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Leadership Through Ethical Innovation in Telecommunications Companies in Gauteng

by

Mildred Manaka

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

Johannesburg, August 2025

ABSTRACT

The telecommunications industry in Gauteng Province, South Africa, plays a pivotal role in South Africa's growth and development. With rapid technological advancements, the industry requires role-players able to navigate ethical dilemmas while fostering responsible innovation.

This study explores the impact of ethical leadership on product innovation within telecommunications companies in Gauteng Province. It examines how ethical behaviour and decision-making influence innovation processes whilst also considering factors such as stakeholder and corporate sustainability. The research is underpinned by three theoretical concepts, Innovation Leadership Theory, Transformational Leadership Theory, and Ethical Leadership Theory. It investigates how these concepts intersect and how leadership balances innovation with ethical principles in a competitive telecommunications environment.

A qualitative research approach was adopted, using semi-structured interviews with professionals in telecommunications, primarily specialists in product development and innovation. Data were analysed using thematic analysis supported by NVivo software to identify key themes and patterns.

Findings indicate that ethical leadership supports ethical innovation in seeking to promote adherence to policies, protecting customer data, complying with regulations, and fostering consumer trust. However, the study also reveals challenges that leaders face in balancing ethical imperatives with market pressures and profitability goals.

The research highlights the critical importance of embedding ethical considerations into innovation strategies to support long-term sustainability

and consumer trust. It contributes valuable insights into ethical leadership and innovation, offering practical recommendations for telecommunications leaders to align their strategies with ethical standards.

Key Concepts

Ethical Innovation, Leadership, Product Innovation

DECLARATION

I, Mildred Manaka, declare that this research report is my own unaided work. This report has not been previously submitted for any degree at any university. I further confirm that all the information is accurate, the research acknowledged is fully cited and all sources acknowleged.

Name: Mildred Manaka Signature: Mmanaka

Signed at 16 Shelley Street Woodmead Ext 1

On the 29th day of August 2025

DEDICATION

This research is dedicated to my late sister, Puleng Manaka, and my family, especially my daughter Lesedi, for their unwavering support and encouragement throughout this journey.

To my colleagues who greatly supported me and encouraged me to explore this exciting topic on leadership, ethics and innovation.

To every individual, leaders in organisations striving to create a more ethical and sustainable future for telecommunications in South Africa. I hope this study will contribute positively to the telecommunications industry.

ACKNOWLEDGEMENTS

I would like acknowledge Dr Manamela Matshabaphala, my supervisor who trusted me fully and supported me with good guidance.

I acknowledge the participants in the research interview, as the study would not be complete without their inputs. Mostly, I thank God for His guidance and blessings throughout this journey.

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LIST OF ACRONYMS

2G:	Second generation of cellular network technology
3G:	Third generation of cellular network technology
4G:	Fourth generation of cellular network technology
AI:	Artificial Intelligence
ESG:	Environmental, Social and Governance
ICASA:	Independent Communications Authority of Africa
LTE:	Long Term Evolution
MNO:	Mobile Network Operator
MTN:	Mobile Telephone Network
MVNO:	Mobile Virtual Network Operator
NVIVO:	A qualitative data analysis software
P:	Participant
POPIA:	Protection of Personal Information Act
QR:	Qualitative Research
RAI:	Responsible Artificial Intelligence
RQ:	Research Question
Telco:	Telecommunications Company
Telecom:	Telecommunications
VC:	Vodacom

CHAPTER 1. INTRODUCTION

1.1 Purpose Statement

As the commercial centre of South Africa, in Gauteng Province telecommunications companies play a pivotal role in driving technological advancement and fostering innovation. However, with the rapid expedition of innovation such as 5G technology, IoT integration and other new technologies, ethical considerations in product development have become significantly more important. This research investigates how leadership influences ethical product innovation within telecommunication companies in Gauteng. The study will analyse the role of different leadership styles such as transactional, servant and transformational leadership in influencing ethical decision making and encouraging innovation.

1.2 Background to the study

Product innovation is critical in driving growth and competitiveness in companies. It drives growth by enabling companies to capture new markets, increase revenue streams, and respond effectively to shifting customer preferences. Successful innovation often leads to enhanced brand loyalty and market share. (Trott, 2021). Telecommunications companies have been at the centre of innovation and are often spearheading technological advancement in Gauteng Province as the economic hub of South Africa. With the rapid growth of technological advancements and innovation, these companies find themselves faced with ethical challenges such as data privacy, societal impact of new technologies, and maintaining consumer trust. The issue of leadership thus becomes critical in addressing these ethical concerns.

The Chief Executive of the Ethics Institute, Deon Rossouw, states that South Africa needs governing bodies that are able to act ethically and effectively,

organisations with deeply embedded ethical cultures, and organisations that are responsible citizens of the societies in which they operate (Press Reader, 2017). Leadership in telecommunications companies is central to driving innovation and organisational change growth. Effective leadership serves to promote a culture of agility and adaptability, which is essential in an industry characterised by rapid technological advancements and shifting consumer demands(Northouse, 2022).

The South African telecommunications industry is a highly competitive environment with a limited number of major roleplayers, comprising Mobile Network Operators, Fixed Line and Internet Service Providers. According to Labuschagne (2024), Vodacom leads the South African mobile network market with a 43.8% share, followed by MTN at 32%, Telkom at 16.9%, and Cell C at 7.3%. The Gauteng telecommunications market can be segmented based on the following factors:

- By Service Type: Mobile Services, Fixed Line Services, Broadband Services and Value-Added Services. https://marketwideresearch.com/south-africa-telecom-market/
- By User Type: Individual Consumers, Business, and Government Organizations (https://marketwideresearch.com/south-africa-telecom-market/
- By Technology: 2G, 3G, 4G/LTE and 5G https://marketwideresearch.com/south-africa-telecom-market/

Figure 1 below depicts the evolution of the telecoms industry adapted from “Know the six stages of growth of the Telecom Industry,” by Market Research Future (2022) The industry is influenced by various dynamics, regulatory environment, evolving consumer behaviour, the market and cometition. This study examines the connection between leadership and ethical product innovation, and the complexity that emerges from the need to balance ethical considerations with the critical demand for innovation within telecommunications in Gauteng Province.

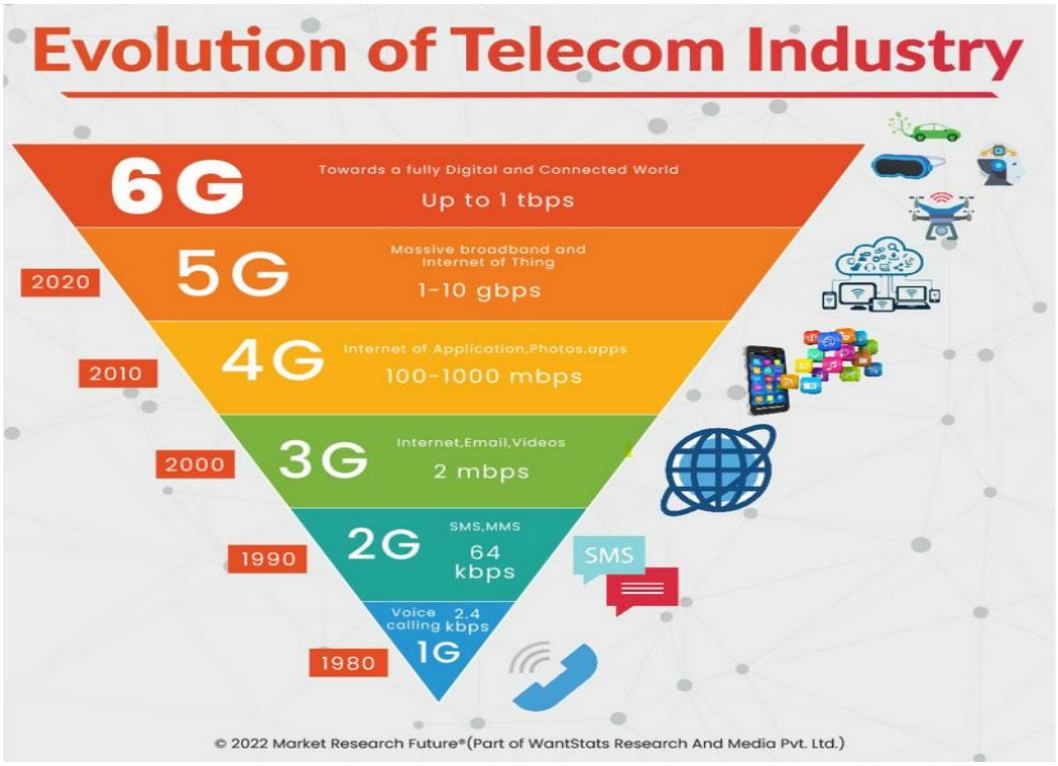


Figure 1: Evolution of the Telecom Industry

1.3 Research problem

Product innovation is a principal driver of growth and competitiveness in the telecommunications sector, particularly in Gauteng which has seen increased revenues for telecommunications companies. As companies increasingly adopt emerging technologies to enhance their service offerings, the role of leadership and ethical considerations in guiding innovation has become more important. While international studies, such as those from Canada and China, amongst others, have explored the intersection of ethics, leadership and innovation telecommunications, there is a notable gap in research in the South African context. Specifically, limited attention has been given to how ethical leadership influences the adoption and implementation of innovative products in Gauteng telecommunications firms. Although related studies exist on ethics and governance (such as King IV on Corporate Governance) and digital transformation (Verhoef et al., 2021), a comprehensive understanding of the ethical challenges and leadership approaches shaping product innovation

remains underdeveloped in current research. This research seeks to address this gap by examining how leadership styles and ethical considerations affect product innovation within telecommunications companies in Gauteng Province.

1.4 Research Questions

1.4.1 Main research question

The main research question is “The impact of leadership on ethical product innovation within telecommunications companies in Gauteng”.

1.4.2 Secondary research questions

The secondary research questions are: “How does leadership in telecommunications companies in Gauteng influence ethical product innovation?”, and “How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes?”

1.5 Rationale

The telecommunications industry is a rapidly expanding industry, particularly with regard to innovation and technological enhancements. It is an industry with significance for the economic growth of South Africa. Product innovation helps telecommunications to stay relevant and competitive in the market. For example, innovation allows telecommunications companies to integrate new emerging technologies. With the rapid technology advancement and the competitive landscape, leadership and ethics are becoming essential in the product innovation process in telecommunications in Gauteng. Whilst there is existing literature on ethics, innovation and leadership, the academic exploration focusing on the relationship between leadership and the integration of ethical principles in product innovation seem to be underdeveloped particularly in the context of telecommunications companies in Gauteng. It is thus expected that the findings of the study will contribute to the telecommunications industry and all other

stakeholders. In particular, it is expected that the study will be of benefit to the stakeholders below.

Policy Makers: Policy makers such as the Independent Communications Authority of South Africa (ICASA) will utilise the findings to promote best practice in product innovation. The research will be of value in the development of ethical guidelines for product innovation. The study will help policy makers in developing regulatory frameworks to ensure that companies comply with, and adhere, to ethical standards. The study further aims to provide guidance in relation to policy development of ethical guidelines on product innovation.

Leaders in Telecommunications: Leaders and managers will benefit from the study as they will learn more about informed decision-making and the ethical implications of product innovation. Leaders will learn to build business cultures promoting ethics in product innovation which promotes a culture of responsibility and integrity.

Consumers/Customers: The study will help customers through promoting awareness of the ethical dimensions of product innovation. Consumers will be empowered to make the correct choices about the products they purchase, and they will benefit from quality products and transparency. Consumers will be protected through enhanced and stringent data protection measures.

This research in addition addressed the integration of leadership and ethical product innovation in telecommunications companies in Gauteng, an industry considered a major contributor to the South African economy. The study offered specific industry insights and can influence leadership practices in telecommunications, enabling them to be proactive in addressing ethical issues whilst fostering innovation.

1.6 Delimitations of the Study

This study explored the implications of leadership on ethical product innovation within selected telecommunication companies in Gauteng Province, South Africa. While the primary focus was the Gauteng Province, the study incorporated a contextual review of global and continental African trends to provide background on the broader leadership and ethical innovation landscape. These international and regional insights informed and contextualised the local findings but were not the focus of data collection or in-depth analysis.

The scope of the study was limited to telecommunications products and services such as voice, data and internet services and associated technologies including 3G, 4G, 5G, Fibre and VoIP. Value added services such as roaming services, content services, SMS/MMS were also considered. Although intersecting technologies like IoT, AI, Cloud computing and Blockchain were briefly referenced for context, they did not form the core of the investigation.

This study was guided by a combination of theoretical frameworks including transformational leadership theory, ethical leadership theory, and innovation diffusion theory. These frameworks were used to examine how leadership approaches influence the ethical dimensions of product innovation within telecommunications companies in Gauteng. The research did not cover other sectors or geographical regions beyond Gauteng for primary data collection.

1.7 Definition of Terms

Table 1 below provides the definition of terms used in this research report, associated with leadership, ethics and product innovation within the telecommunications industry. The terms presented were derived from academic literature and industry reports.

Table 1. Definitions of terms

Term	Definition
Data Privacy	Data privacy, also called “information privacy”, is the principle that a person should have control over their personal data, including the ability to decide how organizations collect, store and use their data (IBM, 2023).
Ethics	Ethics is the branch of philosophy that deals with moral principles. These principles are generally divided into three categories: 1. What should we do? 2. What should we not do? 3. What we ought to do? (Encyclopaedia Britannica, 2025)
Ethical Leadership	The showcasing of normatively appropriate conduct with the help of interpersonal relationships and personal actions, and employing two-way communication, reinforcement and decision making to promote such conduct to followers (Lin, Yip, Ho & Sambasivan, 2020).
Product Innovation	Product Innovation is defined as the creation and development of new or improved products, services, or processes by a company or organization. It involves introducing novel ideas, technologies, features, or designs that provide added value to customers and differentiate the product from existing offerings in the market (Jain, 2023).
Mobile Network Operator	According to Infobip (2024), a Mobile Network Operator (MNO) is a telecoms entity that provides wireless voice and data services to mobile phone subscribers.

1.8 Assumptions

The following are the assumptions made with regard to the overall research project:

- It is assumed that the data shared by participants will be accurate and reliable.
- It is assumed that respondents will be willing to share the information requested.
- It is assumed that there will be adequate data and case studies to analyse the ethical practices and leadership styles at telecommunications companies in Gauteng.

1.9 Chapter Outline

Chapter 1 - Introduction of the Study: This chapter introduces the study, and provides a concise view of the study, outlining the problem statement, research methodology, delimitations of the study, definitions of terms and assumptions.

Chapter 2 - Literature Review: This chapter shares a comprehensive literature review of the study on Leadership through ethical product innovation in telecommunications companies in Gauteng.

Chapter 3 - Research Methodology" This chapter explains how the study was designed. It includes the research approach, design, research method, research instrument, population, data collection, ethical considerations and any limitations of the study.

Chapter 4 - Data Analysis: This section focuses on the data collection and analysis.

Chapter 5 - Research Findings and Discussions: This chapter provides the interpretation and discusses the results of the study. It is in this section that the researcher draws conclusions based on the data analysed.

Chapter 6 - Conclusions and Recommendations: This is the final chapter which summarizes key findings from the study, interpreting and then suggesting practical actions, including further research based on the findings.

CHAPTER 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

The telecommunications industry plays a major role in driving technological advancement and economic growth. According to Mordor Intelligence (2025), the South African telecoms market size is estimated at US $10.55 billion in 2025, and is expected to reach US $12.43 billion by 2030, at a CAGR of 3.33% during the forecast period (2025-2030). The rapid evolution and technological advancements have, however, also brought new challenges, particularly pertaining to leadership and ethical considerations. Ethical leadership requires leaders to create systems that ensure transparency, a thorough audit of processes, and the highest ethical standards. Dealing with personal data, the privacy of individuals, and often sensitive corporate information requires enforcement of stringent compliance and transparency.

This literature review investigates the interaction between leadership and ethical product innovation within telecommunications companies in Gauteng. It examines existing key theories, concepts and studies which highlight leadership influences on the ethical product innovation decision-making process. The literature review assists in understanding the role of leadership in fostering innovation within telecommunications companies in Gauteng. The study provides an overview of leadership theories, innovation and ethics and the relationship in relation to telecommunications industry. The review drew on global perspectives, investigating leadership and ethical product innovation trends and practices at the international level. It then narrowed its focus to the African context, understanding the challenges and dynamics within the Africa region with a particular focus on South Africa and in particular the Gauteng region. This research aimed to reveal underdeveloped areas of existing research particularly in relation to ethical considerations in the product innovation process.

2.2 Background Discussion

The telecommunications industry is a rapidly expanding industry, particularly on innovation and technological enhancements, and the industry is significant for the economic growth of South Africa. Product innovation helps telecommunications to stay relevant and competitive in the market. With rapid technology advancement and the competitive landscape, leadership and ethics are assuming greater importance within the product innovation process in telecommunications in Gauteng.

Product innovation is defined as the creation and development of new or improved products, services, or processes by a company or organization. It involves introducing novel ideas, technologies, features, or designs that provide added value to customers and differentiate the product from existing offerings in the market (IdeaScale, 2023).

The ethical issues surrounding innovations often, and perhaps inevitably, receive attention after the fact. For example, tablets and smartphones as two examples to draw on more than a decade after their introduction, where their excessive use has been identified as the source of problems that include dangers to the mental health of youth, sleep, and even to societal cohesion (McCausland, 2023).

The study explored the global perspective and the Africa region to investigate leadership and ethical product innovation trends and practices on the international level. Some of the observations regarding the integration of ethical principles within product innovation processes are provided below, drawing on different countries as examples.

Germany: Deutsche Telekom emphasizes digital responsibility; the company has an exhaustive approach to matters such as data protection, security and ethical standards. They have established a “Telekom Design Principle” which

incorporates responsible innovation and customer data protection (Deutsche Telekom AG, 2020).

Italy: TIM (Telecom Italia Mobile**)** has a clear focus on ethical governance and sustainability. They have established a “TIM Ethics and Compliance” programme which includes measures for ethical conduct and sustainable innovation. As an example they are involved in the development of 5G technology with strict assessments to ensure that user privacy and security are not compromised by their innovation (TIM S.p.A. 2020).

United States: Network operators in the United States navigate leadership and ethical considerations of product innovation through diverse strategies and practices, including regulatory compliance, adhering to FCC and other legal frameworks to ensure that innovation does not come at the expense of consumer rights or fair competition (Federal Communications Commission, 2025).

AT&T: AT&T emphasises strong leadership on data privacy and security. The company has implemented rigorous security measures and transparent data practices in protection on customer information. The company views ethical considerations in product innovation as essential as they directly impact on customer trust and regulatory requirements. For example, AT &T have a Code of Business conduct which highlights the significance of ethical behaviour, including protection of data privacy and ensuring data security. They conduct regular audits on their processes to maintain high standards of transparency and security. (AT&T, 2022)

Asia: Japan’s leading mobile operator emphasizes ethical leadership and innovation by focusing on customer privacy and data security. The Docomo Group maintains an explicit awareness of the importance of protecting the privacy and personal information of customers at the core of its business, including the confidentiality of its communications, and in handling such information in

accordance with the applicable laws and guidelines of relevant ministries and agencies as well as various in-house regulations. (Docomo Group)

East and West Africa: Network operators in East and West Africa seem to face challenges in navigating leadership and ethical consideration of product innovation.

Nigeria: MTN Nigeria, as an example, has been fined $5.2 billion for non-compliance with SIM card regulations.

Uganda: Airtel Uganda has experienced scrutiny over its alleged failure to adhere to advertising standards set by the Uganda Communications Commission (UCC). Airtel Uganda's aggressive marketing tactics have raised ethical questions about transparency and consumer rights (TECHJAJA, 2024).

SADC Case: Similar to East and West Africa, leaders in Network Operators in the SADC region face a range of challenges in balancing innovation with ethical challenges. For example, in 2020, Vodacom Lesotho was fined for non-compliance with regulatory requirements pertaining to network infrastructure and consumer protection laws (Lesotho Communications Authority, 2020).

Malawi: In 2021, Airtel Malawi found itself facing challenges related to its mobile money services. The Reserve Bank of Malawi raised concerns around ethical and security management of mobile money transactions, particularly in relation to fraud and protection laws (Malawi 24, 2021).

Namibia: Telecom Namibia was investigated by the Communications Regulatory Authority of Namibia (CRAN) in 2023, following complaints about service quality, failure to deliver promised internet speeds and misleading advertising (IT Web Africa, 2023).

2.3 Ethical Product Innovation

Ethics is a broad term based on the ideals, norms and principles that guide the behaviour of an individual, and the ethical behaviour of employees is positively influenced by organizational justice and moral attentiveness (Emerald, 2022). With the rapid technology evolution in telecommunications, it is important for leaders to balance ethics and profitability. Leaders in telecommunication companies encounter the challenge of seeking to balance ethics and profitability.

The future requires ethical product innovation, designing technologies with responsibility. According to Perfetti (2021), this means actively incorporating ethical frameworks from the earliest stages of development. It requires engaging with diverse stakeholders, including ethicists, sociologists, and the communities most likely to be impacted by the technology, in order to gain a comprehensive understanding of potential ethical matters. This collaborative approach ensures that technology is not only efficient and innovative but also equitable, accessible, and respectful of privacy and autonomy. For example, an article from the Product-Led Alliance (2023) emphasises that ethical considerations in product development go beyond legal compliance and profitability and encompass the moral responsibility of product teams to prioritize the well-being and rights of their users.

The Product-Led Alliance (2023) further states that integrating ethical frameworks in product development addresses moral principles and values, focusing on user privacy, fairness, transparency, and social impact. This approach creates responsible, sustainable products that prioritize user well-being and align with societal expectations, promoting trust and a more ethical technology industry.

According to Telecom Review (2023), with technological advancements, it is necessary to prioritize ethical considerations in the development and deployment of technology. This involves ensuring privacy protection, data security and

transparency in how technology operates. Ethical frameworks and guidelines can be established to guide the decision-making process.

Leaders in telecommunications companies in Gauteng play an important role in facilitating and driving the adoption of ethical innovations. The diffusion of innovation theory emerged as the most appropriate for the topic. The diffusion of innovations theory, as proposed by Everett M. Rogers, is a theoretical framework used to explain and predict the process and influencing factors of the dissemination and acceptance of new innovations in society (Guo and Huang, 2024). The diffusion of innovation theory speaks to five key attributes of innovation, namely relative advantage, compatibility, complexity, friability, and observability. All these elements are individually linked to ethical product innovation (Guo and Huang, 2024).

Recent literature emphasises the need for ethical considerations in technological innovations and the product innovation process within telecommunications companies. For instance, Responsible AI (RAI) frameworks are essential not only for maintaining consumer trust and safeguarding sensitive data but also for ensuring compliance with regulatory standards. They further argue that RAI is not merely an ethical exercise but a business imperative for telecommunications companies (McKinsey, 2023).

A notable example of cases that highlight challenges in balancing ethics and product innovation in South African telecommunications companies includes that of the “Please Call Me” Service Dispute: In 2000, Vodacom introduced the “Please Call Me” service, enabling users without airtime to send free callback requests. Nkosana Makate, a former Vodacom employee, claimed to have conceived this idea and sought compensation. Vodacom initially refused payment, leading to a protracted legal battle. In 2016 the Constitutional Court ruled in Makate’s favour, criticizing Vodacom’s conduct as dishonourable and unexpected from an ethical corporate entity (Makate v Vodacom, 2016). The case suggests a gap in ethical considerations within the innovation processes.

It is necessary for leaders in telecommunications companies to incorporate ethical considerations within their product development process to balance ethics and product innovation. According to Sabu (2024), creating clear guidelines and standards for ethical product development ensures that ethical considerations are integrated into every stage of the process. Whether it is developing a code of conduct for employees or implementing ethical sourcing policies, businesses must establish a strong ethical framework to inform their decision-making. Key performance indicators (KPIs) specific to ethics should be in place to allow businesses to monitor transparency, fairness, and corporate social responsibility (CSR) (Onemoneyway, 2024).

Some African scientists and innovators regard ethics as a barrier to harnessing innovation and emerging technologies. Consequently, ethical considerations tend to be applied to a limited set of innovations in medical research and are subsequently limited in comprehensive innovation across a wider STI spectrum (NEPAD, 2021).

According to Springer (2021), restricting technology innovation excessively is ultimately not useful, as the impact will most likely be on weaker groups of citizens where advances in technology can potentially contribute to significant improvements in their lives. They further argue that there should not be over-regulation to the point where it may inhibit innovation. In other words, the concern regarding potential ethical failures should not undermine technology innovation but that better solutions should be identified that can prevent or manage those anticipated ethical failures.

2.3.1 Proposition 1

Transformational and ethical leadership significantly impact the successful adoption and diffusion of ethical product innovation in telecommunications companies in Gauteng.

2.4 Leadership

The telecommunications industry in Gauteng needs leaders who are not only agile but who are committed to ethical principles so that they are able to navigate a constantly changing landscape. Authors such as Huber (2024) argue that agile leadership is a driving force behind innovation within organizations as it nurtures an environment that thrives on creativity and adaptability, ultimately fuelling innovation in several ways.

According to Business Ethics Network (2023), the importance of organizational ethics in today's business environment cannot be overstated. In an era where information is rapidly disseminated and public opinion can be significantly influenced by corporate behaviour, maintaining high ethical standards is necessary for long-term success. Companies that prioritize ethical practices are more likely to build trust with their stakeholders, attract and retain top talent, and maintain a positive public image. Additionally, strong ethical foundations can help organizations navigate legal and regulatory landscapes more effectively, reducing the risk of costly legal battles and sanctions.

It is critical to embed ethical considerations into the innovation process. Leaders must be prepared to pose difficult questions at every stage of the lifecycle and engage diverse stakeholders in order to anticipate blind spots and potential pitfalls (Walcott, 2024). Ethical leadership is an important consideration within the telecommunications industry. Ethical leaders are required to ensure that innovations are implemented and deployed responsibly whilst being balanced with ethics and creativity.

Ethical leadership is supported by a set of core competencies that provide guidance for leaders in their decision-making in order to promote principled and ethical standards and behaviour. According to the Ethical Leadership handbook (The Ethics Institute, 2023) these competencies include:

- **Cognitive competence:** The ability to discern ethical issues and understand the implications of decisions on various stakeholders.
- **Behavioural Competence**: Demonstrating ethical behaviour consistently, serving as a role model for employees.
- **Managerial Competence**: Integrating ethical considerations into management practices, policies, and organizational strategies.

These competencies assist leaders in navigating ethical challenges within organizations and form part of the competencies that are required from leaders in telecommunications companies in Gauteng. The study considered various leadership theories, including the following:

- **Transactional Leadership:** Bass and Avolio (1994) observed transactional leadership as more of a contingent-reward leadership that had an active, positive interaction between the follower and the leader. In transactional leadership, the leader rewards the follower or recognises their accomplishments which have been agreed upon Transactional leaders can support incremental innovation by ensuring that innovation goals are clearly defined and met. For example, in the telecommunications space, a transactional leader may reward teams for improving SIM activation efficiency.

- **Servant Leadership:** “The servant leader focuses on the needs of the follower and helps them to become more autonomous, free and knowledgeable”. The servant leader is also more concerned with the “have-nots” and recognizes them as equals (Greenleaf, 1996). A servant leader creates an environment where employees feel safe and comfortable to experiment and generate new ideas supporting radical innovation.

- **Situational Leadership:** The model was developed by Hersey and Blanchard (1996), and model suggests that no single leadership style is

better than another. Instead of focusing on workplace factors, the model suggests that leaders should adjust their techniques to their employees' abilities. However, Transformational Leadership Theory was selected as the most appropriate to the topic based on its characteristics, ability to inspire employees through open communication, clear articulation of the vision, and ability to inspire trust. A transactional leader is able to adjust based on context and that encourages agility which is required for a competitive environment such as telecommunications.

With regard to Transformational Leadership Theory, the concept of transformational leadership was introduced by Burns in 1978. According to Burns, Transformational leadership is a process where "leaders and their followers raise one another to higher levels of morality and motivation". This theory was further developed by Bass (1978). Telecommunications companies operate in a highly competitive environment, where leaders are expected to set clear goals and inspire people to perform beyond expectations.

Current discourse suggests that effective transformational leaders are those who shift the values, beliefs and attitudes of followers to the extent that they would be willing to go beyond the call of duty (Hu et al., 2023; Lian et al., 2022) Transformational leaders play a critical role in telecommunications in driving ethical product innovation, and they promote an environment where employees are motivated to engage in ethical practices and take into consideration long term implications of ethical principles.

According to Asbari et al. (2020), transformational leadership binds leaders and followers in a collaborative process and thereby contributes to the performance of the entire organization. The theory emphasizes vision, inspiration and change and it aligns well with ethical product innovation. However, it has some limitations. especially with regard to potential ethical blind spots. Transformational leaders have as a key priority innovation and organisational goals; ethical concerns may be unintentional particularly when the organization is under market pressure.

However, the theory might conflict with the need for stringent ethical standards as the focus is more about pursuing visionary goals. Telecommunications companies are required to have robust ethical structures and policies; this will also assist in instances where a leader has a weak ethical compass, and where transformational leadership will require a balance with ethical frameworks in place.

Though Transformational Leadership has been lauded as the best option to drive innovation, there are opposing views that highlight the weaknesses of Transformational Leadership. Murphy 2023) highlights the following issues among others. Leader Dependency - given the character of a transformational leader as being fundamental to the success of the organization - should this leader leave the organisation, employees may hesitate to make decisions, thus stifling creativity and initiative. Another aspect considered a weakness is where Ethical Considerations could be overlooked, where charismatic leaders possess strong influence which can blur ethical lines. Transformational leaders are expected to embody high ethical standards. Their conduct sets a precedent for the entire organization. Yet, maintaining ethical integrity can be challenging amidst sweeping changes. This can be a challenge for leaders in telecommunications companies, and leaders therefore need to be able to navigate ethical dilemmas and balance ethics and innovation.

2.4.1 Proposition 2

Transformational leadership combined with ethical leadership is necessary for fostering sustainable innovation within telecommunications companies in Gauteng.

2.5 Analytical Framework

To explore the impact of leadership on ethical product innovation in telecommunications in Gauteng, this study adopts an analytical framework that integrates key leadership theories, ethical theories, and innovation theories and

processes. The Analytical Framework is meant to investigate how transformational and ethical leadership styles influence the successful adoption and diffusion of innovations, while also examining how these leadership approaches address the challenges of balancing product innovation with ethical considerations. The framework focuses on the dimensions: Innovation; Leadership; and Ethics.

2.5.1 Theoretical Framework

This study is underpinned by three main theoretical perspectives: Innovations Theory, Transformational Leadership Theory, and Ethical Leadership Theory. These frameworks are necessary in understanding how leadership influences the adoption and diffusion of innovations in telecommunications in Gauteng. The framework draws on existing theories that provide comprehensive insights on how these themes interact. This section outlines the theoretical perspectives that underpin each theme also to understand how the theories contribute to analysing the role of leadership in fostering product innovation.

Innovation Theory

Innovation is critical for growth and success in the telecommunications industry. It is at the centre so as to ensure that telecommunications companies stay competitive as they adapt to market pressure and technology enhancements. The Diffusion of Innovations Theory (Rogers, 1962) is used to understand how new innovations, products and services are introduced into the market, adopted and diffused within the telecommunications space. This theory assists in understanding how consumers adopt new products. It explains the passage of a new idea through stages of adoption by different people who participate in the idea. i.e., innovators, early adopters, early majority, late majority, and laggards (Investopedia, n.d.).

Resource availability plays an essential role in attaining competitive advantage and leaders must ensure that innovation resources are not misaligned with the organization’s ethical values. As cited by Armstrong and Lee (2021), the resource

-based view (RBV) argues that a more solid foundation on which strategy can be built is to be found in the firm - namely in the distinctive and differentiating assets, resources, and capabilities that an organisation possesses or can access.

According to Akter et al. (2020), ethical standards are a valuable part of an organization's internal resources. According to Metavshn (2023), in the fast-paced and evolving telecoms industry, balancing compliance with innovation is of paramount importance. While compliance ensures that telecoms companies adhere to regulatory requirements and maintain the trust of their customers, innovation drives the industry forward and enables companies to stay competitive. However, Metavshn further observes that finding the right balance between compliance and innovation can be challenging. On one hand, strict compliance measures can impede the ability to explore new technologies and business models; therefore, within telecommunications companies in Gauteng, a distinctive blend of ethical leadership, frameworks and innovative resources is required to ensure a compelling competitive advantage.

Transformational Leadership Theory

Leadership plays a central role in guiding, directing and ensuring the successful delivery of innovation initiatives in telecommunications companies.

Transformational Leadership Theory: Burns (1978) focuses on leaders who inspire, motivate and challenge followers to achieve higher levels of performance and creativity, and was selected as the most appropriate for the topic. This theory is relevant in understanding how leaders within telecommunications can promote sustainable innovation whilst maintaining ethical standards. In telecommunications companies in Gauteng, leaders are expected to promote ethical innovation, where ethical values need to form part of the product development process. This theory is relevant to this study in that it demonstrates how leaders influence employee engagement and ethical behaviour in innovation processes (Hu et al., 2023; Lian et al., 2022).

Ethical Leadership Theory: Ethical Leadership Theory focuses on how leaders set ethical standards, model ethical behaviour, and enforce accountability within organizations. Ethical leaders prioritize fairness, responsibility, and integrity in decision-making (Brown & Treviño, 2006). In telecommunications companies in Gauteng, ethical leadership ensures that product innovation process aligns with fairness, integrity and the promotion of a culture of ethical practice and sustainable innovation.

Virtue Ethics: According to Weiss (2021), Virtue Ethics is a framework that focuses on the character and virtues of individuals within organizations, rather than solely on rules or consequences, and it suggests that cultivating virtues such as honesty, integrity, and fairness can lead to more ethical decision-making and sustainable business practices. In telecommunications companies, the leader's personal character and the culture of the organization contribute to ethical conduct which leads to better management of potential ethical dilemmas, contributing to improved trust from stakeholders.

By using virtue ethics, the study explores how leaders navigate ethical dilemmas, encourage responsible innovation, and address challenges such as data privacy, consumer transparency and social impact, particularly in instances where innovation may outpace regulation or social readiness.

2.5.2 Conceptual Framework

The conceptual framework of this study provides an approach to understanding the relationship between innovation, leadership and ethics in telecommunications companies in Gauteng. It provides the visual representation of the study's main variables and how these interact and assist with the analysis on how leadership influences product innovation in telecommunications companies in Gauteng.

The central themes in this study are Leadership, which is a critical component of organisational performance. Leadership is at the centre of this framework as it influences both innovation processes and ethical considerations. Next is

Innovation, which is the outcome of ethical decision-making and strategic efforts by leadership. Lastly, Ethics ensures that all these themes align with societal values and environmental wellbeing.

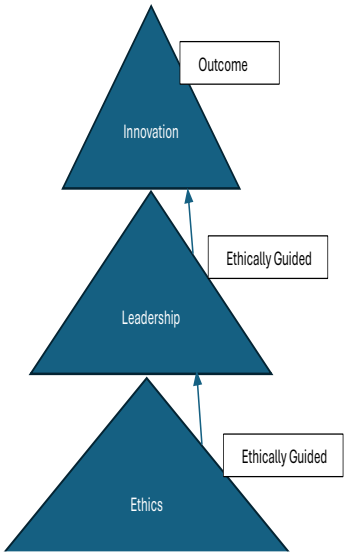


Figure 1: Conceptual Framework depicting relationship between Leadership and Ethical Innovation (Source: Author's Own, 2025)

Ethics forms an important component of the foundation that emphasises leadership traits of integrity, transparency and accountability. Leadership is built on ethics, and this study draws on transformational leadership complemented by digital leadership as key drivers of innovation. Innovation sits at the top as the outcome; it shows leadership through ethical product innovation and organizational growth. The integration of the three themes shows how each theme mutually influences, and in turn is influenced by, the others.

2.6 Research Gaps

The following research gaps were identified through the literature review and analysis of the state of leadership through ethical product innovation in telecommunications companies in Gauteng.

- Existing literature does not specifically focus on ethical dimensions of product innovation in telecommunications.
- There is limited research on emerging markets such as South Africa as compared to developed markets, about ethical leadership and innovation.
- There is a gap in existing frameworks; the focus is more on the legal and regulatory. There is a need to develop comprehensive frameworks for the integration of ethical principles at the initial design stages of product innovation in telecommunications companies.

2.7 Conclusion of Literature Review

This chapter presented and discussed the literature relevant to the study of leadership through ethical product innovation in telecommunications companies in Gauteng. Key theories and concepts related to product innovation and ethical leadership were explored, as well as understanding their integration within telecommunications in Gauteng. The review identified current research on the role of leadership and how it influences ethical product innovation. It revealed challenges experienced in balancing ethical principles with business objectives and the need for the development of comprehensive frameworks to guide ethical decision-making in the product innovation process. Gaps within the literature were identified, signifying the need for further investigation, particularly on the integration of ethical principles within the product development lifecycle in the context of the Gauteng telecommunications environment and regulatory domain.

The following propositions guide the direction of this study.

2.7.1 Proposition 1

Transformational leadership significantly impacts on the successful adoption and diffusion of ethical product innovation in telecommunications companies in Gauteng.

2.7.2 Proposition 2

Transformational leadership combined with ethical leadership is necessary for fostering sustainable innovation within telecommunications companies in Gauteng.

CHAPTER 3. RESEARCH METHODOLOGY

This chapter discusses the research approach utilised to investigate leadership and ethical principles in product innovation within telecommunications companies in Gauteng. The study applies a qualitative research methodology, which is appropriate to exploring intricate social phenomena through rich comprehensive data. The emphasis of the study is on purposive sampling, non-probability sampling technique, and interviews.

This chapter comprises the following areas: research approach, research design, data collection methods, population, and sampling. It further explores steps to ensure credibility, reliability, and ethical considerations of the study. The qualitative method is the most appropriate for this study as it seeks to understand intricate phenomena such as the relationship or interaction between ethical leadership and ethical product innovation.

3.1 Research Approach

The study applies a qualitative research approach to examine leadership and ethics in product innovation within telecommunications companies in Gauteng. The qualitative methodology is appropriate for this study as it provides for an in-depth investigation of participants' perspectives, lived experiences and insights in seeking to explore intricate social phenomena through rich comprehensive data. The study is grounded in the interpretivist paradigm which represents a world view encompassing a framework of beliefs, values, and methods (Ayton & Tsindos, 2023). Pervin and Mokhtar (2022) observes that interpretivism facilitates a subjective understanding of social contexts, enabling researchers to examine the complexities of human interactions.

3.2 Research Design

This study is based on a qualitative research design. The study design used semi-structured interviews to explore leadership through ethical product innovation in telecommunications companies in Gauteng. The main objective of the study was to investigate how leadership influences ethical product innovation.

3.3 Data Collection Methods

According to Bhandari (2020), “data collection is a systematic process of gathering observations or measurements.” For this study, semi-structured interviews were conducted using Microsoft Teams application. The semi-structured interview approach was suitable due to its ability to offer flexibility to alter questions according to participants’ responses. Participants consented to having the interviews audio-recorded. The interviews on average lasted approximately 45 minutes.

3.4 Population and Sample

3.4.1 Population

According to Sileyew (2020), the population refers to the entire group of individuals, objects, or events that share a common characteristic and are the focus of the study. It represents the complete set of elements that the researcher aims to study and draw conclusions about. It is critical to define the population in the context of this study as it ensures that the study is credible, reliable and that insights are focused.

The population constituted telecommunications professionals from the four main network operators in Gauteng, namely Vodacom, MTN, Telkom and Cell C. The target population are individuals with diverse knowledge, skills and experience from different departments including IT, Networks, Finance, Marketing, CVM, and

CX. This was done to ensure that diverse insights were obtained and a range of views and experiences shared.

3.4.2 Sample

The research approach to this study was qualitative, as only 11 participants were interviewed. The collected data adequately addressed the research questions. Participants were selected according to the specifications of the study. Participants in this study were telecommunications professionals involved in the product development process and innovation to drive growth in their organizations.

3.4.3 Sampling method

Sampling is the process of choosing a sample of a population from an individual or a large group for a certain type of research objective (Makwana et al., 2023). A non-probability purposive sampling was selected as being most appropriate for this study. Purposive sampling allows the researcher to deliberately select the participants based on their knowledge, expertise and experience in leadership and ethical product innovation in telecommunications companies in Gauteng.

3.4.4 Sample size

This study employed a purposive sampling method with a targeted sample size of 20 participants, selected to ensure diverse perspectives. However, data saturation was reached after 11 interviews, with no new themes emerging.

3.5 The Research Instrument

The study adopted a qualitative research approach to explore leadership through ethical product innovation within telecommunications in Gauteng. Semi-structured interviews were conducted (Appendix C) with selected participants in leadership roles across different departments. Purposive sampling was used to ensure participants had relevant experience in innovation, ethics and leadership. Data were collected through one-on-one interviews, guided by a set of open-

ended questions. Based on the participants' feedback and emerging themes, interview questions were refined during the data collection process to deepen the insights collected.

3.6 Procedure for Data Collection

The intention of the study was to examine leadership through ethical product innovation in telecommunications companies in Gauteng. A semi-structured interview data collection method was utilised, using the data collection process outlined below.

- Development of the interview guide.
- Identification of middle to senior Product & Innovation management leaders within telecommunications companies in Gauteng.
- A comprehensive recruitment email detailing the objectives and scope was sent out inviting participants to the study.
- The process involved obtaining consent from participants through the consent form attached to the email, before the interview sessions could be scheduled.
- Participants were assured of full confidentiality to protect their identities and their respective organisations.
- Data collected from the participants was stored electronically in a secure password protected device to ensure confidentiality.
- The data collection process adhered to ethical guidelines.
- The collected data adequately addressed the research questions. Data saturation is a point reached during data collection where no new relevant data can be collected. It signifies sufficiency of data (Cobern & Adams, 2020).
- In this study, data saturation was observed after 11 interviews, ensuring the richness and completeness of the findings.

3.7 Data Analysis Strategies and Interpretation

Thematic analysis was used to analyse the data collected for this study. Thematic analysis is a method utilised to analyse qualitative data that involves the identification and reporting of patterns in a data set, which are then interpreted for their inherent meaning (Clarke & Braun, 2006).

The goal of a thematic analysis is to identify themes, namely patterns in the data that are important or interesting, and use these themes to address the research or highlight an issue. This requires more than only summarising the data; a good thematic analysis interprets and makes sense of it. A common pitfall is to use the main interview questions as the themes (Clarke & Braun, 2013). Figure 3 below depicts Braun and Clarke's six-phase framework for undertaking a thematic analysis.



Figure 2: Thematic Analys (Braun & Clarke, 2006)

The six steps explained:

1. Familiarisation with the data: The researcher becomes familiar with the data, listening to recordings and transcribing the interactions and then re-reading (Braun & Clarke, 2006).
2. Generation of initial codes: The researcher identifies preliminary codes, which are features of the data that appear interesting and meaningful. Thematic analysis aims to identify and report the most repeated patterns in the data (Braun & Clarke, 2006).
3. Coding, searching for themes: There are no rigid rules that inform how a theme may be constituted. A theme is characterised by its significance (Braun & Clarke, 2006).
4. Reviewing themes: Themes may be used to develop a conceptual framework or theoretical model that explains the relationships between the categories and the research questions (Braun & Clarke, 2006).
5. Defining and naming themes: This is the final refinement of the themes, and the aim is to identify the 'essence' of what each theme is about (Braun & Clarke, 2006).
6. Producing the report: This stage involves writing up the analysis, incorporating the analytical narrative and data extracts to present the story of the data in a compelling way (Braun & Clarke, 2006). NVivo software was used for data analysis.

3.8 Possible limitations and challenges of the study

The study encounted a number of challenges and limitations, as explained below.

- **Limited sample size:** The initial target was twenty; however, due to reaching data saturation the study obtained comprehensive data from 11 participants.
- **Access to participants:** Securing time with senior leadership presented challenges due to their busy schedules.

- **Confidentiality concerns:** Some participants were reluctant to share detailed information in order to protect their organisations and their confidentiality even though they were assured of confidentiality prior to the interviews.
- **Time constraints:** The study was limited to a specific timeframe due to busy schedules; this may have been a factor in limiting the engagements.

3.9 Quality Assurance

3.9.1 Transferability

Transferability refers to the extent to which the findings and interpretations derived from a study may be applicable and relevant to other contexts or settings beyond the specific research context (Lincoln & Guba,1985). The underlying intention behind transferability is the extent to which the results of a qualitative study can be generalized or transferred to other contexts or settings (Liamputtong, 2019).

While the findings of this research are limited to telecommunications companies in Gauteng province, the rich descriptions of organisational context, the innovation dynamics and leadership styles may offer valuable insights into similar environments. By providing detailed accounts of participants' experiences and their organisations, the study assists readers to determine the extent to which the results can be applied to other contexts, such as other regions or sectors facing similar leadership and ethical innovation challenges.

3.9.2 Credibility

According to Tracy (2010), credibility can be achieved through strategies such as thick description, triangulation, and member reflections. In this particular study which explores leadership through ethical product innovation in telecommunications companies in Gauteng, thick description was furnished through detailed accounts of participant narratives. In terms of triangulation, it was obtained through analysing data from different sources, including semi-

structured interviews and industry articles to validate the insights. Participants were provided with the option to decline participation to ensure that data collection included those who were willing to take part and consenting to offer data or information.

3.9.3 Confirmability and Dependability

In qualitative research, dependability refers to consistency of the research process and findings over time and under different conditions (Janis, 2022). Confirmability addresses the objectivity of the study's findings, emphasizing that the findings are not unduly influenced by researcher biases or perspectives. This study adopted a qualitative approach, where data was collected through semi-structured interviews and industry reports. A detailed account of the research process has been maintained for consistency and replicability where required. All stages of the research process were documented, including data collection; transcription and coding; and thematic analysis stages.

3.10 Ethical considerations

This study adhered to ethical guidelines as ethical considerations are critical inensuring the integrity and credibility of the research. The risk profile of the study was considered low, according to the rating in the Human Research Ethics Committee (HREC) (non-medical) framework. Low risk is defined as being where the only foreseeable risk is that of discomfort, or where there may be some sensitivity involved in terms of the questions asked (University of the Witwatersrand, 2024). Ethics clearance was obtained from the Wits Business School before commencing with interviews (Appendix D).

Some of the ethical considerations that were provided for in the study include:

Voluntary participation: Allowing for voluntary participation will ensure that participants understand the research area and agree to engage in the data collection (Mumford et al, 2021).

Option to opt out of the interviews: This ensures that no interviewee is compelled in any way to engage in the research should questions arise that do not align with their own position or values (Mumford et al, 2021). In this manner the study respected and protected the rights of the interviewees.

Confidentiality: Participants were assured of their confidentiality. Participant names were protected during data transcription. The data was stored in a secure password-protected device with no third-party access.

Data usage: Data collected from the participants were treated in compliance with ethical guidelines as well as taking cognisance of South Africa's data protections laws such as Protection of Personal Information Act (POPIA).

3.11 Summary of the chapter

This chapter explaind how the research was conducted, and how the data was collected and analysed, as well as the design and application of the interview questionnaire. It discussed the data collection process and challenges experienced during the process. The time taken to collect the data and the ethical considerations applied in such collection were clarified. The collected data was analysed using NVivo software.

The next chapter presents the findings of the study.

CHAPTER 4. PRESENTATION OF THE FINDINGS

4.1 Introduction

This chapter presents the findings of the qualitative data collected from the interviews performed with eleven participants, purposively selected and interviewed using a semi-structured questionnaire. The objective of the research was to investigate how leaders in telecommunications companies in Gauteng may influence ethical product innovation. Eleven participants were interviewed, and collected data was transcribed and thematically analysed. NVivo software was used for the analysis. All eleven participants were asked the same questions during the study. The interviews were transcribed and imported into the NVivo software. These finding were organised around the two research questions, namely,

I. How does leadership in telecommunications companies in Gauteng influence ethical product innovation?
II. How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes?

This section presents two major components; the demographic profiles of respondents and the empirical findings from the interviews. The findings were thoroughly examined and then reported in this chapter in order to provide answers to the research questions posed in the study.

After the data were analysed, three key themes emerged that would provide comprehensive answers to all the questions (Leadership, Collaboration and Ethics). Respondents' identities were replaced with a label P, ranging from P1 to P11 to protect their privacy. These numbers appear frequently in the study's findings. Amongst the four themes, each theme is subdivided into various sub-themes. The themes and sub-themes are supported by extracts from participant responses.

Table 2: Themes and Sub-Themes

Research Question	Theme	Sub-Theme
RQ1: How does leadership in telecommunications companies in Gauteng influence product innovation?	Leadership	Leadership Qualities Innovative Leadership Strategic Leadership
	Collaboration	
RQ2: How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes?	Ethics	Ethical Leadership Ethical Standards Ethical Considerations
	Compliance	

4.2 Demographics – Overview of Participants

This section presents the demographic characteristics of participants. Data for this study's findings was derived from 11 participants. The demographic analysis presented in Table 3 confirms that all respondents were telecommunications professionals. The eleven participants comprised executives, senior managers and specialists whose ages ranged between twenty and sixty-two and over 60%. While 60% of respondents were male, only 40% were female.

According to data from BusinessTech (2024) the average tenure of employees in South Africa's telecommunications sector is approximately 5 years and 2months. This indicates the level of experience and depth from the participants and the insights and value they brought to the study. All participants are closely involved in the product development process and innovation. Participants came from all four network operators in Gauteng: Vodacom with a market share of 43,8%; MTN with a market share of 32%; Telkom with a market share of 16.9%; and CellC with a market share of 7.3% (Labuschagne, 2023).

Table 3: Study Participants

Participant ID	Age	Gender	Designation	Experience
P1.	54	Female	Senior manager	18 years
P2.	34	Male	Product Specialist	10 years
P3.	44	Male	Executive	21 years
P4.	35	Female	Senior Manager	12 years
P5.	36	Female	Senior manager	9 years
P6.	48	Male	Senior Manager	26 years
P7.	48	Male	Executive	21 years
P8.	58	Male	Senior manager	30 years
P9.	48	Male	Senior manager	27 years
P10.	62	Male	Senior manager	40 years
P11.	30	Female	Product Specialist	2 years

4.3 Findings for Research Question 1

This section examines how leadership in telecommunications companies in Gauteng influence ethical product innovation.

RQ1: How does leadership in telecommunications companies in Gauteng influence ethical product innovation?

4.3.1 Leadership

Three sub-themes that emerged under leadership, namely Leadership Qualities; Innovative Leadership; and Strategic Leadership.

Leadership Qualities:

Leadership qualities are critical in driving product innovation within telecommunications companies in Gauteng. Participants emphasised the need for leadership that leads by example, that is involved, supportive, and fosters an environment conducive to creativity and ethical practices.

Participants mentioned transformational leadership as the type of leadership required to foster innovation.

P1: *As a leader you influence your team by mentoring and educating them on ethical behaviour and facilitate further training where required.*

P8: *By leading with example, responsible as a leader, transformational leadership style and have integrity. Enhance integrity.*

Innovative Leadership:

Telecommunications companies operate in a competitive environment with constant change; therefore, these companies require innovative leadership to maintain relevance and competitiveness. The sentiments echoed by the participants were mostly about creating an environment for ideas and risk taking. The participants mentioned transformational leadership as being the leadership style that drives innovation. Leadership studies outline a positive connotation between a transformational leadership style, motivation, and meaningful work (Bailey et al., 2019).

P3: *Creativity, curiosity and competitor benchmark. Curiosity is key, gives the team the ability to think out of the box.*

P7: *Allow them to come up with new ideas, interrogate if the idea will be good for the company. They must ensure they leave their mark, and come up with new ideas that will have their name on.*
Open to ideas from other teams and allow them to be creative in their own space.
P9: *Risk taking, creativity.*
P11: *Transformational leadership, Collaborative leadership.*

Strategic Leadership:

P4: *Also be very good in strategy, understand your capabilities.*
P7: *Leadership should create an environment where employees feel empowered to bring ideas, learn from mistakes and understand the strategic direction. It is essential that these are clearly communicated and cascaded throughout the company instead of remaining at the top.*
P2: *Having deeper insights of what the end goal is and what is required to fulfil that.*
P9: *Strategic Problem solving/ prioritisation, time to deliver value.*
P2: *Incentives, recognition and celebration per project.*
P5: *Reward great ideas, be supportive and foster culture of innovation.*
P6: *Part of the leadership that we need to exert is to listen to the customer, evaluate and incorporate into the products to make it more beneficial to the customer.*

Collaboration

P1: *As a leader you influence your team by mentoring and educating them on ethical behaviour and facilitate further training where required.*
P11: *Promote a collaborative culture, regular team checkins, clear goals and ensure there is no silo mentality, regular feedback.*
P7: *Key thing in collaboration is establishing relationships with stakeholders. Communicating and getting their ideas.*
P6: *Need to continuously work on and ensure there is right synergy in the group, ongoing engagement and building relationships.*

4.4 Incorporation of ethical considerations into product innovation processes

This section examines how leaders in telecommunications companies in Gauteng incorporate ethical considerations into their product innovation processes.

RQ2: How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes?

4.4.1. Ethics

Ethics is a broad term based on the ideals, norms and principles that guide the behaviour of an individual. The ethical behaviour of employees is positively influenced by organizational justice and moral attentiveness (Al Halbusi, 2022).

4.4.1.1 Ethical Leadership

P1: *There should be frameworks put in place by Government and associated industry organisations as well as organisations to inculcate ethics into modern day society.*

Leaders should encourage and drive ethical leadership in product innovation as a priority from the "top down to ground level" and represent "ethical leadership" as this is a huge challenge facing all spheres in South African society.

4.4.1.2 Ethical Standards

P1: *Ensure that you are aware of your companies "ethical standards," be aware of "competition regulations," industry standards and bodies and in a "broader" scope it may relate to territories in which your company operates in terms of "Regulatory Standards" i.e., Government bodies, Telecommunications government Acts etc. Also, where necessary consult with your legal department that you are not infringing on any ethical grounds. If ethical standards are ignored their consequences could outweigh profitability and cause reputational damage to the organisation.*

P5: *Ethics speaks to doing the right thing, it is making sure we do not harm customers, i.e., making profit at the expense of customers.*

4.4.1.3 Ethical Considerations

P1: *Privacy has a direct impact on the customer and has to adhere to the relevant regulation e.g., POPIA, Consumer Protection Act; this needs to be assessed prior to the innovation as the consequences are far-reaching in terms of lawsuits and penalties which is a direct cost to the company and its reputation.*

P6: *A forum is required to decide how we apply ethics on product innovations. Example, a drone, which is convenient but also invasive in terms of privacy. It cannot be an afterthought but should be the normal cycle that is incorporated into Product Development*

P4: *In most organisations there was no clear process on ethics in product innovation, they need to define ethical consideration at the beginning of the process. It must be a framework that product managers should follow to evaluate if the product should be launched. Currently it is only the legal part not ethical considerations.*

P4: *Never worked in an organisation where it is properly done. We need to set up forums where we poke holes at the product to see if it meets ethical standards. Anything that has to do with ethics requires time and effort, rushing product launches compromises ethical considerations. It is important to put together a process that integrates ethics and ensures that the process is followed and adhered to.*

4.4.2 Compliance

P1: *The organisation needs to stay abreast and compliant with the countries Government Regulatory Framework (ICASA) as well as the Industry Regulatory Framework (WASPA) and adhere to the relevant acts i.e., ECA (Electronic Communications Act 36 of 2005).*

P9: *Be guided by regulation and terms and conditions. Innovate within the confines of ethics, customers should not feel like they are being robbed. Consult Chief Compliance Officer overseas and ensure compliance. Use Risk Department to make sure right measures are in place.*

P2: *Ethical frameworks would have to evolve, given new applications and technologies. Yearly reviews and updates.*

4.5 Summary of the findings

Chapter 4 examined RQ1 on how leaders in telecommunications companies in Gauteng influence ethical product innovation and RQ2 on how leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes. The findings from the analysis emphasize the multifaceted role of leadership in promoting ethical product innovation within telecommunications companies in Gauteng.

The study revealed that leadership in telecommunications in Gauteng plays a pivotal role in influencing ethical product innovation through various mechanisms. By holding and displaying strong ethical principles, promoting collaboration, upholding compliance and fostering innovation, leaders can drive and deliver products that are innovative as well as ethically and morally acceptable.

Table 4: Summary of Findings

Research Question	Propositions	Findings
How does leadership in telecommunications companies in Gauteng influence ethical product innovation?	Transformational and ethical leadership significantly impacts on the successful adoption and diffusion of ethical product innovation in telecommunications companies in Gauteng.	Emphasis was on the leadership qualities, as respondents wanted leadership that is innovative. Leaders are expected to display ethical behaviour and uphold compliance. Other findings were fostering innovation by allowing employees to take risks and be creative without being punitive. Rewarding and recognising employees were noted as drivers of innovative behaviour within telecommunications companies in Gauteng. A need for clear strategies that incorporate ethical standards and guidelines to ensure teams develop products that meet customer standard and are also ethically sound, adhering to legal frameworks.
How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes?	Transformational leadership combined with ethical leadership is imperative for fostering sustainable innovation within telecommunications companies in Gauteng.	Leadership that embodies strong ethical principles. Leaders should balance innovation with ethical considerations to ensure that technological advancements are pursued responsibly. Embedding ethical principals in the product development process.

CHAPTER 5. DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter discusses the findings of the study, drawing from the data collected and analysed in chapter 4. The chapter revisits the research objectives and questions, highlighting key themes and patterns that emerged from the investigation.

The complex relationship between leadership and ethical product innovation within telecommunications companies in Gauteng is explored. The rapid evolution of technology in the telecommunications sector requires leaders to steer their organizations through technological advancements while simultaneously upholding ethical principles. These technological advancements have raised critical ethical considerations in product development and innovation, pushing for a thorough understanding of how leadership influences ethical product innovation and decision-making. This study aimed to investigate the role of leadership, namely transactional and transformational in influencing ethical product innovation in telecommunications companies in Gauteng. The research aimed to provide insights into how leaders in telecommunications companies in Gauteng, can promote innovation while maintaining ethical standards. This was done by exploring the interaction between leadership and ethical considerations.

The theoretical framework underpinning this study draws on theories of Innovation, Leadership and Ethics. Innovation is important for driving growth and competitiveness in telecommunications companies in Gauteng. Theories of innovation highlight important components such as idea generation, diffusion and adoption, as well as the importance of collaboration and communication (Diffusion Research Institute, 2024).

Within the leadership area, Transformational leadership is relevant as it suggests that leaders who inspire and motivate their employees can facilitate meaningful change and promote innovation. Transformational leadership demonstrates how leaders influence employee engagement and ethical behaviour in innovation processes (Hu et al., 2023; Lian et al., 2022).

Ethical theories emphasize the moral aspects and responsibilities of leadership in guiding their organization's behaviours and decision-making. Ethical Leadership Theory focuses on how leaders set ethical standards, model ethical behaviour, and enforce accountability within organizations. Ethical leaders prioritize fairness, responsibility, and integrity in decision-making (Brown & Treviño, 2006).

This chapter explains how these leadership theories are displayed within telecommunications companies in Gauteng drawing on data analysis to clarify the interconnection between leadership and ethical product innovation. It provides both supporting and opposing views for Proposition 1 and Proposition 2 to deliver a balanced analysis of the study.

5.2 Discussion pertaining to Proposition 1

Proposition 1: Transformational and ethical leadership significantly impact the successful adoption and diffusion of ethical product innovation in telecommunications companies in Gauteng.

Research Question 1: How does leadership in telecommunications companies in Gauteng influence ethical product innovation?

5.2.1 Leadership

Amongst the various definitions of leadership, Northouse (2018) defines leadership as a "process whereby an individual influences a group of individuals to achieve a common goal".

Leadership Qualities:

Transformational leadership and collaborative leadership qualities were presented as the most suitable leadership styles to foster innovation. A transformational leader's principal priority is innovation and organisational goals. Transformational leadership centres on creating a compelling vision that motivates and inspires teams to achieve more than they previously considered possible (Forbes Coaches Counsel, 2024).

According to Asbari et al. (2020), transformational leadership binds leaders and followers in a collaborative process and thus contributes to the performance of the entire organization. Several researchers have criticized transformational leadership theory from a performance standpoint (Andersen, 2015; Tourish, 2013). However, studies have confirmed that transformational leadership is more effective than other leadership styles with regard to the impact on employee behaviour (Banks et al., 2016; Braun et al., 2013; Deinertet al., 2015; Eberly et al., 2017).

The findings from participants indicate a need for leadership that adopts innovative approaches, creating an environment where employees feel empowered to take risks. Leaders should promote a culture that encourages and values ideas and transformative thinking.

A notable example of a transformative leader in telecommunications in Africa is Victor B. Lawrence, a professor at the Stevens Institute of Technology and former Vice President of Advanced Technologies at Bell Laboratories, who displayed visionary innovations, collaborative global initiative and commitment to global connectivity. Through his transformative leadership, he drove significant advancements that shaped modern digital communications (Rutgers University, 2025).

Literature supports the view that - unlike transactional leaders who focus on routine tasks and compliance - transformational leaders motivate employees to exceed expectations by encouraging a shared sense of purpose and innovation (Helmi & Sari, 2021).

Innovative Leadership:

The research findings reveal that leaders who encourage innovative leadership play an important role in enabling product innovation within telecommunications companies in Gauteng. Innovative leadership as defined by INTOO (2025), involves inspiring teams to think outside the box, take calculated risks, and develop groundbreaking solutions. This was reflected in the views of some participants that leaders who create an environment for sharing of ideas and learning from failure create a more agile and innovative environment. These leaders are characterized by their visionary thinking, open-mindedness, and willingness to challenge the status quo.

Strategic Leadership:

Strategic leadership is a practice in which executives, using different styles of management, develop a vision for their organization that enables it to adapt to or remain competitive in a changing economic and technological climate (TechTarget, 2023).

Participants emphasised that clear strategic direction and alignment across all levels of the organisation were important for successful innovation. Both innovation and strategic leadership were found to be critical enablers of ethical and sustainable innovation in telecommunications.

5.3 Discussion pertaining to Proposition 2

Proposition 2: Transformational leadership combined with ethical leadership is imperative for fostering sustainable innovation within telecommunications companies in Gauteng.

Research Question 2: How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes?

In addressing section 5.3, the discussion pertaining to Proposition 2 assumes that transformational leadership combined with ethical leadership is essential for sustainable innovation within telecommunications companies in Gauteng, and it is important to investigate how leaders incorporate ethical considerations into their product innovation process.

Ethics:

Ethics is the branch of philosophy that deals with moral principles. These principles are often divided into three categories:

1. What we should do;
2. What we should not do; and
3. What we ought to do (Geeksforgeeks, 2023).

The finding highlighted the need for robust ethical frameworks guided by internal company policies and governmental regulations. The frameworks provide a foundation for ethical decision-making in product innovation. For example, P1 noted the importance of being aware of company ethical standards, competition regulations, and broader regulatory standards applicable to areas where the companies operate.

The literature reviewed indicated that some African scientists and innovators regard ethics as a barrier to harnessing innovation and emerging technologies. Consequently, ethical considerations tend to be applied to a limited set of innovations (such as in medical research) and subsequently limited in comprehensive innovation across a wider STI spectrum.

Studies suggest that the ethical issues surrounding innovation often, and perhaps inevitably, receive attention after the fact. Tablets and smartphones provide two

such examples. More than a decade after their introduction, researchers, parents and psychologists warn about their excessive use—including dangers to youth mental health, to sleep patterns, and to societal cohesion (McCausland, 2023).

Participant 1 highlighted the need for leaders to encourage and promote ethical leadership in product innovation as a priority from the top that devolves downwards within the organisation. This view is supported by the literature which proposes that leadership is central to creating an innovative culture within an organisation.

Ethical Standards:

The findings indicate that ongoing training and education are necessary to maintain high ethical standards. Participants highlighted the need for regular compliance and workshop sessions to retain ethical considerations at the centre of employee thinking. Participants emphasised the need to uphold ethical standards, noting that ethics is about doing the right thing, ensuring there is no harm to customers and that profits do not come at the expense of customers. This view is supported by the literature. According to the Product-Led Alliance (2023), integrating ethical frameworks in product development addresses moral principles and values, focusing on user privacy, fairness, transparency, and social impact. This approach creates responsible sustainable products prioritizing user well-being and aligning with societal expectations, fostering trust and a more ethical telecommunications industry.

Findings suggest that telecommunucations companies in Gauteng must adhere to regulations such as the Protection of Data Act (POPIA) as well as guidelines from regulatory bodies such as the Independent Communications Authority of South Africa. Participants emphasised the need to follow regulations that govern or provide protection to customers. This is aligned to the position that ethical leadership is about doing the right thing.

An example of ethical leadership in telecommunications is that of Nokia being recognized as one of the World's Most Ethical Companies in 2023 by Ethisphere. Nokia's commitment to responsible innovation set a benchmark in the telecommunications industry and Nokia is one of only two companies in the telecommunications sector to receive this award (Nokia, 2023).

Ethical Considerations:

Ethical consideration refers to the process of evaluating the moral implications of a decision, action, or policy. It involves identifying, analysing, and addressing the potential ethical issues that may arise in various contexts, such as research, business, healthcare, technology, and public policy.

The goal of ethical consideration is to ensure that decisions and actions align with moral principles, values, and standards (Qualee n.d.). The findings indicate that there is a need to prioritize ethical considerations in the product development process. Various participants observed that ethical considerations are often not comprehensively incorporated into the product development process or product lifecycle. The findings emphasised the need for formal processes and forums to evaluate products against ethical considerations before they are launched into the market. Participant 4 noted the absence of clear processes on ethics in product innovation, proposing the need to define ethical considerations at the beginning of the process.

The views from the findings align with the literature reviewed. For example, an article from the Product-Led Alliance (2023) states that ethical considerations in product development go beyond legal compliance and profitability and encompass the moral responsibility of product teams to prioritize the well-being and rights of their users.

The Product-Led Alliance (2023) further notes that integrating ethical frameworks in product development addresses moral principles and values, focusing on user privacy, fairness, transparency, and social impact. This approach creates

responsible sustainable products prioritizing user well-being and aligning with societal expectations, promoting trust and a more ethical telecommunications industry.

An example of network operators that have incorporated ethical considerations into their product innovation process is Telecom Italia Mobile (TIM) which has a clear focus on ethical governance and sustainability. They have established a “TIM Ethics and Compliance” programme which includes the following measures for ethical conduct and sustainable innovation. They are involved in the development of 5G technology with strict assessments to ensure that user privacy and security are not compromised by their innovation (TIM S.p.A., 2020).

A South African example of the challenges in balancing ethics and product innovation in telecommunications companies is that of the “Please Call Me” Service Dispute: In 2000, Vodacom introduced the “Please Call Me” service, enabling users without airtime to send free callback requests. Nkosana Makate, a former Vodacom employee, claimed to have conceptualised the idea and in consequence sought compensation. Vodacom initially refused to pay such compensation which resulted in a protracted legal battle. In 2016, the Constitutional Court ruled in Makate’s favour, criticizing Vodacom’s conduct as dishonourable and unexpected from an ethical corporate entity (Labuschagne, 2024).

The rapid development and deployment of Artificial Intelligence (AI) also brings significant ethical challenges. Issues such as data privacy, algorithmic bias, lack of transparency, and the potential for misuse highlight the need for a careful and deliberate approach to AI innovation (ResearchGate, 2024).

Collaboration:

Collaborative leadership means working closely with all team members, regardless of their title or role. Under collaborative leadership, managers value employee contributions equally and make shared decisions (Kitch, 2024). The

findings of this research indicate that collaborative leadership plays a major role in promoting ethical product innovation within telecommunications companies in Gauteng. Participants emphasised the need for leaders to create a collaborative culture, with regular team meetings, dismantling a silo mentality within the different teams, and clear goal setting. The findings emphasised the need for ongoing team engagements and relationship building to maintain synergy within teams. These activities will support the process of attaining alignment with ethical standards. The findings thus emphasise the significance of collaborative leadership in integrating ethical considerations into the product innovation process within telecommunications.

5.3.1 Contrasting Perspectives on Role of Leadership in Innovation

While a substantial body of literature supports the view that leadership, mainly transformational leadership, is important for driving innovation, the findings from this study also revealed contrasting perspectives. Participants emphasised the need for innovative leaders to encourage creative thinking, risk taking, and experimentation. However, some scholars challenge the view that leadership alone drives innovation. They argue that other external factors such as market forces and chance discoveries can act as primary catalysts for innovation. For instance, the shift to remote work during the Covid-19 pandemic was largely driven by market conditions instead of strategic leadership decisions (Garcia-Murillo & Annabi, 2021).

Despite opposing views, the findings from the study indicate that the type of leadership remains central to the enablement of innovation within telecommunication companies. Transformational leadership appears to be well-suited to the fast-paced and complex environment of telecommunications.

Ethical Considerations:

Some participants noted that there is no ethical consideration within the product innovation process, but rather only legal aspects such as terms and conditions

are considered, and ethical considerations are addressed only at the end of a process when customer issues emerge.

Some African scientists and innovators regard ethics as a barrier to harnessing innovation and emerging technologies. Consequently, ethical considerations may be applied to a limited set of innovations which subsequently undermines the possibility of comprehensive innovation across a wider STI spectrum (NEPAD, 2021).

According to De Cremer and Kasparov (2021), restricting technical innovation unduly is not useful in the long term, and in particular it may fail to support the advancement of less resourced citizens where advances in technology can make a significant difference in their lives. They further argue that over-regulation should be guarded against as it may reach a point where it inhibits innovation. In other words, the justifiable concern that ethical failures may emerge should be balanced against the need for technological innovation and potential concerns on either side must be managed optimally.

In South Africa's telecommunications sector, examples of where regulatory frameworks and ethical principles have posed challenges to innovation can be provided. A significant case is the delayed introduction of SpaceX's Starlink satellite service due to licencing laws that require foreign companies to allocate 30% equity to Black owned business as part of the country's Black Economic Empowerment (BEE) policies.

Conclusion:

This chapter explores the complex interaction between leadership styles, mainly transformational leadership and ethical leadership, and how they influence ethical product innovation in telecommunications companies in Gauteng. The chapter reviews research questions and objectives, highlighting key themes and patterns that emerged from the data analysed in chapter 4.

The telecommunications industry in Gauteng is faced with a rapid increase in technology and innovation enhancements. These advances require leadership that will be agile enough to navigate and embrace the changes whilst upholding ethical standards within product innovation processes. The study's theoretical framework incorporates the main concepts, innovation, leadership and ethics theories. Research findings were considered in line with the research propositions formulated in chapter 2 of the study.

Proposition 1: Transformational and ethical leadership significantly impact the successful adoption and diffusion of ethical product innovation in telecommunications companies in Gauteng.

Research Question 1: How does leadership in telecommunications companies in Gauteng influence ethical product innovation?

Based on the study, the following themes and sub-themes emerged for Proposition 1.

Theme 1:

- **Leadership**

Leadership is fundamentally about influencing individuals to achieve common goals (Northouse, 2018). The study revealed that both transformational leadership and collaborative leadership styles are critical in promoting ethical product innovation within telecommunications companies in Gauteng.

Sub-Themes:

Leadership Qualities: The findings emphasized transformational leadership as the leadership style required to advance ethical product innovation.

Innovative Leadership: Innovative leaders motivate and inspire their teams to deliver. They encourage creative thinking and establish an environment for creativity and fresh thinking.

Strategic Leadership: Within telecommunications companies in Gauteng, strategic leaders are those who develop and communicate clear strategies to their teams, while also encouraging ethical behaviour and principles within the product innovation process.

Proposition 2: Transformational leadership combined with ethical leadership is necessary for promoting sustainable innovation within telecommunications companies in Gauteng.

Research Question 2: How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes?
Based on the study, the following themes and sub-themes emerged for Proposition 2.

Theme 2:

- **Collaboration:** Collaborative leadership was viewed by participants as a vital leadership quality to drive ethical product innovation. Participants emphasized the importance of a collaborative culture through regular team meetings and the need to dismantle a silo mentality within the different teams.

Theme 3:

- **Ethics:** Ethical leadership is the showcasing of normatively appropriate conduct with the help of interpersonal relationships and personal actions, employing two-way communication, reinforcement and decision-making to promote such conduct to followers (Lin, Yip, Ho & Sambasivan, 2020).

Sub-Themes:

Ethical Leadership: Findings highlighted the importance of ethical leadership in promoting and maintaining ethical behaviours within product innovation in telecommunications companies in Gauteng. Participants emphasised the need for robust ethical frameworks which are supported by internal policies and

government regulations. Participants noted the need for ongoing training and workshops to ensure that employees are fully trained in ethical and regulatory requirements and to ensure ethical standards are adhered to.

Ethical Standards and Considerations: Participants noted a gap in the product innovation process, in that ethical principles are not comprehensively integrated into the product innovation process. There is a need for a formal process to evaluate products against ethical standards before they are launched into the market.

Theme 4:

Compliance:

The findings indicate a need for telecommunications companies in Gauteng to comply with rules and regulations as set out by regulatory bodies such as the Independent Communications Authority of South Africa (ICASA).

Opposing Views:

Whilst the study emphasizes the positive impact of ethical leadership on product innovation, some participants observed that ethical principles were ignored or overlooked in the product innovation process with only legal aspects such as terms and conditions being taken into account. This oversight leads to ethical dilemmas post the product launches, necessitating actions from the organisations to address customer issues.

Furthermore, there is a view that stringent regulatory and ethical frameworks may hinder or impede innovation.

CHAPTER 6. CONCLUSIONS & RECOMMENDATIONS

6.1 Introduction

Ethical leadership plays a pivotal role in ethical product innovation within telecommunications companies in South Africa. The primary objective of this study was to investigate how leadership influences ethical product innovation with telecommunications in Gauteng. By implementing effective leadership styles, telecommunications companies can navigate ethical challenges, maintaining ethical principles whilst fostering innovation and contributing to sustainable development. Guided by theoretical frameworks of innovation, leadership and ethics theories, and utilising the qualitative approach, the study responded to research questions and objectives as provided in chapter 1. This study aimed to contribute positively to the development of ethical frameworks and strategies to support and enhance ethical product innovation within the telecommunications industry. The previous chapters prepared the foundation for the conclusions, providing a detailed understanding of the study.

Chapter 1 - Introduction: This chapter introduced the research problem, research objectives and significance of the study. The research aimed to investigate how leadership and ethical considerations influence ethical product innovation within telecommunications in South Africa.

Chapter 2 - Literature Review: The literature review explored theories that underpin the study, innovation, leadership and ethics theories. The literature highlighted existing studies on the role of leadership in promoting ethical considerations within product innovation processes, as well as the challenges and particularly ethical dilemmas emanating from technological advances. The literature review identified gaps mainly pertaining to the telecommunications industry in Gauteng which would be answered by the study. The main theories

underpinning this study are Innovations Theory; Transformational Leadership Theory; and Ethical Leadership Theory.

Chapter 3 - Research Methodology: This study employed a qualitative approach, with semi-structured interviews being undertaken with telecommunications professionals who are specialists in product development and innovation. The study used purposive sampling to select participants specifically with leadership experience and broad knowledge in product development and innovation. Data collection included semi-structured interviews, industry articles, and organizational policies. It applied thematic analysis to identify themes and insights for collected data. NVivo software was used to analyse the data into themes and structured coding.

Chapter 4 - Presentation of Findings: The main objective of this chapter was to present the findings and examine how leadership and ethical considerations influence product innovation within telecommunications companies in Gauteng. The chapter revealed various themes and sub-themes and patterns. Participants in the study shared challenges experienced within the product innovation process as these pertained to ethical considerations. The findings were linked to the theoretical framework concepts, innovation, leadership and ethics theories.

The central themes disclosed by this study are the following.

Leadership: The findings indicate that leadership plays a central role in fostering a culture of innovation within telecommunications companies in Gauteng. The responses from participants were mostly about creating an environment for ideas and risk taking. The participants mentioned Transformational leadership as the preferred leadership style that drives innovation. Aligned with Transformational leadership theory, Asbari et al. (2020) argues that transformational leadership binds leaders and followers in a collaborative process and thus contributes to the performance of the entire organization.

Collaboration: Participants emphasised collaborative leadership as an important leadership quality to drive a culture of innovation and ideas.

Ethics & Compliance: Telecommunications companies in Gauteng experience various ethical challenges such as consumer trust, data privacy, and transparency. Examples included the well-known “Please Call Me” Service Dispute which continues as a judicial process.

Several participants highlighted the need to develop robust ethical principles. Aligned with ethics theory, Weiss (2021) argues that cultivating virtues such as honesty, integrity, and fairness can lead to more ethical decision-making and sustainable business practices.

6.2 Conclusions Regarding Research Question 1

Research Question 1 sought to investigate how leadership in telecommunications companies in Gauteng impact ethical product innovation.

RQ1: How does leadership in telecommunications companies in Gauteng influence ethical product innovation?

The findings, based on participant responses, indicate that the combination of transformational and ethical leadership plays a pivotal role in a culture of innovation within telecommunications companies. Leaders who motivate and inspire their teams, encourage cross-functional collaboration and uphold ethical decision-making were seen to create an environment for successful innovation. This aligns with Transformational Leadership Theory whereby leaders motivate followers to align with the organisation’s aims and interests to achieve performance that exceeds expectations (Grošelj et al., 2021). The ethical aspects further reinforce integrity and trust, which participants noted as being essential to sustaining innovation.

The findings further emphasised ethical leadership, where ethical principles are promoted and practiced. These findings support Ethical Leadership Theory which

focuses on how leaders set ethical standards, model ethical behaviour, and enforce accountability within organizations. Ethical leaders prioritize fairness, responsibility, and integrity in decision-making (Brown & Treviño, 2006).

Participants noted the importance of balancing the interests of different stakeholders in the innovation process, such as taking into consideration employees, customers and regulatory bodies, amongst others, whilst maintaining ethical standards.

However, this study identified opposing views which argued that too much regulation will stifle innovation. According to De Cremer and Kasparov (2021), overly restricting technological innovation will ultimately result in reduced advantages for those groups in society who are most in need of advances in technology that can contribute to improvements in their lives. A balance was thus required between the need for technological innovation as well as the necessary ethical assurances.

Based on these findings, this study responded to Research Question 1: “How does leadership in telecommunications companies in Gauteng influence ethical product innovation?” It identified gaps in product innovation processes within telecommunications companies in Gauteng, suggesting that leadership in telecommunications in Gauteng should consider the application of best practices to ensure that product innovation is implemented soundly and sustainably.

Conclusions Regarding Research Question 2:

Research Question 2 sought to investigate how leaders in telecommunications companies in Gauteng incorporate ethical considerations into their product innovation processes.

RQ2: How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into product innovation processes?

Findings highlighted critical leadership qualities required in telecommunications companies in Gauteng, noting that leadership that personifies clear ethical principles is necessary for driving responsible innovation. Participants emphasised the need for leaders to balance innovation with ethical principles to ensure technological advancements and product launches are implemented responsibly. Participants highlighted that collaborative leadership is essential in creating an environment and culture of innovation.

Findings further indicate that ethical considerations should be embedded in the product development process from the outset. Questions about ethical considerations should be posed from the start of an innovation process, through every stage of the lifecycle, and through engaging diverse stakeholders to identify blind spots and potential pitfalls.

Participants alluded to the need to establish forums and meetings to continually engage on issues within product innovation. This study noted the importance of stakeholder consultation and compliance with industry regulations, as aligned to the Stakeholder Theory (Dmytriyev et al., 2021), who explains that stakeholder theorists see strategic management as managing social relationships, where strategy is about building fair and durable relationships with the firm's stakeholders that are essential to value creation.

However, based on participant responses, the study also indicates that ethical considerations are often only considered at the end of a process when there are customer queries. Participants noted the dangers of harm to customers, citing examples of usage becoming addictive, as well as privacy issues. Such issues could be addressed by incorporating ethical considerations at the beginning of product innovation processes. This aligns with the Ethical Leadership Theory which focuses on how leaders set ethical standards, model ethical behaviour, and enforce accountability within organizations. Ethical leaders prioritize fairness, responsibility, and integrity in decision-making (Brown & Treviño, 2006).

A notable example where ethical concerns were raised is in Nigeria where the Federal Competition and Consumer Protection Commission warned MTN Nigeria, Airtel and Glow against unfair practices that had been raised by consumers (Technext, 2025). The FCCPC is calling for accountability from Telcos. Operators are now required to disclose all information upfront, including the cost, validity period, and the specific inclusions of a plan. Consumers can also expect a mandatory disclosure table from their service providers, enabling them to make informed decisions without experiencing concerns about unexpected charges or surprises. Based on these findings the study indicates that while leaders in telecommunications companies in Gauteng acknowledge the importance of ethical considerations, there are inconsistencies in their application of the relevant frameworks.

This study identified gaps in product innovation within telecommunications companies in Gauteng, specifically pertaining to the incorporation of ethical considerations in innovation processes. Participant 4 noted the absence of clear processes on ethics in product innovation, suggesting the need to define ethical considerations at the beginning of the process.

An example indicating challenges that a Network Operator in the Southern African Development Community (SADC) experienced when seeking to balance innovation with adherence to ethical principles and regulatory requirements is that of Vodacom Lesotho. In 2020 it was faced with significant regulatory actions due to non-compliance with licensing regulations and consumer protection laws. The Lesotho Communications Authority (LCA) imposed a fine of M134 million on Vodacom Lesotho for violations occurring since 2016, including issues related to network infrastructure and failure to appoint independent auditors between 2015 and 2019 (Lesotho Communications Authority, 2020).

Based on the findings, the study adequately answered Research Question 2, “How do leaders in telecommunications companies in Gauteng incorporate ethical considerations into their product innovation processes?”

This study showed that while some leaders in telecommunications companies in Gauteng acknowledge ethical considerations in product innovation which is reflected in policies such as the Protection of Personal Information Act (POPI) and regulatory compliance frameworks, there are no formal processes governing ethical considerations and no appropriate frameworks in place. Findings indicate that ethical considerations are an afterthought often considered during customer disputes. Therefore, based on the findings, leadership in telecommunications in Gauteng needs to apply best practices, and incorporate standardized ethical guidelines to ensure that product innovations are implemented soundly and sustainably.

6.3 Recommendations

This chapter presents recommendations based on the findings of the study concerning the interactions between innovation, leadership, and ethics within telecommunications companies in Gauteng. These recommendations seek to provide insights to the telecommunications industry leaders including executives and thought leaders, chief executive officers, chief technical officers, and policy makers such as government agencies, regulatory bodies and industry associations. Various regulatory bodies in South Africa influence telecommunications policy, including, but not limited to, the Independent Communications Authority of South Africa (ICASA), the Competition Commission of South Africa; and the Department of Communications and Digital Technologies (DCDT).

These recommendations are informed by the study's main research question: "How does leadership impact ethical product innovation within telecommunications companies in Gauteng?" It employs three theoretical frameworks to investigate the relationship between innovation, leadership, and ethics in telecommunications companies in Gauteng. These theories are reiterated below:

1. **Innovation Leadership Theory:** Rogers (1962) described the Diffusion of Innovations Theory as a theory used to understand how new innovations, products and services are introduced into the market, adopted, and diffused within the telecommunications space.
2. **Transformational Leadership Theory:** Burns (1978) described Transformational Leadership as a process where “leaders and their followers raise one another to higher levels of morality and motivation”.
3. **Ethical Leadership Theory:** This theory focuses on how leaders set ethical standards, model ethical behaviour, and enforce accountability within organizations.

This study’s recommendations focus on the following areas:

Fostering a Culture of Responsible Ethical and Sustainable innovation:
Findings indicate that there is inconsistency in the application of ethical principles within innovation processes in telecommunications companies in Gauteng. Participants highlighted the need to have robust ethical frameworks to guide the innovation process, and indicated a need to ensure that ethical considerations are incorporated at the beginning of the innovation process and not at the end. Leaders must ensure that product innovation aligns with societal and regulatory standards. Leadership must encourage accountability across all areas in their organizations.

According to Telecom Review (2023), with technological advancements, it is important to prioritize ethical considerations in the development and deployment of technology. This involves ensuring privacy protection, data security and transparency in how technology operates. Ethical frameworks and guidelines can be established to guide the decision-making process.

Strengthening Ethical Leadership within the Innovation Process:

The findings indicate that ethical leadership is central to fostering ethical innovation within telecommunications companies in Gauteng. Leaders such as chief executive officers and senior executives in telecommunications must model ethical behaviour. Leaders must ensure that ethical considerations form part of the Performance Metrics, and that they include ethical key performance indicators (KPIs) in performance evaluations. Leaders must ensure regular ethics training for both employees and leadership to ensure responsible product innovation.

Compliance and Stakeholder Engagement:

Leaders in telecommunications companies in Gauteng are required to establish robust regulatory and ethical frameworks to guide the innovation process. The study reveals that there is compliance with regulatory standards through legal compliance such as terms and conditions and regulatory engagements. However, the study notes that there is a gap in ethical considerations as there is no structured framework that guides the innovation process.

According to McKinsey (2023), Responsible AI (RAI) frameworks are not only essential for maintaining consumer trust and safeguarding sensitive data but also for ensuring compliance with regulatory standards. They further argue that RAI is not merely an ethical exercise but a business imperative for telecommunications companies.

6.4 Significance of the Research

This study investigated how leadership influences ethical product innovation within telecommunications companies in Gauteng. Ethical leadership is critical in driving ethical product innovation within telecommunications companies. Understanding the interactions between ethical product innovation and leadership is necessary to promote the culture of ethical innovation within telecommunications. This study is supported by three theoretical frameworks

which are Innovation Leadership Theory, Transformational Leadership Theory, and Ethical Leadership Theory.

The following are thestakeholders who are likely to benefit from this study.

- **Academic Contribution**

This study contributes to the body of knowledge on Innovation, Leadership and Ethics and their integration within the telecommunications industry. It offers rich contextual insights from lived experiences and perceptions of leaders in telecommunications. Existing studies have investigated these concepts, mostly done individually. However, this study identified a gap in the three concepts that collectively impact product innovation in telecommunications. The findings will further improve on the three theoretical frameworks.

- **Telecommunications Industry**

This study offers insights for leaders in telecommunications companies in Gauteng who could benefit from the study's insights on the role of ethical leadership in driving ethical product innovation. This finding can assist leaders and executives in telecommunications to build strategies that will balance competitive advantage with ethical considerations. It could assist leaders to understand the impact of ethical leadership, particularly ethical decision-making in ensuring responsible ethical innovation. It could assist leaders to improve on corporate policies and governance on ethical considerations in product innovation. There is currently limited qualitative research, specifically on leadership and ethics in product innovation, as most existing studies focus on themes such as leadership and digital transformation, innovation management, or corporate ethics.

- **Regulatory Bodies**

The findings will assist policy makers in the development of policies and corporate governance. Organisations can draw on insights to enhance their regulatory and ethical guidelines. Furthermore, regulatory bodies can leverage this study to

enhance industry standards and ensure telecommunications companies comply with ethical innovation practices. Stakeholder theory reinforces the importance of incorporating ethical considerations into policymaking to address the interests of employees, consumers, and the broader society (Lange & Bundy, 2018).

- **Consumers**

Ethical leadership in product innovation not only impacts corporate spaces but has major impact on communities and consumers. Within telecommunications organizations, employees benefit from ethical workplace culture which leads to innovation and productivity. On the other hand, consumers benefit from innovative products that have followed ethical product innovation. This means that customers benefit from reliable, high-quality products that meet their needs while also upholding ethical standards. Findings indicate that the innovation process should benefit customers and not prejudice them. Issues of privacy, data protection and trust should be addressed through ethical innovation processes. Fairness and transparency will strengthen consumer trust and brand trust and loyalty.

6.5 Suggestions for further research

This research provides insights into the role of leadership in influencing ethical product innovation in telecommunications companies in Gauteng. Further research is necessary in order to amplify its findings. Such research could explore the following areas:

- A comparative analysis between the telecommunications industry and other industries to determine if there are sector-specific ethical challenges.
- The impact of digital transformation and new technologies in influencing ethical leadership practices in innovation.
- A combination of quantitative studies and qualitative insights to provide statistical validation of the study's findings.

6.6 Limitations of the Study

Though the research provides valuable insights into the role of leadership in influencing ethical product innovation, there were some limitations. Firstly, the study's focus was on telecommunications companies in Gauteng. These may limit the generalisation to other industries or regions. The study relied on participant perspectives, which could bring an element of subjective bias to the study. In addition, the sample size was relatively small with only eleven (11) participants interviewed. Thus, while the data provided valuable qualitative data, it may not fully represent the diverse broader dynamic within telecommunications companies in Gauteng.

6.7 Conclusion

This chapter provides the conclusions of this study after indicating key findings, limitations and recommendations. The study reveals the pivotal role of leadership and ethics in influencing product innovation within telecommunications companies in Gauteng. It contributes to both industry best practice and policy development and provides an understanding of how ethical leadership can promote sustainable innovation within the telecommunications industry. As the industry continues to experience technological progress with new technologies such as 5G, IoT and digital transformation, ethical leadership will attain greater importance. Telecommunications companies who prioritize ethical considerations within their innovation processes and strategies are most likely to achieve long-term sustainable growth. This study was underpinned by three concepts: Innovation. Leadership, and Ethical Theories, and it emphasizes the significant role of leadership and ethics in driving sustainable product innovation in telecommunications companies in Gauteng.

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APPENDICES

APPENDIX A - PARTICIPANT INFORMATION SHEET

Participant Information Sheet (PIS)

Dear Sir/Madam

My name is Mildred Manka. I am a student of master's in management in the field of Digital Business at the University of the Witwatersrand, Johannesburg. My supervisor is Dr Manamela Matshabaphala. I am conducting a research study on the impact of Leadership on ethical Innovation. The study title is Leadership Through Ethical Innovation in Telecommunications Companies in Gauteng.

I am inviting you to take part in an interview questionnaire. If you decide to take part, your participation in this research study will last about an hour. The interview/research activity will take place at the agreed venue or alternative venue.

With your permission, I would like to audio record the interview. The interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below.

Yours sincerely,

Researcher:

Mildred Manaka, 9004108f@students.ac.za

Mobile (+27) 0832128669

APPENDIX B - CONSENT FORM

Title of project: Leadership Through Ethical Innovation in Telecommunications Companies in Gauteng

Name of researcher: Mildred Manaka

Student Number: 9004108F

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

(Please circle the relevant options below)

I agree with the following:

I agree that my details will be kept confidential. YES/NO
I agree that my identity will be kept confidential.
I agree that the interview may be audio recorded. YES/NO
I agree that quotes from my interview may be used by the researcher in their research report. YES/NO

…… (signature)
…… (name of participant)
…… (date)

…… (signature)
…… (name of researcher/person seeking consent)
…… (date)

APPENDIX C - INSTRUMENT

INTERVIEW GUIDE

Questions:

1. Demographic Information

- Age
- Gender
- Job Title
- Years of Experience in Telecommunications
- Company Size

2. Leadership Styles

- **How would you describe the leadership style within your organization?**
  - a) Transactional
  - b) Transformational
  - c) Servant leadership
  - d) Other (Please specify)
- In your opinion, what leadership qualities are most important for promoting innovation within the telecommunications? –
- How do you motivated your teams to engage in innovative practices?
- How do you encourage collaboration among different departments for innovative product development?

3. Ethical Considerations in Product Innovation

- **How important is ethical behaviour in your innovation process?**
  - a) **Very important**
  - b) Moderately important
  - c) Neutral
  - d) Not important
- What measures do you take to ensure that product innovation adheres to ethical principles?

- Have you ever faced a situation where an idea was rejected due to ethical challenges? If yes, please elaborate.

4. Challenges in Ethical Product Innovation

- What are the key challenges you experience in promoting ethical innovation within your organization?
- How do you manage potential conflicts between business goals and maintaining ethical standards in product development?

5. Leadership Role in fostering Ethical Innovation

- How do you influence the ethical behaviour of your team in product innovation?
- What policies or guidelines do you have in place to ensure ethical considerations are integrated into the innovation process?
- Do you provide training for awareness about the importance of ethical innovation?

6. Impact of Ethical Leadership on Innovation

- Can you provide an example/s of a new product where ethical leadership was influential?
- Does ethics inhibit or enhance innovation? Please explain.

7. Future View on Ethical Product Innovation

- Do you see the role of ethics in the future of telecommunications product innovation in South Africa?
- Any ideas you would like to share about the role of leadership and ethics in product innovation within the telecommunications sector?

APPENDIX D - ETHICS APPROVAL

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

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

Ethics Clearance Certificate

Ethics protocol number: WBS/DB9004108f/802
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

This certificate is only valid if accompanied by formal permission from the relevant stakeholder(s).

Project title	Leadership through ethical innovation in telecommunications companies in Gauteng
Investigator / Researcher	Ms Mildred Manaka
Nature of Project	MM (Digital Business)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed confidentialty.
Issue Date of Certificate	23/10/2024
Expiry date	Date of submission of the project / research report
Chairperson	Dr Ayanda Magida ☎ +27 11 717 3953 ✉ ayanda.magida@wits.ac.za

Declaration by Researcher

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

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

Mmanaka — Signature

25/10/2024 — Date: