in our policies” (Participant 10).

Participants' responses regarding their awareness of legislation indicates that their organisation does follow legislation or a governance framework. Participants mention that due to the industry that their organisation operates in, it is important for their organisation to have legislations and governance frameworks in place for support and guidance. However, even though their organisation follows legislations and a governance framework, participants were not able to fully confirm that they know the exact legislations or the actual governance frameworks that are implemented in their organisation. Below are some of the responses of participants that indicate this:

"I'm not entirely sure about the exact legislations used or models, but I know POPI is one. In terms of governance frameworks that have been signed off, I am not sure, so I'm going to say yes but I'm not sure" (Participant 3).

"Yes, it does. As I mentioned we have the data governance Terms of Reference that we currently run where the focus remains on implementation and securing of customer data. So, the governance forum in itself is how we abide by using data ethically. Also, in our governance forum as part of our quorum, we also have our legal team and compliance that's part of our forum. They will come with the legislation to ensure that we understand and that we are compliant. The POPI legislation amongst others is used to guide the forum. Due to our financial services organisation being a joint venture, a lot of our legislations follow that of the financial institute and what our partnering company follows" (Participant 4).

"Absolutely, if I think of all the legislations which we currently have, we have POPI and that is the current legislation that is big within our company" (Participant 9).

Another finding with regards to the legislation question posed to the participants is that the legislation that impacts their organisation the most is the POPI Act, National Credit Act and In duplum. One participant could not name the exact legislation that impacts their organisation but could mention principles from the legislation that they deemed relevant, as seen in the response below:

"Well, I don't know it by name essentially, but I know it's the right to privacy, which governs what we do. So, we have the responsibility to use and store customer data in an ethical manner" (Participant 2).

Another way in which this organisation tries to create awareness around their policy updates, especially policies that are considered mandatory, is through conducting compliance tests, which all employees of the organisation need to take. These tests include various topics relating to data usage, which require employees to pre-read policies. This is evident from the extracts below:

“Our Information Security Departments conducts annual compliance tests, of which the entire organisation must complete. These are administered online and make users aware of what is legally allowed and not allowed in our organisation” (Participant 7).

“We have a process where every year we [conduct] compliant tests. The entire business needs to do this and cover fraud, data and so much more. Those compliance tests that we do cover the content in our policies” (Participant 10).

The findings further revealed how often the organisation's policies are being updated, since technology is constantly changing. This ties in with the understanding of how their policies would be integrated back into the organisation, ensuring that all employees are kept abreast with the latest policy changes. The majority of the participants could not indicate how often policies were updated, as it was not a regular check for them to conduct. As seen in the responses below, many refer to the organisation’s legal team to deal with the policy updates but do not confirm that the overall organisation becomes aware of any policy updates or changes.

“We have a legal and compliance team, so there is a team that is dedicated to this to make sure we are compliant” (Participant 1).

“We’ve got a legal and compliance team that are constantly engaging with the financial services regulator. I would say we are really on top of being compliant as we understand what the repercussions will be financial and reputational” (Participant 3).

“I am not aware of any updates being done” (Participant 14).

However, as seen in the responses below, some participants mention that policies are updated when any changes in legislation or technology take place and the onus is on the employee to ensure that they have reviewed the updated policies.

“I think it would be an organic type of process as it evolves all the time. For example, with Covid currently and employees working from home with sensitive customer data. Policies are updated and evolving as we go along. Especially will legislations, our organisation reacts on the highest level.”, “They forced to now considering the big shift to the Cloud environment, which has different security precautions and processes and requirements around that” (Participant 7).

“I would think every single time we acquire new systems and new frameworks. So, I would think it gets updated frequently, especially if there is always updates and upgrades” (Participant 9).

“I think they updated as legislation changes happen and when there is an actual requirement to do so. But I do think with this new environment we are in such as working from home due to covid. I know there has been a lot more investment and focus to update these policies to align with our new world” (Participant 10).

5.4. ADDITIONAL CONCEPTS FOUND IN THE DATA

When the semi-structured interviews were conducted, additional findings were revealed from the responses collected during the data collection process. These findings were not included as part of the conceptual framework. However, these additional findings provided insight into what else should be taken into consideration when requiring employees to understand the factors affecting the ethical use of data.

5.4.1. Values-driven organisation

Being in a value-driven organisation means that the organisation places more value on how employees behave internally and that decisions are made based on values, as it is a core function of how the organisation operates (Corin, 2020). According to Witter (2019), top management should model the behaviours that they want their employees to display, which should be through day-to-day activities continuously being reinforced. However, value-driven based organisations need to ensure that they steer away from the generic values, such as integrity, respect, and communication as these are broad and could have different understandings amongst employees (Saper and Raimondi, 2020).

It is evident from participants’ responses that their organisation is value-driven as they often pointed to how they respond to using data ethically, which stems from how their core values are instilled within them. One participant mentioned that when new analysts are employed, one of the main factors to consider is whether their personal values align with that of the organisation. From this data, it is evident that there is a focus on trusting that employees will do the right thing when working with customer data. Although this approach might be subjective, most respondents felt that their values are a core factor in ensuring ethical use of customer data and ensuring that it is in the best interest of both the customer and the organisation.

5.4.2. Importance of having a data ethics framework

A data ethics framework can be defined as a set of principles that have been required either by government or by an organisation and guides employees on how to use and protect customer data (Schwab, 2021). Moreover, having a robust data ethics framework enables organisations to have better controls in place when using the data for analytics, decision making, insights, campaigns, and

products and services to the customer (Jones, 2019). In addition, Allen (2020) states that due to customers becoming more technologically inclined, their awareness of data collection, use, and storage has increased. Therefore, to keep their trust, organisations need to demonstrate that they are using customer data ethically and for their benefit.

During the interviews, participants were asked if they feel that having a data ethics framework is important and why or why not. All fifteen participants agree that having a data ethics framework is important. Their justifications are similar and their responses, as seen below, indicates an understanding of the role of a data ethics framework in an organisation.

“It is extremely important [to have a data ethics framework]. Data moves through our hands at quite a rapid pace on a daily basis, and even more frequently. We have a lot of customers and their information changes all the time, gets updated all the time and there need to be strict controls as to how that data is accessed, whether the use of that data is fit for purpose and what the intended use of that data is. So, looking at how we protect the customer identity, but using the customer data for us to figure out the various campaigns to run for the customer. Therefore, we need to make sure our governance practices are updated and in place to remain compliant” (Participant 4).

“It is extremely important [to have a data ethics framework]. We have access to customers’ personal financial information such as their bureau score, so it’s extremely important to have an ethics framework that governs data analytics” (Participant 7).

“I do think it is important [to have a data ethics framework], even if it was a manual to read it’s a verbal contract between an analyst. To my knowledge we don’t have anything like that, and I could be challenged on this, but I haven’t seen anything like this, but it just enables everyone to be on the same page. So, it could be something introduced during onboarding on when a new analyst joins the team that they need to read through this” (Participant 8).

In addition, participants understand the consequences of not having a good data ethics framework in place. There was a strong understanding of the repercussions associated with not having good data ethics in place, as seen from the responses below:

“You can get into a lot of trouble if you don’t follow a specific framework. There might be financial penalties, which are associated with not following a certain framework or approving/declining someone based on misuse of information. We could also run a reputational risk. I

would definitely say it is important to follow an ethical framework for data use” (Participant 3).

“It is your brand reputation and your customer information on the line” (Participant 10).

Another finding from the data is focused on how this organisation ensures the ethical use of data from an employee perspective. This study found that this organisation does not have an exact process in place, but merely focuses on employees keeping one another accountable for their actions. Moreover, one participant referred back to previous companies, where a stringent process had to be followed and non-disclosures had to be signed (participant 6). However, this was not the case for this organisation, as seen from the responses below:

“Well, like I said before, we have a strong set of values we apply. I work very closely with analysts and I see how they hold each other accountable. There is a peer review that forms part of most of our analytics. Throughout the organisation you will find when a model is built or when data is being used as it goes through the peer review, it gets challenged. People are kept honest about their data use. We a very diverse organisation, which makes it better, because we challenge each other, based on our own interpretation of our own values” (Participant 5).

“I didn’t sign any [Non-Disclosure Agreement] NDA in terms of data, but I think that goes without saying, we know that type of thing is not allowed” (Participant 6).

5.4.3. An understanding of the ethical use of data

According to Mahan (2019), employees need to understand ethical behaviour in an organisation, as this can motivate positive behaviours that lead to organisational growth. Furthermore, Cote (2021) states that the ethical use of data is a daily effort, which ensures that employees understand what it means to keep their customer data safe. When this is achieved, meaningful decisions can be made, resulting in organisational success. In addition, Korolov (2020) notes that understanding how to utilise data ethically requires organisations to follow the relevant legislation to protect their customer data, especially since the rapid shift in technology demands more data collection and usage.

The feedback received from the participants, some of which are presented below, indicate that most of them understand what is meant by the ethical use of data.

“My understanding essentially revolves around the idea of privacy and anonymity, so keeping that information confidential especially the type of customer data. I always have to consider

the ethical implications of how I handle that data, like if that data has to get leaked to an external party or if it's abused in any other way that's outside the bounds of what that customer agreed to" (Participant 2).

"Ethical behaviour is governed in our case, in a nutshell, I will say the use of customer data for the purpose of analytics needs to be controlled, access needs to be restricted and the intentions of the use of the data needs to be very clear to both the business and the customer. And obviously, the necessary measures need to be put in place so that customer data does not get leaked" (Participant 4).

"My understanding is you can't use data to discriminate against any customer, knowing the information they didn't give consent to use" (Participant 13).

In addition, participants are aware that being able to understand the different concepts relating to data ethics means that their organisation needs to be guided by legislation relating to data use. Participant 3 states:

"it's all about us being governed by a specific framework and we can't use each and every data point, variable or field that we get from the bureau. An example: you cannot determine a customer's risk rating based on their race, gender, or location. For this, we have a specific framework we need to follow, and we need to stick within the framework. This also is used as a guide on who we approve, decline or limit".

The study further found that even though participants might have a general understanding of what the basics are regarding the ethical use of data, it is something that is not discussed enough within the organisation. This is evident as participant 1 states:

"So, I think the ethical question is a good question and I don't think it's talk about enough. Essentially, I think it's a question about how intrusive you can become, trying to find the right customer at the right time and where do you draw the line in getting the customer, while giving them personalisation".

This indicates that understanding the ethical use of data is interpreted differently by analysts that uses customer data daily.

5.5. CONCLUSION

The analysis in Section 5.3 provided an interpretation of the responses from participants during the semi-structured interviews. The fifteen participants were able to provide relevant insights into the topic as they work with customer data. Analysing the responses enabled the researcher to draw holistic views that are based on the data. As such, it can be argued that this organisation has strict measures implemented to ensure that their data is secure. It also has a data strategy that is implemented and conducts compliance testing for employees to ensure that they read policies. Lastly, this organisation has a governance forum to ensure that data remains unbiased and error free. Through the analysis and interpretation of the data, the researcher was able to determine that data is being used ethically within this organisation.

Analysis and interpretation of the data also led to additional findings that indicated this organisation's views on how well they use data ethically. As such, this organisation was found to be a value-driven organisation, which places emphasis on employees' moral conduct. Additionally, employees within this organisation had an understanding of using data ethically, specifically within their roles.

To conclude this study, the next chapter will provide a discussion of the findings in relation to the research questions, literature and conceptual framework. It will also present the, recommendations, limitations, and suggestions for future research.

CHAPTER 6: RECOMMENDATIONS AND CONCLUSIONS OF THESIS

6.1. INTRODUCTION

In this final chapter, the findings presented in the previous chapter will be discussed in order to link it to the main aims and objectives of the study, and to answer the research questions of this study. Thereafter, the findings are construed according to the literature (Chapter 2) and conceptual framework (Chapter 3). Moreover, this chapter will detail the limitations of this study and recommendations for future research will be provided. Lastly, this chapter will conclude with a final reflection of the study.

6.2. AIMS AND OBJECTIVES OF THE STUDY

As mentioned in Chapter 1, the aims of the study were to:

- establish ethical conduct around the use of data for customer analytics within financial services,
- investigate how customer experience can be personalised digitally through data analytics, and
- establish whether customer experience is affected by the ethical use of data in analytics.

Additionally, the objectives of the study were to:

- determine if financial institutions have defined frameworks/ policies in place that govern the ethical use of data,
- develop a conceptual framework that can be utilised to assess the organisation level of the ethical use of data analytics within financial services in South Africa, and
- use the conceptual framework as a guide that measures if these organisations ensure the ethical use of data analytics when improving personalised customer experiences.

Objective 1 was achieved by answering sub-question 6.4.1. Objective 2 was accomplished through the development of the conceptual framework for factors affecting the ethical use of data, which was detailed in Section 3.8. Objective 3 was accomplished through data analysis, which was discussed in Chapter 5.

6.3. MAIN RESEARCH QUESTIONS AND SUB-QUESTIONS

In order to understand the aims and objectives of the study, the main research question for the study was:

What are the factors affecting ethical data use when improving personalised customer experience?

As discussed previously, three sub-questions were formulated and used as a guide for the data collection process, namely:

1. What are the current data policies perspectives on the use of data for customer analytics?
2. What is considered ethical behaviour around the use of data for customer analytics?
3. How does data ethics impact analytics when providing personalised customer experience in the financial industry in South Africa?

6.4. RELATING THE FINDINGS TO THE RESEARCH SUB-QUESTIONS

This study focused on factors affecting the ethical use of data. The impact of those factors affecting personalisation within a financial services industry within South Africa was explored. The research questions, therefore, focused on 1) determining the current data policies principles, 2) identifying what constitutes as ethical behaviour and, 3) how these factors affect customer experience. Below, the findings discussed in the previous are interpreted in relation to the literature and conceptual framework to determine whether the study achieved its aims and objectives.

6.4.1. Sub question 1: What are the current data policies perspectives on the use of data for customer analytics?

This question was answered through the review of the literature (Chapter 2) and through an understanding of the importance of having a data ethics policy (Chapter 3). In addition, findings nine and ten provide insight through the responses from participants.

Based on the literature explored in Chapter 2 and Chapter 3, it is clear that data policies should include an array of themes to ensure that employee behaviour around data usage is managed. According to Ashbel (2021), a data policy includes guidelines to manage data access, quality, confidentiality, use, and security. These guidelines are implemented to ensure an organisation's data is managed effectively. Moreover, Olavsrud (2021) claims that having a data policy in place enables an organisation to establish a system of accountability for any data related processes.

The principles that were identified as relevant for a data policy includes: data security, privacy, transparency, integrity, accountability, and confidentiality. These principles are important in any data policy or framework. Furthermore, defining these principles provides a guide on how analytics should

be conducted. The use of data governance forums that check that these principles are being adhered to ensures that the use of the data for analytics is being done ethically. According to Askham (2019) having a data governance forum/committee allows oversight and monitoring of data analytics conducted within an organisation. This forum is responsible for ensuring that the use of data for analytics and data related projects are compliant with the relevant regulations.

In addition, it is evident that the top of mind for the financial services industry is to ensure that their data policies and frameworks are guided by POPIA, as this was a law implemented by the South African Government. Therefore, if organisations never had any rigid data policies or frameworks in place, the foundation set by the legislation would ensure the financial services are being compliant. According to Koch (2020), POPIA moves South Africa into a new era of data regulation, which focuses on how they use and manage personal information. Moreover, Olsen (2021) states that POPIA requires organisations to ensure that their current policies align with the principles. By doing this, organisations can share their updated policies with employees and third-party vendors to ensure that everyone is aligned with the new regulations that are implemented.

It is evident in findings nine and ten that the participants were able to identify principles that are determined by literature as significant. It is further evident that the organisation has a dedicated compliance and legal team to ensure that their policies are updated with the relevant regulation and laws that affected the financial services industry. Moreover, there is a general understanding of why a data policy is important for the use of analytics.

Furthermore, through literature and analysis, it is evident that data policies have certain principles that organisations need to take into consideration to ensure that their analytics are guided by stringent measures. Moreover, it was identified that this organisation is guided by strict measures when conducting analytics on customer data, through their integrity standards of data usage. Additionally, this organisation has a data governance forum in place, which is another measure, and which is considered best practice to ensure that the analytics being conducted abides by all the data standards that are in place.

6.4.2. Sub question 2: What is considered ethical behaviour around the use of data for customer analytics?

This question was answered in findings two and four. This organisation was able to ensure ethical behaviour through various means within the organisation.

To ensure that data is being used for the purpose it was intended for, the organisation only collects data from customers that are necessary. They ensure that they do not collect any additional information that is not relevant or would not add value to the customer or the organisation. Ensuring that the data collected is for the customer's benefit and for strategic campaigns to create better personalisation is one measure that this organisation uses to ensure that data is being used ethically. According to Segarra (2020), organisations need to only collect data that has been legally agreed to by their customers. Once collected, the analytics conducted must be done in an ethical manner, where only authorised users can use the data. Additionally, Edwards (2021) states that ethical behaviour regarding data use is when organisations use customer data for the purpose communicated to the customer.

Another way in which this organisation ensures the ethical use of data is through its relationship with third-party vendors. Before providing data to any third-party vendor, the organisation ensures that they obtain the consent of customers and inform them as to why their data will be given to a third party. In addition, when providing data to a third party, the organisation ensures that they tokenise sensitive customer data and that they provide third parties with holistic data as opposed to singular detailed information. Lastly, when providing the sensitive data, they ensure that they send the data via a secure transfer file with password encryption to prevent hackers from accessing this sensitive data.

According to Valia (2019), obtaining customer consent is important for any organisation, especially with the increase of fraud and cybercrimes. Customers might become apprehensive especially if they did not provide consent for any promotional marketing. Moreover, Geysler (2020) adds that consent should always be obtained from customers within the onboarding phase, where customers are made aware of how their data will be used and shared.

This organisation also considers managing the ethical use of data within their organisation through compliance testing. Before the compliance test commences, employees are required to pre-read policies. Employees are thus required to meet a minimum percentage to be considered compliant. These compliance tests not only covers topics on the ethical use of data, but also ensures that it covers elements relevant to the financial services industry as a whole. Compliance testing is thus a means to ensure that employees read the policies available and get tested to ensure that they understand the subject matter. In addition to the compliance testing, this organisation considers itself to be a value-driven organisation. Therefore, integrity and responsibility of data use are values on which this organisation prides itself.

Moreover, it is important to note that this organisation places emphasis on trusting their employees at face value and taking their word that they will act ethically when using customer data. According to Nyhuis (2020), compliance testing within an organisation ensures that regulatory compliance obligations have been communicated and assessed. Moreover, Nambiar (2021) adds that compliance testing allows organisations to implement stringent governance, which enables them to manage and monitor regulation thoroughly.

Finally, this organisation indicated that their data business units (customer analytics and data analytics) developed their own guide of what is deemed appropriate when working with customer data. This guide was developed to provide analysts with further support and guidance to ensure that they uphold the integrity and confidentiality of customer data. Apart from this, there are strict processes that analysts need to follow to ensure that the data strategies that they have developed are approved. This approval process includes a panel to ensure that all data principles have been covered, and if it has not been covered, the analyst would need to justify why a principle was not taken into consideration or would have to redo their strategy. According to Janiszewska et al. (2020), organisations should have a clear and transparent data policy in place that provide guidelines on how to manage and use customer data effectively. Implementing a data policy allows an organisation to minimize any risks that could occur if data is not used ethically.

Therefore, it is evident that this organisation knows what is meant by the ethical use of data and has measures in place to ensure this. However, from participants' responses, it is evident that there is not enough awareness regarding the ethical use of data within the organisation. This organisation should therefore find better ways of ensuring that all employees know more than just the basics and are sure of what the exact principles are that are deemed critical within their organisation.

6.4.3. Sub question 3: How does data ethics impact analytics when providing personalised customer experience in the financial industry in South Africa?

This question was answered through the review of the literature (Chapter 2) and in findings seven and eight.

It is evident from the literature review that data analytics does enable customer experience. The type of customer experience is based on how well the analytics is conducted with their data. Moreover, if data is used ethically, if the correct standards are followed and if customers are provided with personalised experiences, it creates a better relationship with the customer. In turn, this enables the customer to want the organisation to provide them with their product or services. According to Boudet (2019), data analytics has changed due to advancements in technology. New technology has

enabled data analytics to provide customers with more personalised experiences throughout the entire customer journey stages (selling, onboarding, serving, and buying). However, the opposite is true as well because if organisations do not use the data according to correct standards (confidentiality, integrity, and availability), customers could end up having a bad experience. According to Zsurzan (2017), when data analytics goes wrong, it could result in many bad experiences. Therefore, organisations need to ensure that when using analytics to provide personalised experiences, there is always an effective solution in place if anything should go wrong. Furthermore, it is clear that customers want to feel as though organisations do understand their every need, but at the same time, do not want to feel as though the organisation would take advantage of them. Therefore, if analytics is done properly, organisations will be able to make better decisions to benefit the customer. According to Holmlund et al. (2020), with the digital economy developing at a rapid pace, data analytics can help organisations make informed decisions. However, to achieve this, organisations need to understand how the customer data that they receive affects the customer journey experience.

Furthermore, the findings from this study indicates that the analysts that conduct analytics on customer data only do so if consent is provided, which is achieved through onboarding. Moreover, data analytics is conducted holistically and not on a granular level. This ensures that there are no biases and errors that can occur with the results of the data. It also ensures that analysts are not discriminating against any customer, for example, an analyst will not look at geographical information, as that could cause bias in the data when providing personalised vouchers to a set of customers. Customers are also able to provide feedback to the organisation to indicate if their personalised experiences needs have been met. According to Schwarts (2020), taking a holistic approach to data analytics enables organisations to utilise newer technology to conduct advanced analytics and to obtain a better understanding of their customers as a segment and prepare for the unexpected. Furthermore, analysts can review existing data to determine what might have gone wrong. As such, they can determine if they segmented the customer incorrectly and use analytics to better a customer's experience.

Another interesting factor that this question took into consideration was the consequences of the adverse effect on customer experience. It is evident that if this organisation was found using data analytics in a way that would result in a negative customer experience, there would be repercussions for the organisation, analyst, and customer. The organisation could lose a customer and suffer from brand damage, the customer could feel violated and never trust this organisation with their data and, the analyst could end up either with a warning or could face disciplinary action.

This question was thus answered through literature and the qualitative responses of participants. It is evident that this organisation understands the correlation between data analytics and how this impacts the customer's experience. Moreover, this organisation is aware of the implications of conducting negative analytics and what it could mean for the customer, organisation, and analyst. Thus, when data analytics is used correctly, this will not only enable the organisation to be more successful, but through their offerings of products and services, customers will feel as though their needs are understood.

6.5. FINDINGS

Finding one- Information Quality Principle

The financial services organisation ensures that the customer data goes through strict measures to ensure the quality of the data. This is done through governance forums or the strict measures implemented in their data warehouse. As a result of their stringent measures, the organisation is able to ensure that no errors and biases will occur in their data analytics that are conducted.

Finding two- Integrity and Confidentiality Principle

There is an awareness regarding the consequences of misuse of data within the organisation. Based on participants' responses, it is evident that as employees, they know that if found guilty, they could end up losing their jobs, cause brand damage or cause the organisation to be liable for a hefty penalty fee.

Finding three- Accountability Principle

Although the organisation has a data strategy implemented, it is clear that most of the participants are not familiar with the strategy that covers principles of the ethical use of data or accountability. The participants noted that using data ethically stems from their values as an individual as their organisation places significant emphasis on being a value-driven organisation.

Finding four- Safeguard Data Principle

This organisation conducts compliance testing every six months. This is to provide awareness regarding how to use customer data. The test includes various policies which employees are required to pre-read, and they are tested on this and need a certain percentage to pass in order to be seen as "compliant". However, this is the only means of creating awareness. Moreover, most of the

participants agreed that there are policies but also expressed that there is a lack of knowing the finer details of what the policies include.

Finding five- Process Limitation/ Purpose Specification/ Data property Principles

There is strict governance regarding who may access what data within this organisation. There are clear processes in place to request customer data that needs to be approved by their Information Security Team. In addition, analysts have their log in details that need to be refreshed monthly. Another way in which this organisation ensures that its data is being used ethically is via a digital footprint. All users that extract data from the data sources need to account for the data that they extract and provide reasons for the use thereof. Another way in which their data confidentiality and integrity is upheld is by ensuring accesses are only granted as part of the employees' role and by the level of access required within the data warehouse.

Finding six- Privacy Social Contract Principle

When new customers are onboarded within the organisation, They have a clear understanding of what customer data is required. The customers are also required to read the terms and conditions before signing up with the organisation. This creates a relationship of trust between the customer and the organisation. When customers opt-in for marketing, they will receive promotions and marketing ads. However, if customers opt-in for no marketing, the organisation prides itself on respecting the customers' decision.

Finding seven- Data Subject Expectation Principle

Customers do not always fully understand what their data is being used for. It is evident that customers are not interested in understanding the analytics of how their data gets used and requires a high-level understanding of what their data will be used for. Additionally, the organisation knows exactly what data they require from a customer, as they know the type of analytics that will be conducted. They usually have a roadmap focusing on how the data will be used to make better decisions regarding their strategies.

Finding eight- Data Subject Expectation Principle

Analytics within the organisation is done ethically, especially when trying to create personalised experiences for the customer. This organisation ensures that they have segments of customers and create personalisation based on their preferences. They do not single out customers as there could be implications of crossing a line if you accidentally send a customer something they did not want to find

out. For example, this organisation will not send a customer a baby voucher, even though the customer's spending patterns will indicate that they bought baby items. This is in case the customer is struggling to have children and therefore might feel offended. As such, vouchers will always be generalised to be inclusive of all the customers' preferences. It is evident that there was a strong understanding of how personalisation can be used positively but can also have negative impacts on the organisation and customer.

Finding nine- Cultural Change/Awareness principle

It is evident that there is no formal guide on how to use data ethically in the organisation. However, departments that utilise customer data created their own guidelines and policies on how to ensure that they are using data ethically. Furthermore, participants made mention that there were policies developed in the organisation that references POPIA. However, there is a lack of awareness of this by everyone in the organisation. Furthermore, although participants mentioned that there are embedded policies within the organisation, emphasis is placed on the internal values system being significant in how employees should behave and conduct themselves when using customer data. The data from this study further revealed that the organisation has a compliance team that ensures that the policies within the organisation are updated according to what is current in South Africa.

It is clear there is an understanding of the importance of the implementation of a data ethics policy or framework. All participants noted that having a good policy or framework enables them to use the data appropriately. This also ensures that the analytics conducted on the customer data is done in such a way that it is beneficial to both the organisation and the customer. Furthermore, it is evident that participants understand what the ethical use of data means, especially the principles thereof, such as ensuring privacy, anonymity, transparency, and confidentiality of customer data. However, even though there is a basic understanding, it is clear from the participants' responses that the meaning of ethical use of data is open to interpretation by the analysts.

Moreover, with the findings and the conceptual framework developed. The researcher proposes a data ethics canvas that would assist optimal customer experience while at the same time ensuring ethical data use. Figure 5 below indicates the proposed data ethics canvas:

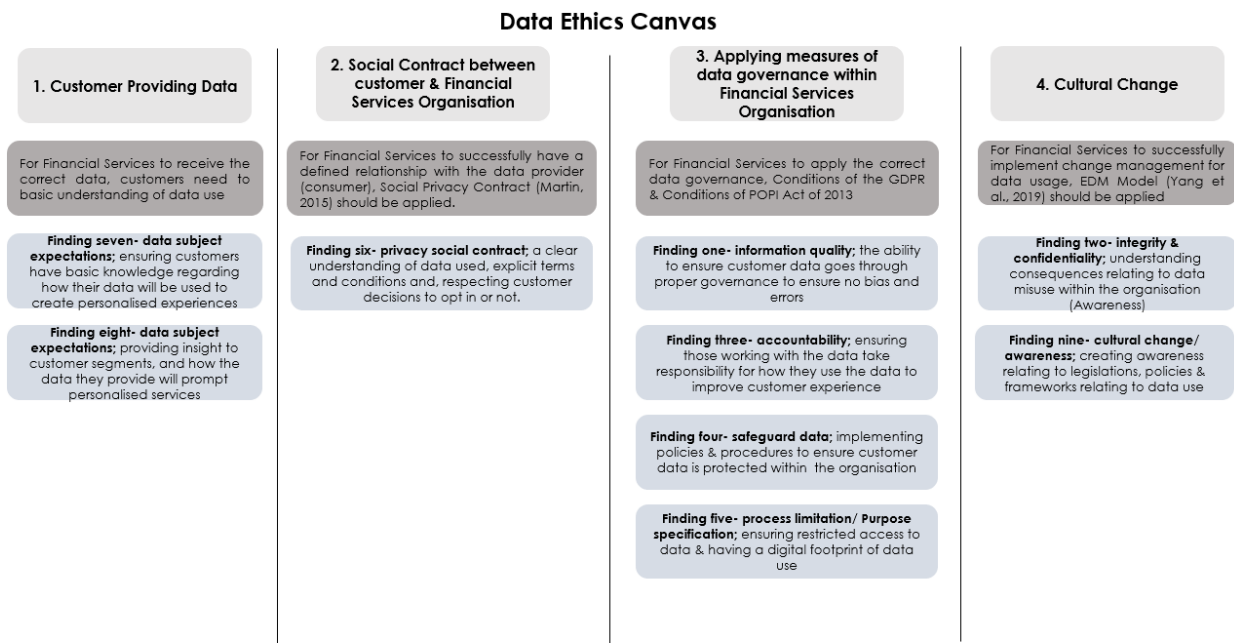


Figure 5: Proposed Data Ethics Canvas

This data ethic canvas combines the findings with the proposed conceptual framework, indicating what could be considered as optimal customer experience, whilst still using data ethically. This data ethic canvas provides a basis of what financial services organisations should be implementing to ensure data is being used ethically to provide customers with personalised experiences.

6.6. LIMITATIONS OF THIS STUDY

Several study limitations were identified in this study, all of which are discussed below.

Lack of generalisability

Due to the researcher only conducting research on one case study (one organisation), it might not reflect the true view of all financial institutions. Although, a limited sample was used, the findings from this study can still be applied to other studies as well.

Lack of defined data frameworks within South Africa

Another limitation is that the researcher is unable to compare the proposed framework to a South African data framework/policy as most policies and frameworks for South Africa focuses on data privacy and does not provide enough measures to be utilised for this study.

Sampling technique

A judgement sampling technique was utilised for this study, which suggests that the sample was not selected randomly. The researcher thus selected a sample for this study based on their professional judgement and existing knowledge on the subject matter. In addition, the responses are subjective due to a qualitative method being utilised, which might suggest that there is not enough objectivity in the research. Moreover, only fifteen participants took part in the study.

Location

The geographical scope is limited. As such, this study does not provide an overall view of all financial institutions within South Africa.

COVID-19 Pandemic

The semi-structured interviews could not take place in person due to COVID-19 preventative measures. Interviews were thus conducted via Microsoft Teams and as such, for recordings to be clear, the researcher needed to ensure that both the participant's and the researcher's internet connection was stable.

Conceptual Framework

Another limitation identified during this study is that the conceptual framework was updated after the research instrument for the study was established. As a result, there were elements within the research instrument that did not include the exact principles within the conceptual framework. However, due to the use of semi-structured interviews, all principles were covered in the answers of the participants. It is important to note that even with these limitations identified, it did not affect the validity of the study, as all objectives were met.

6.7. RECOMMENDATIONS

To address the findings and gaps identified in Section 6.4, the following recommendations have been made for the financial services organisation in the Western Cape, South Africa.

Improving awareness of data governance

This financial services organisation should improve their level of awareness within the organisation. Based on participants' responses, it is clear that there is a lack of certainty around whether these policies exist and what exactly they cover. However, many participants indicated that there are

policies, processes, and procedures in place to ensure the ethical use of data, although some indicated that they have not seen it. Moreover, participants are not sure where it was located and what the exact principles are within those policies.

Creating awareness within the organisation will not only enable these users to know exactly what is expected of them in terms of their behaviour. It will also enable analysts to refer to a guide if they require support when conducting their analytics. Another way in which this organisation can create awareness is by introducing compliance testing more than twice a year. Through this, all employees will need to ensure that their knowledge of all policies stays up to date.

Additional principles to the data strategy

It is evident from the responses that most participants assume that their organisation's data strategy covers the basic principles relating to the ethical use of data. However, when interviewing the Head of Data Analytics, it became clear that the data strategy developed does not cover these principles specifically but focused on governance as a whole. Moreover, the data strategy is focused on migrating into new cloud infrastructure and the security measures of migration.

However, the behaviour that analysts should follow when using customer data is not defined within this strategy. Thus, as part of any data strategy, there should be a section that focuses on those who will use the data, especially since this strategy is constantly reviewed and presented to the broader organisation. Therefore, an element in the strategy that covers the ethical use of data and the behaviours that are deemed suitable should be developed and implemented.

6.8. SUGGESTIONS FOR FURTHER RESEARCH

Many opportunities for future research can be identified. One case study was used as a basis for the study, however, a follow-up study could conduct a comparison of two to three case studies (financial services organisations), where better comparisons of the phenomenon within the same industry can be made. By introducing more than one case study, the researcher/s would be able to have generalisability, enabling informed conclusions, which are based on more data.

A follow-up study could make use of a mixed-methods approach (both qualitative and quantitative analysis). As such, the study's findings could be validated from both a statistical and a subjective view. In addition, validity would be strengthened through statistical measures.

Another study could be conducted to review and measure how organisations are tracking the implementation of POPIA within their organisations. A follow-up study will identify how these

organisations are tracking the new stringent measures of ensuring the ethical use of customer data. It will provide insight into whether the factors to consider have been redefined or if these principles are still the most suitable for ensuring the ethical use of data.

6.9. FINAL REFLECTION

The most important finding of this study is that the ethical use of data impacts a customer's experience. Ensuring that the correct analytics are conducted on customer data will determine if that customer will remain loyal to the organisation. Another important finding is that the organisation which was used as the case study has policies, processes, and procedures in place to ensure that customer data is being used ethically. However, there is room for improvement in terms of creating better awareness in this organisation. It is evident that customer data is deemed as an organisational asset and needs to be treated as such. Furthermore, the participants in this study provided rich and in-depth information regarding the phenomenon, which enabled the researcher to make informed conclusions about this organisation.

Overall, the study achieved its aims and objectives through a qualitative data analysis. The findings from the qualitative analysis were validated against existing literature. In conclusion, this study contributes to the existing body of knowledge by providing an overview of how the ethical use of data analytics within the organisation is used to ensure personalised experiences for customers. Additionally, in this study, a conceptual framework was developed, which encompasses what is deemed significant for organisations when using customer data to ensure the ethical use thereof. This conceptual framework can be utilised by organisations and academia to identify if there are gaps that need to be considered when exploring the ethical use of data within the financial services industry.

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APPENDICES

APPENDIX A- INFORMATION SHEET & CONSENT FORM



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FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

Department of Information Systems

Information Sheet: Semi-Structured Interviews

Dear Participant,

Re: Invitation to participate in the semi-structured interviews

The research study being conducted by the Information Systems Student, Zita De Villiers from the University of the Western Cape, requires completion of data collection, as part of the requirements for the Masters of Commerce Program. The study of the title: **A framework for ethical data use to improve personalised customer experience in the financial industry in South Africa**. This study aims to explore how data can be utilised ethically and the factors thereof, to improve customer's experiences digitally. The outcome of this study will provide the researcher with an understanding of the phenomenon. As well as provide the researcher to identify if there is a gap for further research to be conducted regarding this research topic.

The purpose of this study is thus, to determine if data being collected is utilized ethically, when trying to ensure customers have personalized experiences. Furthermore, it seeks to answer the following questions:

1. What are the current data policies on the use of data for customer analytics?
2. What is considered ethical behaviour around the use of data for customer analytics?
3. How does data analytics enable personalised customer experience in the financial industry in South Africa?

The researcher's supervisor is Dr C. van den Berg. The co-supervisor is Prof M. Jantjies. Both supervisors are in the Information Systems field, at the University of the Western Cape. If you have any questions regarding this study, feel free to contact the study leaders.

Researcher Contact Details:

Email: 3421315@myuwc.ac.za

Cell: 0838520909

Co- Supervisor Contact Details:

Email: mjantjies@uwc.ac.za

Tel: +27 21 959 3249

Supervisor Contact Details:

Email: cvandenberg@uwc.ac.za

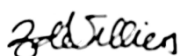
Tel: +27 21 959 3247

The open-ended questionnaire that will be conducted, serves as a method in which the researcher, Zita De Villiers will collect data that will enable her to answer the questions required for the completion of the study. The researcher chose a Financial Services Industry organisation, as a convenient case study to explore the phenomenon from the working professional's perspective, specifically those who work daily with customer data. The analysts such as Customer Analytics Analysts, Data Analysts and Customer Experience Analysts are vital to this study, as their job functions deals with what the researcher requires critical for this study.

Please note, only those stipulated as critical participants, will complete the open-ended questionnaire. With this being said, prior to completing the open-ended questionnaire, all participants will have to agree that they have understood the information stipulated within the information sheet. Furthermore, the participants will not be vulnerable to any risks or harm by participating in this study. The name of the participants, organisation and university will be kept anonymous on the published thesis and other publications that will be extracted from this thesis. However, essentially the purpose of the study is for academic purposes aimed at the researcher obtaining her Master's Degree, thus it is not intended for any commercial purposes. Furthermore, participation in this study is completely and entirely voluntary, which indicates participants may withdraw from this study at any moment.

Importantly, this research project has received ethical approval from the Humanities & Social Sciences Research Ethics Committee of the University of the Western Cape, Tel. 021 959 2988, email: research-ethics@uwc.ac.za

Kind Regards,



FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

Department of Information Systems

Consent Form

Title: A framework for ethical data use to improve personalised customer experience in the financial industry in South Africa

Participants should ensure that they fully understand the information shared on the information sheet before completing this form.

Please tick each box to consent:

1. I confirm that I have read and understand the information sheet explaining the above research project and I have had the opportunity to ask questions about the research.

2. I understand that my participation is voluntary and that I can withdraw at any time without there being any negative consequences. In addition, I am free not to answer questions I am not comfortable with. I am free to decline.

(If I wish to withdraw, I may contact the lead researcher at any time)

3. I understand that my responses and personal data will be kept confidential. I give permission to the research team to have access to my anonymized responses. I understand that my name will not be linked with research materials and that I will not be identified or identifiable in any publications as a result of this research.

4. I agree that the data collected from me may be used in future research (that is, within 5 years, as data collected from this study will be destroyed after 5 years).

5. I understand that there are no risks or harm associated with participation in the research.

6. I agree to take part in the above research project.

The researcher and the participant should also complete the information required below.

.....
Name of Research Participant	Date	Signature
Zita de Villiers	<i>Zita de Villiers</i>
Name of the researcher	Date	Signature

Each participant will receive a copy of the unsigned consent and information sheet. The researcher will keep the completed and signed forms securely for research purpose only.

Researcher: Zita de Villiers Masters Student (IS) Contact No: 0838520909	Supervisor: Dr Carolien van den Berg Department of Information Systems Contact No.: +27 21 959 3247	HOD: Prof. Shaun Pather Department of Information Systems	HSSREC: Patricia Josias Office of Research Development
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APPENDIX B- RESEARCH ETHICAL CLEARANCE



UNIVERSITY of the
WESTERN CAPE



27 October 2020

Ms Z De Villiers
Information Systems
Faculty of Economic and Management Sciences

Ethics Reference Number: HS20/8/23

Project Title: Factors affecting ethical data use to improve personalised customer experience.

Approval Period: 26 October 2020 – 26 October 2023

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report by 30 November each year for the duration of the project.

The permission to conduct the study must be submitted to HSSREC for record keeping purposes.

The Committee must be informed of any serious adverse event and/or termination of the study.

*Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape*

HSSREC Registration Number: HSSREC-130416-049

Director: Research Development
University of the Western Cape
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FROM HOPE TO ACTION THROUGH KNOWLEDGE.

APPENDIX C- RESEARCH QUESTIONS

Semi- structured Interview Questions

Title: A framework for ethical data use to improve personalised customer experience in the financial industry in South Africa

1. What is your role in the organization?
2. How do you use and access customer data in your role?
3. What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?
4. Does your organisation have a guide on how to utilise data ethically?
5. Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?
6. Please tell us about legislation that affects your organisation.
7. Do you think having a data ethics framework within your organisation is important? If so, Why?
8. In your opinion, do you think that consumers need to know what current policies/ frameworks organisations have in place to govern the ethical use of data?
9. How does your organisation ensure the ethical use of customer data?
10. Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?
11. Do you think that the unethical use of data would impact customer experience? Why?
12. What is your understanding of the consequences associated with unethical use of data within your organisation?

13. Does your organisation have embedded policies around the ethical behaviour around data usage?
14. How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.
15. When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.
16. When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?
17. Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?
18. What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?
19. How often does your organisation check that data is being utilised ethically?

APPENDIX D- ATLAS-TI DATA REPORT

Code Report

All (11) codes

o Principle 9- Data Subject Expectation

15 Quotations:

1:8 Do you think customer experience is affected by the ethical use of dat..... (3325:4045) - D 1: Participant_1_ Semi-Structured_Interviews (1)

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

I definitely think so. Like I said, data is so important and it's all about using data to leverage your position and to understand your customer, their pain points, what would entice them to buy. So, from a customer analytics point of view, using the data ethically to retain your customer.

Do you think that the unethical use of data would impact customer experience? Why?

Definitely. So, again talking to where to draw the line. From an ethics point of view, the minute you start doing something bad, a customer will pick it up and the organisation will pick it up. Also, our customers would call it out.

2:8 Do you think customer experience is affected by the ethical use of dat..... (2992:3813) - D 2: Participant_2_ Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Yes I think it's affected, especially if the analytics are done well. In terms of analytics that helps the customer benefit, so for example, a form of analytics that speaks to what customers dislike and that way the customer can better the products and the overall customer experience.

Do you think that the unethical use of data would impact customer experience? Why?

Yes. So improper use can affect the customer experience negatively. A simple example can be a customer opted out, but the organisation ignored the opt out request and continued communicating with the customer, which leads to the customer having a terrible experience. Or for example they are getting requests that hinges their right to privacy.

**3:7 Do you think customer experience is affected by the ethical use of dat..... (3990:4623) - D 3:
Participant_3_Semi-Structured_Interviews**

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Yes I would say so. If for example, we see a loss rate on our credit product is higher for males than for females, if we started declining people on their gender it would impact the customer experience for all males. They could disengage with the company brand completely, which would be horrible.

Do you think that the unethical use of data would impact customer experience? Why?

Yes. I think so. If we had to use gender for example as a determining factor it would unethical and there would be repercussions for that.

**4:8 Do you think customer experience is affected by the ethical use of dat..... (4750:5770) - D 4:
Participant_4_Semi-Structured_Interviews**

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Most definitely. Once customers are aware how the data is used, what the intention behind the use is and how secure it is, it will surely give them a sense of comfort and a sense of trust with the organisation and ultimately give them a much better experience, so they will know they can rely on the organisation to not divulge their information to anybody. Or to use the data for any other purposes, except for what you have declared your intentions to be.

Do you think that the unethical use of data would impact customer experience? Why?

Most definitely. If it is that my data gets leaked from the organisation and ended up in the hands of some marketing company, it will definitely give off a bad customer experience, because you will know that company cannot be trusted. Therefore, if a company cannot be trusted with personal information, are you able to trust them with their products and services.

5:7 Do you think customer experience is affected by the ethical use of dat..... (3863:4672) - D 5:

Participant_5_Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

I think there is a fine line when you start using machine learning, for instance if you are using geo location you could easily start being bias to one group of individuals because of the area they reside in, where a model doesn't understand that this is not acceptable. So, it is a very fine line to ensure that that when we do analytics that we teach the models not to be biased in anyway.

Do you think that the unethical use of data would impact customer experience? Why?

Yes, if we use customer data unethically and we start selling customer data to other industries and they can start marketing because they have your personal information it will have a negative impact on their experiences.

6:8 Do you think customer experience is affected by the ethical use of dat..... (2393:3102) - D 6:

Participant_6_Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Most certainly, how segment people is very important. If we don't do that properly, a lot of customers are sensitive. If you send a customer an incorrect voucher for example from a different religion, the customer may take offense. That is why when making assumptions we need to ensure we understand the data correctly.

Do you think that the unethical use of data would impact customer experience? Why?

Yes. That will also impact customer experience. So, in our business we have a satisfaction score, we will see the score dropping if the customer complains. The number needs to be 8 and higher.

7:7 Do you think customer experience is affected by the ethical use of dat..... (3516:4543) - D 7:

Participant_7_Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Yes, it is affected. You know it's like sharing your personally information. We use customer data confidentially. We don't pass on any information to third parties. So, customers experience will be affected positively if we are using their data appropriately and for the right reasons. For example, if customers did not opt in for marketing then the organisation should not be bombarding the customer with information. This way the customers data remains only utilised for the purpose it was intended for.

Do you think that the unethical use of data would impact customer experience? Why?

Definitely. If the customers don't want their data shared or passed on, that's obviously important. If it got into the wrong hands, it would be a real issue. But I mean even if people were getting wind that our information to contact customers who didn't want to be contacted, it would affect the customer experience negatively

**8:8 Do you think customer experience is affected by the ethical use of dat..... (5613:7067) - D 8:
Participant_8_Semi-Structured_Interviews**

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Most definitely. I think the more accurate your data is and the best you can respond with that data can really help a customer experience. So, giving you an example of it in the customer experience space, they are responsible for survey data of customer experience data and what happens in that environment is that customers will often give us feedback and give us pretty poor scores on certain items such as I haven't received my statements, or I am being overcharged. Based on that data coming in you will be able to take that information and react on it and resolve that query and obviously improve the customers all round experience. Now without having data and data readily available you wouldn't be aware of that. If you didn't have it at a customer level, you wouldn't be able to personally help and solve the query for that individual.

Do you think that the unethical use of data would impact customer experience? Why?

Yes, for sure. I mean so if a customer doesn't opt in for marketing messages but you still sending them COMMS to try and ensure they react, that is going against what the customer told you and you in contravention of what they told you. Secondly it would deteriorate the customer experience because they might feel that you not upholding their wishes and as a result close their accounts with you and move elsewhere.

9:7 Do you think customer experience is affected by the ethical use of dat..... (3441:4683) - D 9:

Participant_9_Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Well, I honestly think that if I look at it from a customer experience perspective and a personalisation perspective. If there is a customer we want to market to, and for example this customer does not have any kids, but we constantly sending them vouchers for children. That would result in a poor customer experience. We must use customer experience correctly and align it to their behaviour and their data that speaks to their needs and them personally. This would make them feel that we care and take note of what they need. Data is so powerful; we just need to make sure we position it correctly.

Do you think that the unethical use of data would impact customer experience? Why?

Definitely. If I look at the inverse affect. For example, if you are sending customers collection messages and they not in arrears with their accounts, that is unethical to me as you create unnecessary stress for the customer, because they will automatically think has their identity been stolen and using their products. Customers would also lose trust because they would feel the company never did their due diligence before contacting them.

10:8 Do you think customer experience is affected by the ethical use of dat..... (3863:5007) - D

10: Participant_10_Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Yes. Customer experience is really about your brand and the trust customers have in your brand. So, if you not going to be using customer data ethically you are going to have huge customer experience fails. When we do use customer insights and feedback we receive from customers, is that it's not used at an individual level, its consolidated as an overall view, so customer is disadvantaged down the line. It is always at an aggregate level. If we so receive complaints from customers, we can keep their information and ensure that based on their previous data they would experience the same outcome.

Do you think that the unethical use of data would impact customer experience? Why?

Yes absolutely. If anything gets out or if there should be a data breach for example and customer data gets out. We would have a massive influx of calls into the call centre, that

would cause the call centre to fall over, there could be a ton of social media complaints and our staff would not be able to deal if something like this had to happen.

11:7 Do you think customer experience is affected by the ethical use of dat..... (3400:4191) - D

11: Participant_11_Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Yes definitely, the customer experience would be hyper-personalised. We try to strive for this. We always try to be in touch with the customer.

Do you think that the unethical use of data would impact customer experience? Why?

It will impact the customer negatively as the customer will have questions regarding “how do you know this” and it could open up a “different can of worms” at the end of day. So, we need to be very conscious especially in our world about the data we use and making sure we use it ethically. So, for example, we need to be careful, if a customer buys toilet paper we can’t use their spending behaviour and spam them with toilet paper Comms the next day.

12:8 Do you think customer experience is affected by the ethical use of dat..... (2338:2993) - D

12: Participant_12_Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

I think if data is used ethically, it would impact the customer positively. Especially in my area, if we are using the data responsibly, we can offer the customer personalised products and services, which would yield a good experience for the customer.

Do you think that the unethical use of data would impact customer experience? Why?

Yes, it would. For example, in my space if a customer opted in to not be communicated with, and you still do it. It will give them a negative experience and it would give the organisation a bad reputation.

13:7 Do you think customer experience is affected by the ethical use of dat..... (2387:2871) - D

13: Participant_13_Semi-Structured_Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Yes, the most obviously is personalisation- customers get showed what that might be interesting to them only.

Do you think that the unethical use of data would impact customer experience? Why?

Yes. I think it definitely would. There are certain things the customer does not want organisations to know, and people being advertised those things they did not want out yet.

14:8 Do you think customer experience is affected by the ethical use of dat..... (2782:3455) - D

14: Participant_14_ Semi-Structured_ Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

Yes, customer experience will be affected. I also know that if we use the data in the correct way and use analytics in a way that is ethical, we can always ensure a good customer experience.

Do you think that the unethical use of data would impact customer experience? Why?

Well, we sell a credit product, and we want the customer to spend. If we can see the customer is struggling to make payments and we still keep pushing the customer to purchase more, that would be detrimental to her and that would be unethical as we can see she is unable to afford it.

15:7 Do you think customer experience is affected by the ethical use of dat..... (2350:3025) - D

15: Participant_15_ Semi-Structured_ Interviews

Do you think customer experience is affected by the ethical use of data for the purpose of analytics? If so how?

So yes, it would, especially with direct marketing strategies our organisation have it would improve the customer's experience. So, for example, if a customer buys 10 bottles of milk, our analytics tea will use this data to target this customer to be part of a rewards program, vouchers or benefits.

Do you think that the unethical use of data would impact customer experience? Why?

Yes, I do think so. For example, if the wrong people get a hold of our data it can affect our customers in a negative way, especially with the type of data we have in our warehouse.

○ Principle 8- Data Property

16 Quotations:

**1:1 What is your role in the organization? So, my role is really plannin..... (176:333) - D 1:
Participant_1_ Semi-Structured_Interviews (1)**

What is your role in the organization?

So, my role is really planning and execution for growth, with a main focus on the Customer. I am a customer Analyst.

**1:2 How do you use and access customer data in your role? It depends on..... (335:550) - D 1:
Participant_1_ Semi-Structured_Interviews (1)**

How do you use and access customer data in your role?

It depends on the campaigning. We would get our data from a third-party provider (Bureau) and internal data that we receive from customers via the call centre.

**2:14 What is your role in the organization? I am a senior Customer Analyst..... (176:640) - D 2:
Participant_2_ Semi-Structured_Interviews**

What is your role in the organization?

I am a senior Customer Analyst within Growth team. It involves working a lot with customer data and using that data for marketing purposes.

How do you use and access customer data in your role?

I access the data directly from SAS, SQL or the data Warehouse. I can access personal customer data. I essentially use that data in an anonymised fashion for general reporting and then we use that same data for targeted campaigns.

**3:1 What is your role in the organization? I am a Customer Credit Analyti..... (176:808) - D 3:
Participant_3_ Semi-Structured_Interviews**

What is your role in the organization?

I am a Customer Credit Analytics Analyst. I am accountable for determining product outcomes based on the information received and analysed of customers.

How do you use and access customer data in your role?

So, we extract data from the credit bureau, there are various credit bureaus. We used one called TransUnion. Based on the information we extract from this bureau we can then, through analytics and algorithms that we run within our team. We can decide whether or not a customer is approved or declined as well as their limits/ terms for the financial products, example, a loan product.

**4:14 What is your role in the organization? My job title is a BI Data Anal..... (176:645) - D 4:
Participant_4_ Semi-Structured_ Interviews**

What is your role in the organization?

My job title is a BI Data Analyst and my role it's getting data from our data sources (internal and external) and getting the data fit for purpose for analytics.

How do you use and access customer data in your role?

I use customer data to report on analytics and to report on different variations of customer metrics, more recently to do with customer privacy and behaviour and spend patterns. This data is accessed from source.

**5:1 What is your role in the organization? Currently I am Head of Data i..... (176:601) - D 5:
Participant_5_ Semi-Structured_ Interviews**

What is your role in the organization?

Currently I am Head of Data in IT operations, as part of the CIO for the organisation.

How do you use and access customer data in your role?

So, in my role we are more the technical enablers of data for the organisation. So, from a data perspective my team is responsible for to source and provision customer data. making provision using various tools for analysts to use that data.

**6:14 What is your role in the organization? I am a Customer Analytics Anal..... (176:559) - D 6:
Participant_6_ Semi-Structured_ Interviews**

What is your role in the organization?

I am a Customer Analytics Analyst.

How do you use and access customer data in your role?

I use the data warehouse, or I use a platform using SAS and that is how I access the data. I use the customer data to build reports based on customer data, understanding their shopping behaviour to provide insights for better offerings to the customer.

7:1 What is your role in the organization? My role is a Senior Customer Ex..... (176:911) - D 7:

Participant_7_Semi-Structured_Interviews

What is your role in the organization?

My role is a Senior Customer Experience Analyst. I look after the existing customer portfolio in the organisation, with that I look after how various campaigns will be executed and for which customers we will target through these campaigns, taking into consideration our strategies.

How do you use and access customer data in your role?

Typically, what I would do is get information from a dataset provided to us, which pulls in all our customer data and identifies all the relevant information of that customers (based on the products we sell to them, which is their credit information) to see if they eligible for the products. We access the data via the data warehouse or through the SAS tool.

8:14 What is your role in the organization? My role is the Customer Analyt..... (176:1401) - D 8:

Participant_8_Semi-Structured_Interviews

What is your role in the organization?

My role is the Customer Analytics Manager. I manage a team of six analyst to produce customer insights to the organisation. In doing so, we work closely with our partner brands as well as direct marketing teams. Our work is predominately done on adhoc basis, with some reports but essentially when something is happening in the organisation, we will take up that challenge.

How do you use and access customer data in your role?

We use and access customer data in predominately two ways within this organisation. The first way is, we have an on prem server (Oracle), which stores structured data in the likes of tables and that consists of customer information, banking information, sales and bureau information, which constitutes most of the data we work with. As we move towards a future fit business, we have launched a Cloud project over the last year and a half, within AWS. We are slowly trying to absorb data from this environment. The final area in which we can access

data is on the TAD server, which is an environment maintained by the Chief Risk Office and this will usually be similar data that is found on Oracle database, that might have slightly different information.

9:1 What is your role in the organization? My role in the organisation is..... (177:948) - D 9:

Participant_9_Semi-Structured_Interviews

What is your role in the organization?

My role in the organisation is a customer experience analyst. I look at the experience customers have with us and how they perceive us. Customer experience lays the foundation for our business. Our main aim is to translate customer experience feedback and from this, strategic decisions can be made to support the business in improving ways for the customer experience to be better.

How do you use and access customer data in your role?

So, we access data in two ways, via a third-party vendor, which we utilise information from when we potentially serving customers. Secondly, via our internal source, which is the Data warehouse, which consists of all our customer data. And from that, using SAS as a tool to extract that data.

10:14 What is your role in the organization? I am the Customer Experience m..... (177:569) - D

10: Participant_10_Semi-Structured_Interviews

What is your role in the organization?

I am the Customer Experience manager, reporting into the broader customer team which also consists of Marketing and Customer Analytics

How do you use and access customer data in your role?

We access customer data in order to conduct Voice of Customer surveys from customers and to do research on an adhoc basis. It's purely used as a research function.

11:1 What is your role in the organization? So, I am a Customer Analyst in..... (177:1059) - D 11:

Participant_11_Semi-Structured_Interviews

What is your role in the organization?

So, I am a Customer Analyst in our Growth department. So basically, I look after our existing customer management portfolio, of which these customers will be part of campaigns on a daily basis, where the main aim is to grow more customers for the organisation.

How do you use and access customer data in your role?

So, we directly extract our customer data from our data warehouse that is where we get our customer data from. We will only go to customers to have given us permission to call, SMS or email them. Depending on those who opted in as well as the various channels the customers opted in for. We run customers through a “waterfall process” and when I say waterfall, I mean it’s just to check that customers potentially qualify for the campaign that we are running. This way we are able to exclude those who are in arrears in their accounts.

12:14 What is your role in the organization? I work within the Growth team..... (177:580) - D

12: Participant_12_ Semi-Structured_ Interviews

What is your role in the organization?

I work within the Growth team, and my role is a Customer Analyst. So, what we do is market to new customers.

How do you use and access customer data in your role?

So, we work with existing customer data and with bureau data to help with insights on how to best market to customers and provide them with products and services they will find best suited for them.

13:1 What is your role in the organization? My role is a Senior Customer A..... (177:544) - D 13:

Participant_13_ Semi-Structured_ Interviews

What is your role in the organization?

My role is a Senior Customer Analytics Analyst. I put together strategies for customers to manage their profiles and to award them appropriate limits based on their risk level.

How do you use and access customer data in your role?

So firstly, we have it provided via SAS server or Oracle. We obtain data from credit bureau to.

14:14 What is your role in the organization? I am a senior analyst, focusi..... (177:642) - D 14:

Participant_14_ Semi-Structured_ Interviews

What is your role in the organization?

I am a senior analyst, focusing on Customer Analytics in the form of customer behaviour.

How do you use and access customer data in your role?

So, we have a data warehouse, where a lot of the data is housed in there. We also have data that is available on the AWS cloud platform. We make use of a SAS tool to access the data as well as Oracle SQL developer. But that is to lesser level. That is limited to usage to many.

15:1 What is your role in the organization? My role is a Data Analyst in t..... (177:617) - D 15: Participant_15_ Semi-Structured Interviews

What is your role in the organization?

My role is a Data Analyst in the BI team.

How do you use and access customer data in your role?

We access data through Data Warehouse, and in terms of making use of customer data, we just perform analytics on the data but very minimal. So, I basically just make sure all the data is available and that it's in the data warehouse and that it's in a usable format for our other analysts to make use of.

o **Principle 7- Process Limitation**

15 Quotations:

1:12 When accessing your consumer data stored in the Warehouse, what measur..... (5184:5421) - D 1: Participant_1_ Semi-Structured Interviews (1)

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

The measures would be access controlled to the warehouse. We also have certain restrictions to certain tables in the data warehouse.

2:4 When accessing your consumer data stored in the Warehouse, what measur..... (5440:5805) - D 2: Participant_2_ Semi-Structured Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

So, there is strict control around who can access the data. so, there is authenticated logins that you need to use, and very strong passwords generated by the IT team. They are also able to monitor what we are doing, seeing how much data is moving and who is utilising it.

3:11 When accessing your consumer data stored in the Warehouse, what measur..... (6652:7142) - D 3: Participant_3_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

We track every single query that someone runs, so we can ensure nobody is extracting information for unethical purpose. So just because the information is there doesn't mean you are just able to go look up someone's address or gross. We can track every single user, the script they are running and when so we can validate whether they are doing it for the purpose of which they said they were.

4:4 When accessing your consumer data stored in the Warehouse, what measur..... (8545:9177) - D 4: Participant_4_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

So, control is granted through our information security department. Access to data is also requested on departmental level, where there are some processes you need to go through in order to get access to the data. This entire process is governed through our data and analytics forum. So, we know for this particular department, this team, group or individual needs access to this particular data. Where it's just read/ write access it gets controlled. We also need to know the intention behind the requirement of needing the data.

5:11 When accessing your consumer data stored in the Warehouse, what measur..... (6176:6739) - D 5: Participant_5_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

Our data is accessed controlled. It is role based, so it determines if your role required you to have access. There are policies that you need to agree to when you get access to the data and we review access on a quarterly basis to review if any user needs to be removed. There are restrictions on where data can be stored to ensure we maintain access to those areas and to wherever data is extracted too. All this goes through our information security team.

6:4 When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control? (4296:4554)

- D 6: Participant_6_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

Each of us need to login with a certain code, this measures who runs what from the warehouse. You can see who is running what so everything is monitored.

7:11 When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control? (6320:6709)

- D 7: Participant_7_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

So, I think that refers to what I mentioned earlier, we silo to a degree on the workspaces we use. Access to the warehouse is definitely controlled has various departments have different types of accesses, so some might have read only access, whereas others have read and write access.

8:4 When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control? (9021:9941)

- D 8: Participant_8_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

It is much secured so in terms of the infrastructure of server there will be backups of such there will be firewalls. In order to get into that you not only need a password to access the environment, but you also need sign off for tools to be put on your laptop in order to access it. An example is SQL, SAS, Python and the likes thereof. You also get a password, which you log into your tool and in order to get access to the server you need to run a script, which tracks your staff number as well as your password to give you access to that. When sharing data, you will get password protected links, which is issued by the Information Security team and finally if there is any emails sent that could potentially have confidential information included, we have internal firewalls and antiviruses to protect anyone.

9:11 When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control? (6145:6485)

- D 9: Participant_9_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

So, everyone has their own login details that is personalised to them only. That login details are recorded when that individual uses that to obtain data from the warehouse. The login details also expire, so you will need to update it.

**10:4 When accessing your consumer data stored in the Warehouse, what measur.....
(6577:6791) - D 10: Participant_10_Semi-Structured_Interviews**

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

So, as far as I know it would be access control, role controlled and only being able to access data you need.

**11:11 When accessing your consumer data stored in the Warehouse, what measur.....
(5099:5479) - D 11: Participant_11_Semi-Structured_Interviews**

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

Not everyone has access to the data warehouse, it depends on your job function. And based on your job function you will receive a password for you to access the data. also, there is a log, so basically you can see an analyst is accessing the data and what they are doing with it.

**12:4 When accessing your consumer data stored in the Warehouse, what measur.....
(4177:4345) - D 12: Participant_12_Semi-Structured_Interviews**

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

There are passwords that restrict access to certain individuals.

**13:12 When accessing your consumer data stored in the Warehouse, what measur.....
(4002:4183) - D 13: Participant_13_Semi-Structured_Interviews**

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

Basically, we all have given a profile and passwords, they expire regularly.

14:4 When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control? (4548:4814) - D 14: Participant_14_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

So, we have a lot of segmentation for each department and analysts, what they can and cannot see. We also have security team that monitors users when using data.

15:11 When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control? (4128:4465) - D 15: Participant_15_Semi-Structured_Interviews

When accessing your consumer data stored in the Warehouse, what measures are in place to ensure control?

So, we have an approval process for access to data warehouse. Also, depending on your role you will have data restrictions, so certain areas will only be able to access certain sets of data. There are also data audits that are done.

o **Principle 6- Integrity & Confidentiality**

15 Quotations:

1:7 How does your organisation ensure the ethical use of customer data? So..... (2785:3323) - D 1: Participant_1_Semi-Structured_Interviews (1)

How does your organisation ensure the ethical use of customer data?

So, that is a difficult question. I can't say we have a set of rules. We have some guidelines we have an information security team that conducts regular assessments. In a more practical space as analyst, it depends on the analyst and their values and it is provided through those values on how to be ethical. Our organisation focuses on values such as integrity, customer first and responsibility and that resonates how we should live our lives and be ethical with data.

2:9 How does your organisation ensure the ethical use of customer data? We..... (2701:2990) - D 2: Participant_2_Semi-Structured_Interviews

How does your organisation ensure the ethical use of customer data?

Well in my role there are strict checks and rules around how we access data and who we market to. So, for example, if someone opted out, we update our records so that we don't spam the customer. So, in a nutshell that's it.

3:6 How does your organisation ensure the ethical use of customer data? I..... (3658:3988) - D

3: Participant_3_Semi-Structured_Interviews

How does your organisation ensure the ethical use of customer data?

I think again following those two controls I mentioned. Anything having to do with customer data in our models needs to be signed off at our forum. And sending our models to the external organisation for validation. This is how we ensure the ethical use of data.

4:9 How does your organisation ensure the ethical use of customer data? So..... (4326:4748) -

D 4: Participant_4_Semi-Structured_Interviews

How does your organisation ensure the ethical use of customer data?

So, during our on-boarding processes once we acquire new customers. We do have our Terms and Conditions readily available for customers to read, prior to accepting any offers. We have this on our websites and the likes of our mobi- app, with this, the privacy policy is there as well. It remains available and updated for the customer on a regular basis.

5:6 How does your organisation ensure the ethical use of customer data? We..... (3252:3861) -

D 5: Participant_5_Semi-Structured_Interviews

How does your organisation ensure the ethical use of customer data?

Well, like I said before we have a strong set of values we apply. I work very closely with analysts and I see how they hold each other accountable. There is a peer review that forms part of most of our analytics. Throughout the organisation you will find when a model is built or when data is being used as it goes through the peer review, it gets challenged. People are kept honest for their data use. We a very diverse organisation, which makes it better, because we challenge each other, based on our own interpretation of our own values.

6:9 How does your organisation ensure the ethical use of customer data? So..... (2199:2391) -

D 6: Participant_6_Semi-Structured_Interviews

How does your organisation ensure the ethical use of customer data?

So, I didn't sign any NDA in terms of data, but I think that goes without saying, we know that type of thing is not allowed.

7:6 How does your organisation ensure the ethical use of customer data? Ok..... (3092:3513) -

D 7: Participant_7_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

Okay, well partially it is that online mandatory compliance testing we need to complete annually. And with that, we have a legal department to an extent they make sure we are compliant with things. For example, when creating campaigns any communication are usually checked by them to ensure they messages being communicated to the customer is compliant.

8:9 How does your organisation ensure the ethical use of customer data? So..... (4951:5609) -

D 8: Participant_8_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

So, I think firstly the way customer data is stored is very accurate, so at least when you are looking at an individual's records you are comfortable in knowing that it is the right data associated with the person. Secondly there is a lot of data that we see that is fairly confidential, which we will ensure we do not look at a customer level but rather aggregate those customers. So, we do take precautions and I think the message we speak about quite often is that you are aware that it is personal data you are working with. Also, we do require various permissions to look at customer data

9:6 How does your organisation ensure the ethical use of customer data? So..... (3033:3439) -

D 9: Participant_9_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

So, the measures that are in place already from an operational level; a staff member that is in the call centre is not allowed to use their cell phones while assisting customers. All calls are also recorded, it is also easy to track any customer data and there is a digital footprint left from a staff member on any system they might use.

10:9 How does your organisation ensure the ethical use of customer data? We..... (3325:3861)

- D 10: Participant_10_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

We have data policies and frameworks in place. We have all the checks required. We have an Information Security Team that monitors the processes. Its tight and really well managed. We have secure file transfers to protect our customers data, we have file destroying processes that ensure we remove data that's past its validity date, we align and follow POPI. I think in our environment we take it extremely seriously as we deal with customer information all the time.

11:6 How does your organisation ensure the ethical use of customer data? Th..... (3029:3398) -

D 11: Participant_11_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

There's a lot of information that goes around in our organisation, so we need to use it ethically. So, when any customer touch points require data from a customer, there's always a footprint. We also sign clauses and documents in terms of using the data and the repercussions of such data being leaked.

12:9 How does your organisation ensure the ethical use of customer data? So..... (2050:2237) -

D 12: Participant_12_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

So, we get training regarding how to use data, especially when working with sensitive data such as customer ID numbers.

13:6 How does your organisation ensure the ethical use of customer data? So..... (2028:2385) -

D 13: Participant_13_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

So, there are regular quality controls for data usage in the organisation, especially within the call centre. Agents are not allowed to use their phones during working hours. We do not email actual customer information to other business units; it needs to go through a secure file transfer.

14:9 How does your organisation ensure the ethical use of customer data? I..... (2590:2780) - D

14: Participant_14_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

I think in a lot of cases they do try to segment. Kind of accessibly, limit the analysts to certain kinds of information.

15:6 How does your organisation ensure the ethical use of customer data? So..... (2149:2348) -

D 15: Participant_15_ Semi-Structured Interviews

How does your organisation ensure the ethical use of customer data?

So, we do have all those policies in place, the POPI and PCI and data access controls in place, that's about it that I can think of.

o **Principle 5- Data Participation**

0 Quotations

o **Principle 4- Privacy Contract**

15 Quotations:

1:6 In your opinion, do you think that consumers need to know what current..... (2367:2783) -

D 1: Participant_1_ Semi-Structured Interviews (1)

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

I think as more people become digital enabled, especially from a SA perspective our customer base will have the protection of their data become more important so therefore it will become important for organisations to become more transparent with the customers.

2:10 In your opinion, do you think that consumers need to know what current..... (2409:2699)

- D 2: Participant_2_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Yes, I think they should, it's only fair. Customers definitely need to understand exactly what they are opting into certain communications.

3:5 In your opinion, do you think that consumers need to know what current..... (3197:3656) -

D 3: Participant_3_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Yes. I definitely feel it is important. Speaking for myself, I give data for any organisation I would love to know what it's used for and that it is being used in an ethical way and that you are not storing my address or income. We definitely need to make them aware of what we storing what using it for.

4:10 In your opinion, do you think that consumers need to know what current..... (3606:4324)

- D 4: Participant_4_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Yes, most definitely. As in the case of any social media platform for example that you might sign up to or any company's website. As soon as a customer makes their personal data available to them, the customer needs to know what their privacy policies are, how they going to protect your data and the use thereof. These policies needs to be readily available on their websites, blogs or social media platforms. Also, the customer needs to have access to this information prior to signing up to any products and services so they are able to make informed decisions.

5:5 In your opinion, do you think that consumers need to know what current..... (2775:3250) -

D 5: Participant_5_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

I think consumers should have the right to know and ask any point in time from any organisation they have dealings with. I think consumers are not fixated with the jargon but more so interested in what you are doing with their data. I think customers need to feel assured their data is safe and that its not being shared.

6:10 In your opinion, do you think that consumers need to know what current..... (1903:2197)

- D 6: Participant_6_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

I think it would be nice, but I'm not sure how valuable that information would be. I think they would just want to know their data is safe.

7:5 In your opinion, do you think that consumers need to know what current..... (2866:3090) -

D 7: Participant_7_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

I think so, I definitely think customers should be aware of this yes.

8:10 In your opinion, do you think that consumers need to know what current..... (4219:4949)

- D 8: Participant_8_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Personally, I do not think so, I think it might help in T's and C's to specify that there is something in place. I don't think they would need to know the detail. I know there are some clauses regarding the use of the data internally or third parties related, of which the customer would opt in for. I think theoretically this sounds right to however, ethics is something that is subjective as even though we are stating we will use the data in an ethical manner can be questioned. By putting out the detail it could result in a can of worms being open and more damage being done.

9:5 In your opinion, do you think that consumers need to know what current..... (2731:3031) –

D 9: Participant_9_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

I think from a consumer perspective it is good to know. Especially if you are giving out your personal data and these organisations are using it.

10:10 In your opinion, do you think that consumers need to know what current..... (2776:3323)

– D 10: Participant_10_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Oh yes for sure, there are so many opportunities for customers to be taken advantage of and for their data to be used against them and harm them. I think it's a huge risk and many still don't understand the how dangerous it is for their data to get out there and being used by fraudsters etc. So, I think its imperative customers understand the who, what, why and how their data will be used.

11:5 In your opinion, do you think that consumers need to know what current..... (2681:3027)

- D 11: Participant_11_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Well, that can be yes and no. if the customer wants to know, the business should be obliged to give that customer that relevant information. So ultimately it should be on a need-to-know basis.

12:10 In your opinion, do you think that consumers need to know what current..... (1687:2048)

- D 12: Participant_12_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Yes, customers do need to know what data organisations have of them. It is also important that customers are aware that they can opt out of marketing from organisations that they do not want to be a part of.

13:5 In your opinion, do you think that consumers need to know what current..... (1669:2025)

- D 13: Participant_13_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

I think yes. I think consumers should definitely know. How to get it to them and whether they will take the time to go through it I'm not sure, but they should know what data is being used and for what.

14:10 In your opinion, do you think that consumers need to know what current..... (2158:2588)

- D 14: Participant_14_ Semi-Structured Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Yes, however I think most consumers are not as worried about their personal information. But I think they should understand how their data is being used and that they should have the right to request this level of detail and prove their data is deleted in x number of years.

15:5 In your opinion, do you think that consumers need to know what current..... (1861:2147)

- D 15: Participant_15_ Semi-Structured_ Interviews

In your opinion, do you think that consumers need to know what current policies/frameworks organisations have in place to govern the ethical use of data?

Yes. For me as a consumer I would want to know how my data is used. Therefore, it is important for us to ensure customers are aware.

o **Principle 3- Safeguard Data**

15 Quotations:

1:16 How often does your organisation check that data is being utilised eth..... (6095:6413) - D

1: Participant_1_ Semi-Structured_ Interviews (1)

How often does your organisation check that data is being utilised ethically?

I wouldn't say often in my own personal experience. I think those questions would pop up in my space at initiation of a campaign idea and the ethical use of data for that campaign. But I don't see regular check ins for the data being used.

2:1 How often does your organisation check that data is being utilised eth..... (6804:7038) - D

2: Participant_2_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

I think it's an on-going process. There are various measures and metrics in place across the business to ensure data is being used and presented accurately.

3:14 How often does your organisation check that data is being utilised eth..... (8124:8528) - D

3: Participant_3_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

There's probably not a person who does this on a day-to-day basis. As I mentioned whenever we present something, there is so many channels it needs to go through and so many sign

off required. So, by giving everyone in the exposure before implementation we are creating that ethical waterfall before we get to the end product.

4:1 How often does your organisation check that data is being utilised eth..... (10535:10824) -

D 4: Participant_4_ Semi-Structured_Interviews

How often does your organisation check that data is being utilised ethically?

Our data and analytics forum runs on a monthly basis, it started off bi- weekly. This is how often we ensure whatever checks need to be done and whatever actions come from this gets completed on a regular basis

5:14 How often does your organisation check that data is being utilised eth..... (7313:7670) - D

5: Participant_5_ Semi-Structured_Interviews

How often does your organisation check that data is being utilised ethically?

I don't think we have specific checks. I think it's an everyday thing, where we keep each other accountable for our data use. There are audits that take place for data usage, which we get from our risk and compliance team, where they will advise which data was used and for what.

6:1 How often does your organisation check that data is being utilised eth..... (5220:5537) - D

6: Participant_6_ Semi-Structured_Interviews

How often does your organisation check that data is being utilised ethically?

I think the way our business looks at the data is ethically or not; you need to present your findings before it is signed off for campaign. You will present numbers etc and from that they will decide if the data is correct and of quality.

7:14 How often does your organisation check that data is being utilised eth..... (7447:7671) - D

7: Participant_7_ Semi-Structured_Interviews

How often does your organisation check that data is being utilised ethically?

We have a department called Information Security and they constantly conduct checks to make sure there is not unethically behaviour taking place.

8:1 How often does your organisation check that data is being utilised eth..... (11017:11492) -

D 8: Participant_8_ Semi-Structured_Interviews

How often does your organisation check that data is being utilised ethically?

Within the data environment, they do have a data governance forum and it governs how you structure the data, bring it in, what is included, and are the right precautions taken so in terms of ensuring if the data is accurate and it is ethically ingested into our environment is an on-going process. It's also subjective and based on our organisation's values, that analysts will use data ethically.

9:14 How often does your organisation check that data is being utilised eth..... (7104:7414) - D

9: Participant_9_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

Well, I'm not sure how often. But I do know when we do go through certain system integrations. We do have to list all accesses you have, which could potentially be an audit process- making sure the user is using the data ethically.

10:1 How often does your organisation check that data is being utilised eth..... (7420:7687) - D

10: Participant_10_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

I am not sure for the broader business. However, from a customer experience perspective, every single time we extract data, we check the data to ensure nothing seems off regarding the data.

11:14 How often does your organisation check that data is being utilised eth..... (6139:6320) -

D 11: Participant_11_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

In my opinion, I would say it is a continuous process as data is being used daily in our organisation.

12:1 How often does your organisation check that data is being utilised eth..... (4867:5035) - D

12: Participant_12_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

I think it's an on-going process. Where our information Security Team will monitor this.

13:15 How often does your organisation check that data is being utilised eth..... (4777:4975) -

D 13: Participant_13_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

In my department its every time a new strategy is created, the data will be checked via a strict panel of individuals.

14:1 How often does your organisation check that data is being utilised eth..... (5473:5659) - D

14: Participant_14_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

I know there is one or two audits that took place. But I can't exactly pinpoint how often this is checked.

15:14 How often does your organisation check that data is being utilised eth..... (5076:5309) -

D 15: Participant_15_ Semi-Structured_ Interviews

How often does your organisation check that data is being utilised ethically?

So, in terms of data warehouse. We conduct annual audits and checks on everyone that utilises the data and to see what they have been doing with that data.

o **Principle 2- Accountability**

30 Quotations:

1:9 What is your understanding of the consequences associated with unethic..... (4047:4353) -

D 1: Participant_1_ Semi-Structured_ Interviews (1)

What is your understanding of the consequences associated with unethical use of data within your organisation?

So, it depends, but there are repercussions as an analyst you know data is sensitive, you can share it, download it etc. You can lose your job and it can be a criminal offence if found fraudulent.

1:15 Does your organisation have a defined data strategy? If so, does it co..... (5423:5722) - D

1: Participant_1_ Semi-Structured_ Interviews (1)

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

From a strategy perspective, I would say we do have a defined strategy for data in the organisation, however the elements I can't confirm if the strategy focuses on those elements.

2:3 Does your organisation have a defined data strategy? If so, does it co..... (5807:6127) - D 2:

Participant_2_ Semi-Structured Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

Yes, there is quite a clear strategy, especially for the fact we are moving to digital. And again, everything will be aligned with the ethical use of data. Especially with the shift to being POPIA compliant.

2:7 What is your understanding of the consequences associated with unethical..... (3815:4099) -

D 2: Participant_2_ Semi-Structured Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

The consequences vary depending on the severity of the situation, it can go from disciplinary hearings to losing your job, which could even go up to being a criminal offence.

3:8 What is your understanding of the consequences associated with unethical..... (4626:5204) -

D 3: Participant_3_ Semi-Structured Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

From an employee level it could lead to repercussions like dismissals. From a customer point of view, we have so much information on customers, if someone had to maliciously do something with that information, like use their address, gross or ID no. that would lead to serious impacts. Therefore, we need all these controls in place is things like this can't happen. For an organisation it would be major financial penalties, worst scenario the place could shut down.

3:12 Does your organisation have a defined data strategy? If so, does it co..... (7144:7454) - D

3: Participant_3_ Semi-Structured Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

I do think we have a data strategy. One of the components should definitely be the ethical use of data. However, I haven't seen such a document. But I'm pretty sure something like that exists.

4:3 Does your organisation have a defined data strategy? If so, does it co..... (9180:9685) - D 4:

Participant_4_Semi-Structured_Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

So yes, we have a defined data strategy, it is included in our terms of reference of our data and analytics forum. Within the terms of reference there are elements that not only speak to ethical use of data and accountability but also to the quality and the integrity of the data. The controls around the access of data. There is very detailed prescriptions around all of the use of data.

4:7 What is your understanding of the consequences associated with unethical..... (5772:6721) -

D 4: Participant_4_Semi-Structured_Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

So, as an organisation should we be found not to be compliant, and again with reference to the POPI Act. The information regulator can fine us up to 10 million rand for each instance of a breach. It can become an extremely expensive penalty if we are found not to be compliant. Therefore, this is motivation for the company to be compliant. If it were on an analyst level, the consequences would be grounds for dismissal if it were found that customer information was leaked by you as an employee of the company. As an employee of the organisation, we all had to sign an agreement with the company that we will not divulge company/ customer information. It is definitely immediate dismissal. The employee would appear before disciplinary committee of some sort, prior to the dismissal but it's definitely grounds for immediate dismissal.

5:8 What is your understanding of the consequences associated with unethical..... (4674:5030) -

D 5: Participant_5_Semi-Structured_Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

I don't exactly know what the consequences are. However, because we are a value driven organisation it would be treated in the most severe way, ending up in a disciplinary hearing or depending on the severity it would warrant instant dismissal.

5:12 Does your organisation have a defined data strategy? If so, does it co..... (6741:7045) - D

5: Participant_5_ Semi-Structured_Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

We do have a data strategy. We also have a data governance forum in place to govern data usage. Ethical data usage is not something I see in the forefront as part of those discussions.

6:3 Does your organisation have a defined data strategy? If so, does it co..... (4556:4778) - D 6:

Participant_6_ Semi-Structured_Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

I think we do have a data strategy, but I think the strategies are customised to each data department.

6:7 What is your understanding of the consequences associated with unethical..... (3104:3293) -

D 6: Participant_6_ Semi-Structured_Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

Very unhappy customers could end up closing their accounts, reputation damage.

7:8 What is your understanding of the consequences associated with unethical..... (4547:4951) -

D 7: Participant_7_ Semi-Structured_Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

If it were on an employee level the staff member would be dismissed. They would need to go through a disciplinary hearing. Also, on a wider organisation level, if those things came to light that fraudulent or data misuse activity was happening then there would be punitive damage to the company.

7:12 Does your organisation have a defined data strategy? If so, does it co..... (6711:6893) - D

7: Participant_7_ Semi-Structured_ Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

Yes, they do. I'm not entirely sure of the documentation thereof.

8:3 Does your organisation have a defined data strategy? If so, does it co..... (9943:10216) - D

8: Participant_8_ Semi-Structured_ Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

Yes, we have a data strategy, but in terms of the various elements, there isn't defined policies on the ethical use of data in our business to my knowledge.

8:7 What is your understanding of the consequences associated with unethical..... (7069:7510) -

D 8: Participant_8_ Semi-Structured_ Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

Personally, I have never experienced a final warning as a result of using data in an unethical way or that of anyone in my team. I have had conversations whereby they wanted to do something, especially when they are a bit more junior and I kind of guided them down the path of asking if they have the right permissions and sign off.

9:8 What is your understanding of the consequences associated with unethical..... (4685:5001) -

D 9: Participant_9_ Semi-Structured_ Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

The consequences would be that the individual needs to take accountability and ownership for their error/ misuse of data. Overall, the individual could end up getting fired if any information were to leak.

9:12 Does your organisation have a defined data strategy? If so, does it co..... (6487:6779) - D

9: Participant_9_ Semi-Structured_ Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

Yes, it does. As I mentioned I haven't seen it, but I know from an accountability and a usage perspective, access is only granted to certain users with specific privileges.

10:3 Does your organisation have a defined data strategy? If so, does it co..... (6793:7169) - D

10: Participant_10_ Semi-Structured Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

I can't respond to that entirely, but I do know that managing data ethically is an engrained way of doing things. I can't exactly say the processes, however I do know that I need to go through a stringent process which would ultimately cover those elements.

10:7 What is your understanding of the consequences associated with unethic..... (5010:5342)

- D 10: Participant_10_ Semi-Structured Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

I think the consequences are massive. If you are found to have a breach, apart from the brand reputation stuff, would have a significant impact on the bottom line of the business. You will also be fined, if found guilty.

11:8 What is your understanding of the consequences associated with unethic..... (4193:4502)

- D 11: Participant_11_ Semi-Structured Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

It depends on how the data gets used unethically. So, in my opinion, if I should use data unethically from both a customer and company perspective, I could lose my job as it would lead to a dismissal.

11:12 Does your organisation have a defined data strategy? If so, does it co..... (5481:5723) - D

11: Participant_11_ Semi-Structured Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

Yes, I do. The ethical use of data, we all covered in terms of how we use data, regardless of which department you belong to.

12:3 Does your organisation have a defined data strategy? If so, does it co..... (4347:4576) - D

12: Participant_12_ Semi-Structured_ Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

Yes, however I haven't exactly looked at the strategy, but I would assume the strategy covers those elements.

12:7 What is your understanding of the consequences associated with unethical..... (2995:3259)

- D 12: Participant_12_ Semi-Structured_ Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

So, I know that the business takes these things very seriously. And it is frowned upon. You could end up having a disciplinary hearing for these actions.

13:8 What is your understanding of the consequences associated with unethical..... (2873:3198)

- D 13: Participant_13_ Semi-Structured_ Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

So, there are financial risks to the organisation, they could get fines due to data leaks. There can be reputational damage and from a customer perspective they could be affected negatively especially if its fraud.

13:13 Does your organisation have a defined data strategy? If so, does it co..... (4185:4384) - D

13: Participant_13_ Semi-Structured_ Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

I believe we do have a strategy. But I do not know the exact ins and outs of it.

14:3 Does your organisation have a defined data strategy? If so, does it co..... (4816:5087) - D

14: Participant_14_ Semi-Structured_ Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

I am vaguely aware of a data strategy. But I think our data strategy has matured enough where they have given certain people accountability of the data.

14:7 What is your understanding of the consequences associated with unethical..... (3457:3716)

- D 14: Participant_14_ Semi-Structured_ Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

The consequences would be that those who use data unethically would immediately get dismissed. There could also be brand damage to the organisation.

15:8 What is your understanding of the consequences associated with unethical..... (3027:3203)

- D 15: Participant_15_ Semi-Structured_ Interviews

What is your understanding of the consequences associated with unethical use of data within your organisation?

In our organisation, it would be considered a dismissal offence.

15:12 Does your organisation have a defined data strategy? If so, does it co..... (4468:4773) - D

15: Participant_15_ Semi-Structured_ Interviews

Does your organisation have a defined data strategy? If so, does it cover the ethical use of data and accountability?

Yes, we do a defined data strategy and yes it does cover both elements of the ethical use of data and accountability. We have a data governance forum where we discuss all issues as well.

o **Principle 11- Cultural Change**

31 Quotations:

1:4 Does your organisation follow a specific legislation/ governance frame..... (1257:1966) - D

1: Participant_1_ Semi-Structured_ Interviews (1)

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

So, I'm not too close to that, but what I do know is that POPI Act is top of mind. This has been something we definitely are working closely to achieve. I think we have a good legal and compliance team and everything we do goes through this team for approval. So, I do think we do have a fairly good governance process in place.

Please tell us about legislation that affects your organisation.

So, again top of mind is POPI Act. This impacts our business and the way we do marketing to customers. The way we execute our campaigns, communicate is impacted by POPI.

1:10 Does your organisation have embedded policies around the ethical behav..... (4355:4864)

- D 1: Participant_1_ Semi-Structured_Interviews (1)

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes, I do think we have that, but I don't think it is communicated enough. I don't think the message is brought across enough.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

I wouldn't really know to be honest, if assumed, we have a legal and compliance team, so there is a team that is dedicated to this to make sure we are compliant.

2:6 Does your organisation have embedded policies around the ethical behav..... (4101:4756) -

D 2: Participant_2_ Semi-Structured_Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes. They do and I think it speaks back to the organisation's values. There are rules and laws that govern what we do and at the same time it is our internal value system that speaks to putting the customer first.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

So, what I have seen they are quite quick that decides on various issues for example, using data in a secure manner whilst working at home. So, I think it's an on- going process. I think they quite quick to change policies.

2:12 Does your organisation follow a specific legislation/ governance frame..... (1517:2101) - D

2: Participant_2_ Semi-Structured_ Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes, as far as I know. There is also a lot of talk in our organisation around the upcoming POPI legislation and how we are going to conform to that in terms of the new business practices.

Please tell us about legislation that affects your organisation.

Well, I don't know it by name essentially, but I know it's the right to privacy, which governs what we do. So, we have the responsibility to use and store customer data in an ethical manner

3:3 Does your organisation follow a specific legislation/ governance frame..... (2219:2697) - D

3: Participant_3_ Semi-Structured_ Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

I'm definitely not entirely sure around the exact legislations used or models. I know POPI is one. But in terms of governance frameworks that have been signed off. I am not sure, so I'm going to say yes but I'm not sure.

Please tell us about legislation that affects your organisation.

I definitely think again but it would be POPI.

3:9 Does your organisation have embedded policies around the ethical behav..... (5206:6026) -

D 3: Participant_3_ Semi-Structured_ Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

I think we do, but it's not something we document per say. It's definitely within our environment getting sign off before implementation. There are various channels to go

through such as compliance and legal. There is always representation of these two departments at the forum as they form part of the process of ensuring the ethical use of data.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

So, we've got a team legal and compliance that are constantly engaging with the financial services regulator. I would say we are really on top in this regard in being compliant as we understand what the repercussions will be financial and reputational.

4:6 Does your organisation have embedded policies around the ethical behav..... (6723:7861) -

D 4: Participant_4_ Semi-Structured_Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes, I would say there are policies that govern ethical behaviour within the organisation. For example, the organisation conducts annual tests to ensure all employees are kept up to date with current policies and also able to instil the ethical behaviour when using customer data.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

Our policies are reviewed and updated annually. In addition to our partner company, we also receive their updated policies to ensure we are still compliant. So, both their policies and ours gets updated annually. If something, emerges in the market that requires us to update our policies outside of our annual review and update process, then we will update those policies accordingly and also quite urgently, because if it is something that came out into the industry or the market that our customers are now aware of and it's something, we need to subscribe to then we need to update to ensure our customers know we on top of our game.

4:12 Does your organisation follow a specific legislation/ governance frame..... (1611:2874) - D

4: Participant_4_ Semi-Structured_Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes, it does. As I mentioned we have the data governance, Terms of Reference that we currently run. Where the focus remains on implementation and securing of customer data. So, the governance forum in itself is how we abide by using data ethically. Also, in our

governance forum as part of our quorum, we also have our legal team and compliance that's part of our forum. They will come with the legislation to ensure that we understand and that we are compliant. The POPI legislation amongst others are used to guide the forum. Due to our financial services organisation being a joint venture, a lot of our legislations follow that of financial institute and what our partnering company follows.

Please tell us about legislation that affects your organisation.

As a financial services organisation, we offer services to customers and we receive a lot of customer information in the application phase for our products and services. So, we do need to be POPI compliant, so of the others include that of Induplum, but POPI is deemed the most important one. As it directly impacts our customer and the customer's experience.

5:3 Does your organisation follow a specific legislation/ governance frame..... (1438:2240) - D

5: Participant_5_Semi-Structured_Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes, our organisation follows many of the regulations inclusive of the POPI Act, that we are busy implementing. The National Credit Act of responsible data usage and storage. These are regulations we need to abide by, as we have audits that to monitor if we are being compliant.

Please tell us about legislation that affects your organisation.

I suppose the National Credit Regulation Act is probably the one that affect our organisation the most. If you are talking data right now, the one that is top of mind is POPI. We understand there is a lot more rigour around how do we use our customer data to the benefit of them and that we have their permission.

5:9 Does your organisation have embedded policies around the ethical behav..... (5032:5759) -

D 5: Participant_5_Semi-Structured_Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

No, I don't believe we have embedded processes or policies that speaks to the ethical use of data, not in terms of analytics. However, there are policies regarding the usage of data such as access control and marketing controls.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

I am quite confident; I have seen from a risk and compliance perspective that our organisations stays close to legislative changes and from a data usage perspective. It is almost monthly you will see audits and new policies that are reviewed coming in. it is an on-going process.

6:6 Does your organisation have embedded policies around the ethical behav..... (3295:3900) -

D 6: Participant_6_ Semi-Structured Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

We haven't sign anything, so there are general policies about information sharing and the surveys we need to do based on fraud awareness etc. that is how they try to create awareness.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

We are kind of lucky we be working in a fast pace environment, every 6 months I see something that has changed. In these 5 years, they have changed values, policy updates, so I would say quite often.

6:12 Does your organisation follow a specific legislation/ governance frame..... (1175:1603) - D

6: Participant_6_ Semi-Structured Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes. So, I think the business as a whole we have a lot of measures in place that will flag if something is not supposed to be happening. The information security team will be flagged.

Please tell us about legislation that affects your organisation.

POPI and the National Credit Act.

7:3 Does your organisation follow a specific legislation/ governance frame..... (1813:2537) - D

7: Participant_7_ Semi-Structured Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Definitely. In terms of governance in the organisation. Our Information Security Departments conducts annual compliance tests, of which it is mandatory for the entire organisation to complete. These are administered online. This it to make use aware of what is legally allowed and not allowed in our organisation.

Please tell us about legislation that affects your organisation.

In our environment, definitely POPI and the consumer protection Act. Especially since we do various campaigns, these laws and legislations guide us in terms of what is allowed when using customer data.

7:9 Does your organisation have embedded policies around the ethical behav..... (4953:5762) -

D 7: Participant_7_ Semi-Structured Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes, I do. There are also designated documents per department on the ethical use of data. So, for example what I might see if quite different to someone in another department and what they can see in terms of data. So, this is done to mitigate data exposure. So, there is structural restrictions.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

I think it would be an organic type of process as it evolves all the time. For example, with Covid currently and employees working from home with sensitive customer data. Policies are updated and evolving as we go along. Especially will legislations, our organisation reacts on the highest level

8:6 Does your organisation have embedded policies around the ethical behav..... (7513:8444) -

D 8: Participant_8_ Semi-Structured Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

To my knowledge no. I don't think there's anything in place. I have not seen them and nothing to my knowledge has been scoped for those particular type of documents.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

I think, they forced to now considering the big shift to the Cloud environment, which has different security precautions and processes and requirements around that. So, they are having update documentation and internal processes around what it means. So, I think to answer your question in short, companies are forced when they make drastic moves like we are. Alternatively, they will update documents when there is a need or ask so I don't think there is a review of documents on a regular basis unless something lands that impacts our organisation.

8:12 Does your organisation follow a specific legislation/ governance frame..... (2391:3713) - D

8: Participant_8_ Semi-Structured_Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes, so in this case I do think there are Acts we need to adhere to, specifically in this case POPIA and in this case, we are very careful on how we use information that comes from marketing when communicating with those customers. I think we also have internal data policies, which protect our customer information from third parties. We are very conscious about this. To ensure no leakage, or fraud activity plays out. We also have an internal Information Security team that often needs to sign off on anyone getting access to a certain environment or people getting laptops for example. There are a number of steps in place and key people that need to sign off on before someone would have access to this information.

Please tell us about legislation that affects your organisation.

So POPIA is a legislation that affects the organisation. I can't quote any particular phrases, but what it means in a nutshell is how you use the personal information the customer provides when they are signing up for a product and the rules of which you share, communicate and use it in terms of marketing and services you can sell to them in the future. We have to adhere to this very tightly.

9:3 Does your organisation follow a specific legislation/ governance frame..... (1758:2277) - D

9: Participant_9_ Semi-Structured_Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Absolutely, if I think of all the legislations which we currently have. We have POPI and that is the current legislation that is big within our company.

Please tell us about legislation that affects your organisation.

Well, I would think one of the legislations that could impact us would be POPI and the National Credit Act. Both these legislations affect the organisation.

9:9 Does your organisation have embedded policies around the ethical behav..... (5003:5591) -

D 9: Participant_9_ Semi-Structured Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

From my opinion, they do. Even though I haven't seen it. I know with every organisation there are embedded policies we must adhere to especially when working with personal customer data.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

Well, I would think every single time we acquire new systems and new frameworks. So, I would think it gets updated frequently, especially if there is always updates and upgrades.

10:6 Does your organisation have embedded policies around the ethical behav..... (5344:6148)

- D 10: Participant_10_ Semi-Structured Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes, I think we do. We have a process where every year we compliant tests. The entire business needs to do this. Which covers, fraud, data and so much more. Those compliance tests that we do really cover the content in our policies.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

I think probably not as often as they should be. I think they updated as legislation changes happen and when there is an actual requirement to do so. But I do think with this new environment we are in such as working from home due to covid. I know there has been a lot more investment and focus to update these policies to align with our new world.

10:12 Does your organisation follow a specific legislation/ governance frame..... (1664:2397) -

D 10: Participant_10_ Semi-Structured Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes absolutely. We are guided by a framework set up by our compliance team. And they are part of any processes that we take on or that is new, that requires customer data. So, there is an entire panel that reviews these processes to ensure it supports ethical management of data. So, there is a sign off process that is very tight.

Please tell us about legislation that affects your organisation.

I think the biggest thing that affects us now is POPI. It influences the customer data we can receive and what we use that data for, storage etc. So, POPI is the biggest one that affects us.

11:3 Does your organisation follow a specific legislation/ governance frame..... (1776:2405) - D

11: Participant_11_ Semi-Structured Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes, especially with the legal department. We always touch base with legal in terms of things changing in the country, like POPI. We have the legal department going back and forth with different business units regarding data use.

Please tell us about legislation that affects your organisation.

POPI is going to affect our organisation, this will limit the way in which communicate with our customers. We will have to come up with better ways to obtain information from our customers.

11:9 Does your organisation have embedded policies around the ethical behav..... (4504:4814)

- D 11: Participant_11_ Semi-Structured Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes, they do, I'm sure they do.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

I think it gets updated quite often. I can't say exactly.

12:6 Does your organisation have embedded policies around the ethical behav..... (3261:3719)

- D 12: Participant_12_ Semi-Structured Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes, they do. We have assessments we need to complete. These are done to make everyone aware of the different processes and policies in place.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

So, I think its updated regularly. I am not sure how often exactly. I would say its evolving.

12:12 Does your organisation follow a specific legislation/ governance frame..... (1005:1486) -

D 12: Participant_12_ Semi-Structured Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes, I do think so, I don't think there is a formal guide, however. But they are strict with protocols and following the POPI Act.

Please tell us about legislation that affects your organisation.

So, I know POPI will impact our business. We have been doing research to determine the impacts it will have on how we market to customers.

13:3 Does your organisation follow a specific legislation/ governance frame..... (1056:1373) - D

13: Participant_13_ Semi-Structured Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

It does, but I know we do but I'm not sure exactly.

Please tell us about legislation that affects your organisation.

POPI is top of mind, of which affects our organisation.

13:9 Does your organisation have embedded policies around the ethical behav..... (3201:3399)

- D 13: Participant_13_ Semi-Structured_Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes. They have regular reviews and sign off on tests and policies and we have a robust fraud department.

13:10 How often would you say your organisations policies are updated? Takin..... (3401:3634)

- D 13: Participant_13_ Semi-Structured_Interviews

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

I have no idea the massive changes in technology, I don't think the policies are updated frequently enough.

14:6 Does your organisation have embedded policies around the ethical behav..... (3718:4007)

- D 14: Participant_14_ Semi-Structured_Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Not that I'm aware of no.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

I am not aware of any updates being done.

14:12 Does your organisation follow a specific legislation/ governance frame..... (1402:1850) -

D 14: Participant_14_ Semi-Structured_Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes, I definitely think we do. We are very much aware of the POPI Act and also the data retention of the sensitive customer data.

Please tell us about legislation that affects your organisation.

POPI comes to mind. Especially due to the sensitive nature of the data we use, such as customers ID numbers.

15:3 Does your organisation follow a specific legislation/ governance frame..... (1070:1568) - D

15: Participant_15_ Semi-Structured_ Interviews

Does your organisation follow a specific legislation/ governance framework to ensure it fulfils its legal obligations by using data ethically?

Yes, I assume that is the POPI and PCI acts they follow.

Please tell us about legislation that affects your organisation.

So, I would right now it's the POPI Act, especially because we a financial services institution. It's imperative we are compliant; therefore, we have a defined effort placed on the full implementation of POPI within the organisation

15:9 Does your organisation have embedded policies around the ethical behav..... (3205:3767)

- D 15: Participant_15_ Semi-Structured_ Interviews

Does your organisation have embedded policies around the ethical behaviour around data usage?

Yes, they do. We have these policies in a central place where the entire organisation is able to access them via the intranet.

How often would you say your organisations policies are updated? Taking into consideration technology is constantly changing.

So, policies are reviewed yearly. But with the project I'm busy with, which is a cloud project, the company has already started with the governance around it. So, I would say they are quite fast with policy creation.

o **Principle 10 - Purpose Specification**

45 Quotations:

1:3 What is your understanding of ethical behaviour around the use of data..... (552:1251) - D

1: Participant_1_ Semi-Structured_ Interviews (1)

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

So, I think the ethical question is a good question and I don't think its talk about enough. Essentially, I think it's a question about how intrusive you can become, trying to find the right customer at the right time and where do you draw the line in getting the customer, while giving them personalisation.

Does your organisation have a guide on how to utilise data ethically?

My direct answer would be no, and I think it ties back to this level of data analytics, just the amount of data we have to our disposal now. If I think back, there hasn't been enough guidelines in this space.

1:5 Do you think having a data ethics framework within your organisation i..... (1968:2363) - D

1: Participant_1_ Semi-Structured_Interviews (1)

Do you think having a data ethics framework within your organisation is important? If so, Why?

Yes, I definitely think it's important. The data landscape is shifting significantly and also a lot of companies are generating data and it is becoming accessible to others. So, I think it's important to have a good governance framework to protect the customers and to ensure users use data ethically

1:11 When data is collected, is the reason for data collection always known..... (4866:5182) - D

1: Participant_1_ Semi-Structured_Interviews (1)

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

Uhm, so I think it data collection is very broad. So, I honestly wouldn't know if in every instance a customer knows exactly the reason as to why data is being collected.

2:5 When data is collected, is the reason for data collection always known..... (4759:5437) - D

2: Participant_2_ Semi-Structured_Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

I think the reasons are less known to the customer and more known to the organisation. So, for example, the organisation will have a particular strategy and a roadmap to follow, and it will inform the type of data is needed to grow our data and our analytics. But from the customer's point of view, they obviously don't know the confidential workings of an organisation, they won't know the roadmap the organisation will take. The organisation will however have a roadmap of the type of data they want and what they intend to use it for.

2:11 Do you think having a data ethics framework within your organisation i..... (2105:2407) -

D 2: Participant_2_ Semi-Structured_Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

I definitely think so. In our organisation firstly it speaks to our values and even if we didn't have values aligned to that it would still speak to putting the customers first; making sure you align to that.

2:13 What is your understanding of ethical behaviour around the use of data..... (642:1515) - D

2: Participant_2_ Semi-Structured_Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

My understanding essentially revolves around the idea of privacy and anonymity, so keeping that information confidential especially the type of customer data; I always have to consider the ethical implications of how I handle that data, like if that data have to get leaked to an external party or if it's abused in any other way that's outside the bounds of what that customer agreed too.

Does your organisation have a guide on how to utilise data ethically?

Well, they have rules around how to use the data ethically. But when I joined there wasn't a detailed guide essentially. So, there is set standards and rules like you cannot market to someone who didn't opt in for that. Those type of business rules do exist, but a document I personally haven't seen one.

3:2 What is your understanding of ethical behaviour around the use of data..... (810:2217) - D

3: Participant_3_ Semi-Structured_Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

I think for us, it's all about us being governed by a specific framework and we can't use each and every data point, variable or field that we get from the bureau. An example: you cannot determine a customer's risk rating based on their race, gender or location. For this we have a specific framework we need to follow, and we need to stick within the framework. This also is used as a guide on who we approve, decline or limit.

Does your organisation have a guide on how to utilise data ethically?

So, we don't have a formal document indicating this is how you need to use the data, and this is how you can't use it, but we do have a lot of controls in place, so all the models that we build needs to go for model validation that we outsource to another company. This company needs to provide their approval on the variables and determines whether or not it fits the ethical behaviour and values within the framework. We also have a formal sign off process, which gets held through a forum for our department. So, if we present something and the committee is not happy with what we put in, then they will definitely not approve the model and we won't be able to implement. Those are our main controls. It's not a document per say, but we definitely have those two controls that we need to adhere to.

3:4 Do you think having a data ethics framework within your organisation i..... (2699:3194) - D

3: Participant_3_Semi-Structured_Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Yes definitely, I think it is important. You can get into a lot of trouble if you don't follow a specific framework. There might be financial penalties, which are associated with not following a certain framework or approving/ declining someone based on misuse of information. We could also run a reputational risk. I would definitely say it is important to follow an ethical framework for data use.

3:10 When data is collected, is the reason for data collection always known..... (6028:6649) - D

3: Participant_3_Semi-Structured_Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

So, when we collect data. We definitely know what we going to use it for. In my team specifically we use it for making decisions based on the analytics we do. From the customers perspective when they do the application there's various T's and C's, whether they read it or not, I doubt. But I know they give us consent for us to extract their data from the bureau. They definitely are aware, and they need to provide consent for the purpose of approving/ declining their products.

4:5 When data is collected, is the reason for data collection always known..... (7863:8543) - D

4: Participant_4_Semi-Structured_Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

Yes, it is. As soon as we need to get information from a customer in whatever manner for example, it could be through surveys we are doing with them or an on-boarding process. We need to ensure they understand what the data is going to be used for. So, any process in which we engage with customers and that we acquire information from them. We always let them know, this is exactly what we need it for, this is exactly what we going to use it for, and this is how we will ensure it remains secure in our environment, while we are having the data.

4:11 Do you think having a data ethics framework within your organisation i..... (2876:3604) -

D 4: Participant_4_Semi-Structured_Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

It is extremely important. Data moves through our hands at quite a rapid pace on a daily basis, and even so more frequently. We have a lot of customers and their information changes all the time, gets updated all the time and there needs to be strict controls as to how that data is accessed, whether the use of that data is fit for purpose and what the intended use of that data is. So, looking at how we protect the customer identity, but using the customer data for us to figure out the various campaigns to run for the customer. Therefore, we need to make sure our governance practices are updated and in place to remain compliant.

4:13 What is your understanding of ethical behaviour around the use of data..... (647:1609) - D

4: Participant_4_Semi-Structured_Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

Ethical behaviour is governed in our case, in a nutshell I will say the use of customer data for the purpose of analytics needs to be controlled, access needs to be restricted and the intentions of the use of the data needs to be very clear to both the business and the customer. And obviously the necessary measures need to be put in place so that customer data does not get leaked.

Does your organisation have a guide on how to utilise data ethically?

We do have guide yes, as a matter of fact, it is a guide I put together specifically for the data team. It's called the "Terms of reference". It's a term of reference for our data governance and analytics forum, so that's one guide. But then that also makes use of the various policies that we have in the organisation. This also speaks to how we need to use and govern the use of customer data.

5:2 What is your understanding of ethical behaviour around the use of data..... (604:1435) - D

5: Participant_5_ Semi-Structured_Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

For me, it would be that we can use our customer data in order to improve our processes and services for our customers. So, because we have so much of our customers information, as long as we use their data to improve their experiences, where they have given consent to use their data. when it comes to analytics there are some fine lines when we build segmentation models to ensure models and machine learning that we do, do not put any bias on how we use customer data.

Does your organisation have a guide on how to utilise data ethically?

I believe our organisation have a set of values that we ask our staff to live by. I don't believe we have a policy that speaks to the ethical use of data, not to my knowledge.

5:4 Do you think having a data ethics framework within your organisation i..... (2242:2773) - D

5: Participant_5_ Semi-Structured_Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Yes, I think it is. I think there should be some sort of data ethics policy that look at how people utilise data. There are a number of reasons why organisations should, such as reputational damage to the organisation if you use customer data in an ethical way is significant. I don't think every organisation has an ethical data usage policy or code, but they build it into the values of the people they bring on board to their company.

5:10 When data is collected, is the reason for data collection always known..... (5761:6172) - D

5: Participant_5_ Semi-Structured_Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

Well in terms of on boarding we already inform our customers that our organisation will be using their data to improve our processes and services to them. So, customers are definitely informed upfront. They are asked consent for marketing purposes, so they are aware.

6:5 When data is collected, is the reason for data collection always known..... (3902:4292) - D

6: Participant_6_ Semi-Structured_Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

I don't think the customer always understand why we collect certain data. when we sign up new customers, we ask them personal information, they don't think about what we use it for. The organisation definitely knows the reason for data collection.

6:11 Do you think having a data ethics framework within your organisation i..... (1606:1901) - D

D 6: Participant_6_ Semi-Structured_Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Yes. Because without data we can't do any sort of predictive analytics or marketing. We can segment people into different populations and having a data framework will guide the process in doing this.

6:13 What is your understanding of ethical behaviour around the use of data..... (561:1168) - D

6: Participant_6_ Semi-Structured_Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

I think that, thankfully the data is stored in a way, where privacy is tight and strict. We ensure before promoting things to customers, everything is verified and tested before reaching the customer.

Does your organisation have a guide on how to utilise data ethically?

No exactly. There is not a guide. But in our role as analysts, there is always a data privacy form that needs to be signed. However, I did not sign one as this company, however there is an unspoken rule to use data ethically

7:2 What is your understanding of ethical behaviour around the use of data..... (913:1811) - D

7: Participant_7_ Semi-Structured_ Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

So largely it's about making we don't use the data in a fraudulent manner, so we wouldn't want to be passing that data to anyone outside of the company, with that through all our campaigns, we ensure we do not identify customers individually from the start because their information is confidential. Even with the test cases we conduct, we ensure strict ethical behaviour to ensure all the information remains confidential.

Does your organisation have a guide on how to utilise data ethically?

In our environment, there is definitely a guide on how to use data ethically, especially since we work with confidential customer data. There are measures put in place to ensure all data used and analysed is done in an ethical manner. It's also largely communicated throughout our environment.

7:4 Do you think having a data ethics framework within your organisation i..... (2539:2863) - D

7: Participant_7_ Semi-Structured_ Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Yes, it is extremely important. We have access to customer's personal financial information. It might be for example a behavioural or bureau score, so it's extremely important to have an ethics framework that governs data analytics.

7:10 When data is collected, is the reason for data collection always known..... (5765:6318) - D

7: Participant_7_ Semi-Structured_ Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

So, the customer is aware we have their details. But the finer detail on what we are doing, I doubt they would know. So, for example, if I'm looking at a purchasing spend trend, they wouldn't know the detail upfront what I'm looking at. From an organisation perspective, agents ask for specific information when speaking to customers. It is stated the information will be used internally and not shared externally.

8:5 When data is collected, is the reason for data collection always known..... (8446:9019) - D

8: Participant_8_Semi-Structured_Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

So, I think from an organisations perspective definitely as pipelines are currently being built to retrieve that data. In terms of the customer, I would say largely no unless they are up to date with technology and understands how data is transferred. They might have been partially aware when signing up for the product, where they gave permission for their data to be collected but subsequently, I don't know how certain they are.

8:11 Do you think having a data ethics framework within your organisation i..... (3715:4217) -

D 8: Participant_8_Semi-Structured_Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

I do think it is important, even if it was a manual to read it's a verbal contract between an analyst. To my knowledge we don't have anything like that, and I could be challenged on this, but I haven't seen anything like this, but it just enables everyone to be on the same page. So, it could be something introduced during on boarding on when a new analyst join the team that they need to read through this.

8:13 What is your understanding of ethical behaviour around the use of data..... (1403:2389) -

D 8: Participant_8_Semi-Structured_Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

When coming aboard, analysts need to sign any waivers and forms to commit to working in the most integral manner. What I often link it to be our company is has to live up to 7 core values. That is why when taking anyone into the environment, it's these values such as responsibility, integrity and customer first that we expect analysts to follow when working with customer data. It's very much a self-disciplined approach and to my knowledge analysts live up to it.

Does your organisation have a guide on how to utilise data ethically?

To my knowledge the answer is no. what I think when we do send people on particular courses and if people have done certain courses in their own capacity. I think ethics is always subject taught. I think ethics as a theme is overarching in the organisation. You also have your peers around you to keep you and uphold you to those values.

9:2 What is your understanding of ethical behaviour around the use of data..... (950:1756) - D

9: Participant_9_ Semi-Structured_ Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

So, my understanding is that security is a huge component when it comes to data ethics. Once of the biggest drivers when working with sensitive data, is to make sure that it does not leak in any way. So, the biggest key role is to make sure who know who is accessing the data and why they are accessing the data and the level of security that that have when accessing the data.

Does your organisation have a guide on how to utilise data ethically?

Absolutely, so our information team they provide those level of security and each because each user has their own username and password. There is a paper trail that follows them. You can be easily managed in that sense due to access restrictions.

9:4 Do you think having a data ethics framework within your organisation i..... (2280:2729) - D

9: Participant_9_ Semi-Structured_ Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

I think it's very important. Once you have a framework where everyone can comply to, especially from an ethics perspective. Once you build a framework and there are those

certain parameters in place it's very easy for people to know what they can and cannot do regarding data. A framework is definitely essential to any organisation when it comes to data.

9:10 When data is collected, is the reason for data collection always known..... (5593:6143) - D

9: Participant_9_ Semi-Structured_ Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

So, in my opinion is that in our environment we do target customers that don't necessarily have a relationship with our company, but with that of our parent company. In that sense, we then sometimes, get information from those companies and sometimes those customers might not know when we do market to them, but because of our brand and who the company is affiliated with, people are more willing to trust.

10:5 When data is collected, is the reason for data collection always known..... (6150:6575) - D

10: Participant_10_ Semi-Structured_ Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

Yes, absolutely. For an example, in our digital onboarding experience, we ask customers questions from customers that might seem irrelevant. However, we need that information for certain things, so we do try to give them a little more context as to why that information is required.

10:11 Do you think having a data ethics framework within your organisation i..... (2400:2774) -

D 10: Participant_10_ Semi-Structured_ Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Absolutely. If you look at what recently happened with credit bureaus, there was a data breach, and it was terrible. It is your brand reputation and your customer information on the line. It can be used to harm them as well as the legal repercussions the organisations could face.

10:13 What is your understanding of ethical behaviour around the use of data..... (571:1662) -

D 10: Participant_10_ Semi-Structured_ Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

Okay so we take our customer data very seriously. There are a couple of things we do, such as data privacy. Because we conduct research, we took on a third party that executes this function. So, any customer data we send to them has gone through a strict information security check. All our processes ensure all data is moved through secure protocols executed by our information security team (Secure file transfer protocol); nothing is sent via email. Another way we ensure this is by only using research done on customers on our books, so if a customer gives an email address that does not correspond with what we have on file, we won't use that data.

Does your organisation have a guide on how to utilise data ethically?

Yes. I think our organisation is very close with projects such as POPI. So, we make sure we comply in that regard and the requirements thereof. Our research data gets destroyed after a year, so we make sure we align with the data protocols set out for us.

11:2 What is your understanding of ethical behaviour around the use of data..... (1062:1774) -

D 11: Participant_11_ Semi-Structured_ Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

Well, my view is we won't solicit to a customer that does not want to be solicited to. We need to make sure that you as a customer we have all the relevant information that pertains to you if you have given us permission for us to contact you and the type of channel you would want to be contacted.

Does your organisation have a guide on how to utilise data ethically?

Well, I'm assuming there is a guide yes. It's difficult for me to answer the question as I am new to the role. However, based on documentation I have seen I can see there are things in place in terms of how to use the data ethically.

11:4 Do you think having a data ethics framework within your organisation i..... (2407:2677) -

D 11: Participant_11_ Semi-Structured_ Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Well, it's very important. We need to trust ourselves with our customers information otherwise the customer will not trust us as a business, and they will take their business away

11:10 When data is collected, is the reason for data collection always known..... (4816:5096) -

D 11: Participant_11_ Semi-Structured Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

Not necessary, I can only base it on assumption that the customer assumes we use the data to ensure we are managing their accounts correctly.

12:5 When data is collected, is the reason for data collection always known..... (3722:4175) - D

12: Participant_12_ Semi-Structured Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

So, with regards to the bureau data we receive, I don't think customers are aware of what exactly we receive. But I think it's a general thing that all customers use. However, the data we ask of customers, they aware what it will be used for. The organisation knows what data they want and the reason thereof.

12:11 Do you think having a data ethics framework within your organisation i..... (1488:1684) -

D 12: Participant_12_ Semi-Structured Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Yes, it is important. Especially when it comes to customer experience and how we work with their data.

12:13 What is your understanding of ethical behaviour around the use of data..... (583:1003) -

D 12: Participant_12_ Semi-Structured Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

So, when comes to personal customer data, we do not share it. We always make sure customers have opted in for marketing before contacting customers.

Does your organisation have a guide on how to utilise data ethically?

I'm not of a formal guide, but there are rules within the organisation that we do follow.

13:2 What is your understanding of ethical behaviour around the use of data..... (546:1048) - D

13: Participant_13_ Semi-Structured_ Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

My understanding is you can't use data to discriminate on any customer, knowing information they didn't give consent to use. In a nutshell do no evil.

Does your organisation have a guide on how to utilise data ethically?

Yes. No formal polices but we do regularly get guided by upper management and we do go through mandatory testing for fraud and ethics to check we are using data ethically

13:4 Do you think having a data ethics framework within your organisation i..... (1378:1667) -

D 13: Participant_13_ Semi-Structured_ Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Yes 100%. I think it is incredibly important. For once so organisations cannot discriminate against their customers. You won't be able to use variables of their race or geographical information.

13:11 When data is collected, is the reason for data collection always known..... (3637:4000) -

D 13: Participant_13_ Semi-Structured_ Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

To be honest probably not from a customer's perspective. I'm sure because they are not aware because I don't think a company has a full extent of what to use the data one. I think company thing the more data the better.

14:5 When data is collected, is the reason for data collection always known..... (4009:4546) - D

14: Participant_14_ Semi-Structured_ Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

So, I don't think the customer is always aware of what all is recorded in terms of their data, and the level to which their data gets recorded. I think customers know data is being recorded and they are not really aware what data is being used for. I personally don't think organisations keep all the data they can, but more so a result of infrastructure and not whether it is ethical or not.

14:11 Do you think having a data ethics framework within your organisation i..... (1852:2156) -

D 14: Participant_14_ Semi-Structured Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

I definitely do think so. However, I do think it becomes difficult to apply those frameworks and put it into practice. I think it would improve the way employees think, change their mindset on how to use data.

14:13 What is your understanding of ethical behaviour around the use of data..... (644:1400) -

D 14: Participant_14_ Semi-Structured Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

So, what we try to do is understand customers behaviour to offer promotions to benefit them. In a sense, trying to sell something to them. I think, what is important is important is that when doing analytics, we need to tread lightly as we make decisions based on the patterns in customer data.

Does your organisation have a guide on how to utilise data ethically?

I have never seen a guide, per say. There has never really been a guide on this. our decisions we make using data is to base it on their trends based on the data we receive, this way we not harming them for example if we offer them vouchers based off their previous purchases.

15:2 What is your understanding of ethical behaviour around the use of data..... (619:1068) - D

15: Participant_15_ Semi-Structured Interviews

What is your understanding of ethical behaviour around the use of data for the purpose of customer analytics?

Well, the way I understand the ethical use of data, is that the data should be anonymous, like that would be the right way to use it. You shouldn't know which customer you are dealing with.

Does your organisation have a guide on how to utilise data ethically?

Yes, there are some guides available, but I'm not sure if anyone actually reads it.

15:4 Do you think having a data ethics framework within your organisation is important? (1573:1858) -

D 15: Participant_15_ Semi-Structured Interviews

Do you think having a data ethics framework within your organisation is important? If so, Why?

Yes, I think it's very important. This way everyone will know how to use our data. I think a data ethics framework is very useful especially as we have lot of analysts that make use of data.

15:10 When data is collected, is the reason for data collection always known..... (3770:4125) -

D 15: Participant_15_ Semi-Structured Interviews

When data is collected, is the reason for data collection always known from both the customer and the organisation perspective? Please explain.

I don't know from the organisation perspective, but I do know that we do let our customers know which data is being collected in our terms and conditions and I think we let them know it will be used for analytics.

o **Principle 1- Information Quality**

15 Quotations:

1:14 What is your process to ensure data is free from bias and errors when..... (5724:6093) - D

1: Participant_1_ Semi-Structured Interviews (1)

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

So, data quality is important. We generally are very good at understanding our data and making sure the data is quality. We good at checking and holding each other accountable. If I pick up any anomalies, this would be escalated to our data team.

2:2 What is your process to ensure data is free from bias and errors when..... (6130:6802) - D 2:

Participant_2_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

So, the actual management of the data is a function that sits with IT. They have various rules around how the data is structured and maintained. So, the processes they have in place ensure before we get the data, we will receive accurate data. We are the end users of the data; we rely on the data being accurate as the data has been checked already by IT. QC checks are also conducted on the data to ensure data is free from bias. Standard reports we can also refer to; this enables us to refer back if we uncertain about something in the data sets.

3:13 What is your process to ensure data is free from bias and errors in wh..... (7456:8122) - D

3: Participant_3_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors in when utilising customer data to improve their experiences?

I guess for me if I extract something, and it just doesn't sit right with me. I will start asking questions. But for the large part, when the data comes to me by that stage there is a lot checks and validation done before that data gets to use, where we query it. We do expect 100% accuracy at that point. We do trust the 100% we get. However, if it should happen, we will flag it with the relevant team if we feel there's a certain trend in the data happening before we start drawing conclusions or start making any strategy recommendations.

4:2 What is your process to ensure data is free from bias and errors in wh..... (9687:10532) - D

4: Participant_4_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors in when utilising customer data to improve their experiences?

For us, that gets the data from source and passing data to various analysts. We ensure the data quality, integrity and sustainability of that data is in place. This is also done through the governance forum. So, on acquisition we ensure the data is free from errors and bias. If in any instances errors and bias is found in the data firstly our analytical community gets informed regarding the errors found in the data and we will investigate it internally to see what the error is and what the cause of it is. From that we will go back to source and with

source we will have the necessary protocols and procedures in place to log the associated incidents to track the change that will occur in the data once rectified.

5:13 What is your process to ensure data is free from bias and errors when..... (7047:7311) - D

5: Participant_5_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

We ensure the data we provide is holistic to ensure no biases can occur in any way. This way you won't have a one-sided view of a customer.

6:2 What is your process to ensure data is free from bias and errors when..... (4780:5218) - D 6:

Participant_6_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

So, when I look at credit card data, I can see where someone is spending so we don't really have any bias when doing insights on customers. We don't know if all customers fall within the selection pool. So, when creating insights for example, I will select a range of individual who purchased at a certain merchant.

7:13 What is your process to ensure data is free from bias and errors in wh..... (6895:7445) - D

7: Participant_7_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors in when utilising customer data to improve their experiences?

So, some of the things we have in place in our department is we have check and balances. So, for example, we will select customers for a campaign, and we have an individual in our department who will check the data and ensure it aligns with the overall intent of the campaign, so we have processes in place. We also produce outputs of our distribution, which will highlight if there is any concerns or issues regarding the data

8:2 What is your process to ensure data is free from bias and errors when..... (10219:11015) - D

8: Participant_8_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

There is a couple of processes that will happen for analysts will work with the data, so in the data environment the developers building pipelines will do quality control checks on that data, not only when they build the pipes and structure the data but subsequently, they will do daily checks on it. If everything is correct. There is a process when ingesting that data. When anomalies are found, which is the case the data there is also a process to log a query to follow up with the developers and the architecture guys to rectify the problem, so I think we have very accurate data and there is processes in place to make the data more accurate when anomalies are found.

9:13 What is your process to ensure data is free from bias and errors when..... (6781:7102) - D

9: Participant_9_Semi-Structured_Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

Well, that is why it is always important to ensure the data that is being collected is from the most updated tables from our sources. And it is vital to know the data being extracted has no errors.

10:2 What is your process to ensure data is free from bias and errors when..... (7170:7418) - D

10: Participant_10_Semi-Structured_Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

Well to ensure its free from error, we only use data that is from our Data Warehouse, so we don't use any external sources.

11:13 What is your process to ensure data is free from bias and errors when..... (5726:6137) - D

11: Participant_11_Semi-Structured_Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

In my world, we try to find the most recent data. On the flip side of that, is if the customer calls to update their data. We do have instances where customer contact details are for the wrong person, however there is no way to rectify it unless the correct person calls in to update it.

12:2 What is your process to ensure data is free from bias and errors when..... (4579:4864) - D

12: Participant_12_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

So, when it comes to existing customer data. we rely on what the customer has given us. But when it comes to Bureau, we have no control over the data we receive.

13:14 What is your process to ensure data is free from bias and errors when..... (4387:4775) - D

13: Participant_13_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

So, in my department we try to keep up with current news. So, if variables come up as discriminatory, we definitely make sure we keep up to date everything. We also go through regular peer reviews. You need to be open about your data usage. And this is signed off.

14:2 What is your process to ensure data is free from bias and errors when..... (5090:5471) - D

14: Participant_14_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

So, a lot of the time we tend to do promotions based on customer behaviour data, so we don't look at race. However, we focus on income etc as we cannot offer certain vouchers to certain individuals. We do steer away from anything that could cause any bias.

15:13 What is your process to ensure data is free from bias and errors when..... (4775:5074) - D

15: Participant_15_ Semi-Structured_ Interviews

What is your process to ensure data is free from bias and errors when utilising customer data to improve their experiences?

So, team specifically, if any errors found in the data. We will conduct an investigation and based on that outcome we will contact the relevant data source to rectify the data.