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IT Governance Disclosures of South African Telecommunications Companies

by

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ABSTRACT

The South African telecommunications industry has been experiencing constant transformation as a result of ongoing developments in technology. Over the years, the top telecommunications companies have invested billions into information technology (IT) infrastructure in order to expand their portfolios to meet the growing demands of a digital hungry society. Considering the nature of their business activities and their heavy reliance on IT, telecommunications companies are exposed to significant IT governance issues which may affect the sustainability of their business activities. In order to effectively address these issues, the governing bodies need to ensure that strong IT governance is implemented. Governing bodies also need to communicate these issues to external stakeholders, who require such information to make informed assessments of the companies’ operations.

The disclosure of IT governance information is, according to King IV, a regulated requirement for JSE-listed companies. However, it is unclear whether these IT governance disclosure requirements are sufficient to satisfy stakeholder expectations. This study evaluates the IT governance disclosures of the top three telecommunications companies according to the stipulations of King IV. It also benchmarks these disclosures against the five IT governance focus areas and stakeholder values (Strategic Alignment, Value Delivery, Risk Management, Resource Management and Performance Management) established by the IT Governance Institute (ITGI) and the Information Systems Audit and Control Association (ISACA). This comparison aims to determine whether the King IV IT governance disclosures are sufficient to satisfy stakeholder expectations. The results were gathered by analysing the annual integrated reports of the top three telecommunications companies.

The results of the study revealed that none of the top three selected telecommunications companies were fully compliant with the IT governance disclosure requirements of King IV. The findings did confirm, however, that the IT governance requirements of King IV were aligned to the five IT governance focus areas and to stakeholder values in terms of the ITGI and ISACA. Companies needing clarity on specific items of disclosure may therefore refer to the five IT governance focus areas and stakeholder values by the ITGI and ISACA.
Keywords: Governance, IT governance, IT governance disclosures, King IV, telecommunications companies.
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<thead>
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<th>Description</th>
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<tbody>
<tr>
<td>CIO</td>
<td>Chief Information Officer</td>
</tr>
<tr>
<td>COBIT</td>
<td>Control Objectives for Information and Related Technology</td>
</tr>
<tr>
<td>ICASA</td>
<td>Independent Communications Authority of South Africa</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communications Technology</td>
</tr>
<tr>
<td>IoDSA</td>
<td>Institute of Directors of Southern Africa</td>
</tr>
<tr>
<td>ISACA</td>
<td>Information Systems Audit and Control Association</td>
</tr>
<tr>
<td>ISO/IEC</td>
<td>International Organization for Standardization and International Electrotechnical Commission</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>ITGI</td>
<td>IT Governance Institute</td>
</tr>
<tr>
<td>ITIL</td>
<td>Information Technology Infrastructure Library</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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</tbody>
</table>
CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Over the years, Information Technology (hereafter IT) has emerged as the backbone of businesses to the point where it would be inconceivable for many to operate without it. IT has grown from a mere backroom support function to an imperative strategic enabler, often at the top of boardroom agendas (Hamidovic, 2010).

IT is regarded as critical to the transformation and sustainability of business processes. Most companies across all sectors of industry, commerce and government are primarily reliant on IT and continue to invest heavily towards the improvement of IT infrastructure in order to keep up with ever-advancing trends (Kappelman, Johnson, McLean & Gerhart, 2014; Sevrani, Kordha & Gorica, 2011). A recent report by Gartner projected global IT spending totalling R43 trillion in 2017 – a 2.7% increase from 2016 (Stamford, 2017). Locally, South Africa’s total IT expenditure was projected to increase from R337 billion in 2016 to R352 billion in 2017 (Malinga, 2017). The majority of this growth is spurred by business enterprises influenced by recent trends such as cloud computing, blockchain, digital business and artificial intelligence (Stamford, 2017).

The local telecommunications industry is a typical example of a sector influenced by the continuous developments in IT. It is a large contributor to the rising spend on IT as leading companies such as Vodacom, MTN, Cell C and Telkom all try to keep up with a growing digital society (GSMA Intelligence, 2016). According to the Independent Communications Authority of South Africa (hereafter, ICASA) (2017a), total telecommunications investments increased by 18% in 2016. This total is expected to multiply over the next three years as companies continue to invest in IT infrastructure (Ericsson, 2016). While many of these companies recognise the potential benefits of IT and as the speed of adoption continues to accelerate, South African telecommunications companies have been posed with many IT-related governance and risk challenges which have drawn the attention of key stakeholders. Firstly, mobile data tariffs in the country remain some of the most expensive when compared to other countries across the world (Nhlapo, 2017). This has prompted public outcry as many researchers and consumer activists argue that the high data tariffs are to the detriment
of South African low-income households (Gilbert, 2018). South African consumers are calling for government and the market regulator ICASA to protect them against distortion by regulating data tariffs. They are also calling for overall transparency from telecommunications companies on data charges, in- and out-of-bundle rates and the reasons why data is so expensive in the country (Gilbert, 2018). Both government and ICASA have since responded to public concerns and have launched investigations into telecommunications companies to determine the reason for expensive data tariffs in South Africa. Investigations have since revealed that the lack of spectrum and high operating costs of IT infrastructure are the reason for the high data tariffs (Gilbert, 2018).

The second issue posing a challenge to telecommunications companies are the risks associated with new technologies and their pervasive nature. Risks such as cybersecurity, large and ineffective capital expenditures, data governance and the constant developments in regulatory compliance all have a significant impact on telecommunication companies and their ability to create value. For this reason, these issues deserve critical attention from governing bodies (BDO, 2015; KPMG, 2016).

Vizcayno (2012) states that telecommunications networks are inseparable from social interactions and critical worldwide infrastructure. It is therefore important to protect them from malicious attacks which may lead to the unavailability or corruption of network services, applications and critical business functions. Failure to appease stakeholders by adequately addressing these issues puts telecommunications companies in a position where they could face negative consequences such as financial loss, reputational damage, loss of customer confidence and legal actions and fines from government and regulatory bodies (Atanga, 2017; Vizcayno, 2012).

In order to respond effectively to these risks, BDO (2015) suggests that governing bodies across all telecommunications companies need to ensure they have sound risk management and governance processes. Governing bodies also need to maintain a relationship of trust amongst themselves and stakeholders by addressing these issues in their annual integrated reports as this will afford stakeholders the opportunity to make informed assessments regarding the companies’ governance of IT-related activities (Ngwenya, 2015).
The adoption of sound IT governance practices can assist governing bodies in the effective discharge of their IT-related responsibilities. It can also help governing bodies in improving communication and building trust amongst key stakeholders by means of disclosure (De Haes, Joshi, Huygh & Jansen, 2016).

IT governance has an important role in the success of a company’s IT projects. It provides direction and control, ensuring that important investments in IT add value to the enterprise, that IT resources are used responsibly and that related risks are mitigated (ITGI, 2009). A good IT governance framework is also important in developing trust and transparency among stakeholders, it offers a better approach to deliver results through IT projects and ensures the appropriate use of IT, in alignment with business priorities (de Souza Bermejo, Tonelli, Zamalde, de Brito & Tedesco, 2012).

Whilst previously largely overlooked by governing bodies, the rise of digitised business and the serious consequences inherent in such ventures call for increased governing body participation in IT governance in order to ensure that IT sustains and extends the company’s strategies and objectives (Antwerp Management School, 2016; Deloitte, 2013). Governing bodies are now required to develop a greater understanding of IT and its impact on the company and society in order to direct and control IT investments and ensure compliance with regulatory and legislative requirements. Moreover, stakeholders also require enhanced accountability and transparency on IT-related matters, calling for governing bodies to disclose how IT assets are governed in their integrated reports (Antwerp Management School, 2016).

According to various researchers, the topic of transparency in IT governance has received little attention from both business and researchers. This is particularly surprising given the significance of IT-related activities and expenses and the potential economic benefits associated with disclosure practices (De Haes et al., 2016; Joshi, Bollen & Hassink, 2013; Kim & Lim, 2011). Attempting to explain the possible reasons for the lack of IT governance disclosures, Ally (2016), Joshi et al. (2013) and Ngwenya (2015) attribute the problem to inadequate guidance given to companies on what to disclose with regards to their IT activities.
The disclosure of information on IT-related matters is largely voluntary, and as such, most global company disclosures of IT governance do not subscribe to any standardised or compulsory reporting framework (Joshi et al., 2013). While transparency is a prevalent theme across many international best practice frameworks for IT governance, including the Control Objectives for Information and Related Technology (hereafter COBIT) and the Board Briefing of IT Governance 2nd Edition, these frameworks do not provide specific guidance in terms of what companies need to disclose pertaining to IT in order to satisfy stakeholder expectations (ITGI, 2003; ISACA, 2012). Nonetheless, in the Board Briefing for IT Governance 2nd Edition, the IT Governance Institute (hereafter ITGI) and the Information Systems Audit and Control Association (hereafter ISACA) do identify five critical IT governance focus areas that are of value to stakeholders (ITGI, 2003). These five focus areas and stakeholder values are (i) Strategic Alignment, (ii) Value Delivery, (iii) Risk Management, (iv) Resource Management and (v) Performance Measurement. According to Joshi et al. (2013), it is important for companies to report on each of these focus areas in order to enable stakeholders to evaluate the extent to which their expectations pertaining to IT governance are being met by company practices.

In an effort to promote transparency of IT governance, some countries, including South Africa, have regulated IT governance disclosures in large companies (Ngwenya, 2015). The King Reports on Corporate Governance and the King Codes of Corporate Governance regulate IT governance practices and disclosures in South African listed companies. They require companies to comply with the codes, which are included in the reports, by disclosing their application of the recommended IT governance practices in their annual integrated reports (Ally, 2016). The King Reports on Corporate Governance also provide a framework for corporate governance best practice to non-listed companies, regardless of their size and nature, which can adopt the reports on a voluntary basis (IoDSA, 2009).

The King Code of Governance for South Africa 2009 (hereafter King III) was the first report on corporate governance to provide extensive guidance on IT governance practices (Giles, 2009). The code also provides disclosure items for IT governance, however, research conducted by Ally (2016) and Ngwenya (2015) on IT governance disclosures in the top four financial institutions and the top 40 companies listed on the
Johannesburg Securities Exchange (hereafter JSE) proves that the code did not provide comprehensive guidance to simplify such disclosures. This consequently resulted in companies treating disclosure as a mindless exercise and failing to disclose critical, IT-related information (Ally, 2016).

The King IV Report on Corporate Governance for South Africa (hereafter King IV) was introduced in 2016, effectively replacing King III from financial years commencing on or after 1 April 2017. King IV aims to address such shortcomings with the introduction of targeted disclosure requirements for comprehensive reporting on all governance aspects, including IT governance (IoDSA, 2016). It is unclear whether King IV will improve IT governance disclosures in South African companies or whether such disclosures will be sufficient to meet the expectations of stakeholders as no study has been conducted to prove this.

This study builds on the research of Ally (2016) and Ngwenya (2015) by adding to the subject matter of IT governance disclosures in South African companies. The South African telecommunications companies were chosen as no specific focus has been given to the industry in prior research. Given the influence of IT on telecommunications companies and inherent IT governance concerns that have drawn stakeholder attention, it is important to assess the companies’ commitment to transparency by evaluating the extent to which they comply and conform to the King IV IT governance disclosure practices. It is also important to determine whether such disclosures are sufficient to satisfy stakeholder expectations.

1.2 PROBLEM STATEMENT

The purpose of this research is to build on existing studies by Ally (2016) and Ngwenya (2015) by evaluating the extent to which South African telecommunication companies comply with targeted IT governance disclosure practices of King IV. The study also benchmarks the current King IV IT governance disclosures to the five IT governance focus areas and stakeholder values identified by the ITGI and ISACA (Strategic Alignment, Value Delivery, Risk Management, Resource Management and Performance Measurement) in order to determine whether they are sufficient to satisfy the new targeted disclosures and stakeholder expectations.
1.3 RESEARCH OBJECTIVES

The primary objective of this study is to evaluate the extent of South African telecommunications companies’ IT governance disclosures according to King IV and to benchmark current disclosures to the five IT governance focus areas by the ITGI and ISACA in order determine whether they are sufficient to satisfy stakeholder expectations. This primary objective will be achieved through the following secondary objectives:

- Establishing the importance of good corporate governance (Chapter 2);
- Establishing the importance of IT governance (Chapter 2);
- Establishing the need for IT governance disclosures in South African telecommunications companies (Chapter 2);
- Evaluating the extent to which the top three telecommunications companies listed on the JSE comply with the IT governance targeted disclosure requirements of King IV (Chapter 4);
- Benchmarking current IT governance disclosures by the top three telecommunications companies listed on the JSE to the five IT governance focus areas and stakeholder values provided by the ITGI and ISACA (Chapter 4).

1.4 SCOPE AND LIMITATIONS

The following limitations are placed on the study:

- The scope is limited to the IT disclosures of South African telecommunications companies given the increasing adoption of IT in their organisations.
- The study only analyses existing literature as well as data collected according to the research design and methodology.
- Currently, there are four top telecommunications companies in South Africa, namely, Vodacom, MTN, Cell C and Telkom. Of the top four companies mentioned above, only three are JSE-listed entities (Vodacom, MTN and Telkom), while Cell C is a privately-owned company. Cell C’s information is therefore not available for public perusal or scrutiny. As a result, the data collected will only be from the top three telecommunications companies listed...
on the JSE in South Africa, namely, Vodacom, MTN and Telkom, and generalisations are made accordingly.

- The empirical study uses 2017 annual integrated reports as these were the latest available reports at the time when the study was conducted.
- King IV came into effect for financial years commencing on or after 1 April 2017, as such the financial year ends of the top three telecommunications companies selected was instrumental in whether they were compliant with King III or King IV.
- Due to the fact that the study only uses publicly available documents, no enquires could be made in instances where the top three telecommunications companies listed on the JSE did not comply with King IV.

1.5 CHAPTER OUTLINE

This research consists of five chapters, outlined as follows:

Chapter 1: Introduction

Chapter 1 introduces the area of interest of the study, namely, the subject of IT governance. The chapter provides a background to the study and identifies the research problem. The chapter further provides insight into the research objectives, motivations for the study and its scope and limitations.

Chapter 2: Literature Review

The purpose of the literature review is to inform readers of recent developments on the subject at hand. The review begins by discussing the concepts of corporate governance in order to establish IT governance as an important component of good corporate governance. The research then goes on to discuss IT governance, with strong emphasis on the need for IT governance disclosures. Lastly, recent developments in the South African telecommunications companies are discussed in order to establish the need for IT governance and IT governance disclosures in companies.

Chapter 3: Research Design and Methodology
Chapter 3 provides an outline of the research design, approach and methodology adopted to achieve the research objectives. This includes a step-by-step explanation of the research process to evaluate the extent of IT governance disclosures in South African telecommunications companies’ annual integrated reports.

Chapter 4: Empirical Study and Research Findings

This chapter evaluates the extent of IT governance disclosures in the annual integrated reports of the top telecommunications companies. Current IT governance disclosures according to King IV will also be benchmarked to a framework based on the five IT governance focus areas and stakeholder values by the ITGI and ISACA in order to determine whether they are sufficient to satisfy stakeholder expectations.

Chapter 5: Conclusion

The last chapter of this study summarises the key findings of the research obtained through the literature review and empirical study. Thereafter, the chapter draws conclusions and suggests areas for future research.

1.6 CONCLUSION

The purpose of this chapter was to introduce the researcher’s general area of interest, namely, the subject of IT governance. The chapter provided a background to the study and identified the research problem, which is to evaluate the extent of South African telecommunications companies’ IT governance disclosures according to King IV and to benchmark current disclosures to the five IT governance focus areas put forward by the ITGI and ISACA to determine whether they are sufficient to satisfy stakeholder expectations. The chapter further provided insight into the research objectives, scope and limitations of the study.

The following chapter outlines recent developments in the field of IT governance. Its main purpose is to establish the credibility of the research and justify the need and relevance of IT governance disclosures in South African telecommunications companies.
CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of the literature review is to inform readers of recent developments in IT governance and IT governance disclosures, establish the credibility of the researcher, and to argue the need and relevance of the study. The review begins by introducing the importance of good corporate governance by discussing various definitions and characteristics of good corporate governance and recent developments on the subject matter in South Africa. The review then identifies IT governance as an inseparable component of corporate governance, providing various definitions, identifying the characteristics of good IT governance and discussing frameworks for IT governance best practice with an emphasis on the need for IT governance disclosures. The review will end by discussing recent IT-related developments in the telecommunications industry in order to establish the need for good IT governance and IT governance disclosures in the companies.

2.2 THE IMPORTANCE OF GOOD CORPORATE GOVERNANCE

2.2.1 Definition of Corporate Governance

The Cadbury Committee define corporate governance as “the system by which companies are directed and controlled” (The Committee on the Financial Aspects of Corporate Governance, 1992:18). This definition has evolved over the years, with various contributors to corporate governance literature expanding it to the following:

“a set of responsibilities and practices exercised by the board and executive management with the goal of providing strategic direction, ensuring that objectives are achieved, ascertaining that risks are managed appropriately and verifying that the enterprise’s resources are used responsibly.” (ITGI 2003:6).

“The exercise of ethical and effective leadership by the governing body towards the achievement of the following governance outcomes: ethical culture, good performance, effective control and legitimacy” (IoDSA, 2016:11).
For the purpose of this study and based on the definitions provided above, corporate governance is defined as:

*A set of responsibilities and practices instituted by the governing body in order to ensure a company achieves its strategic objectives while remaining sustainable.*

### 2.2.2 Characteristics of good corporate governance

Historically, corporate governance only focused on the relationship between governing bodies, shareholders and management. Its main objective was to address agency conflicts and ensure that the agents deployed by the owners of business organisations managed organisations in a way that served the best interests of the shareholders (Panda & Leepsa, 2017). However, as a result of increased stakeholder interests, and regulatory developments, the concept of corporate governance has evolved to become more inclusive in nature, taking into account the rights of all stakeholders involved in the corporate wealth creation process. Additionally, corporate governance addresses issues relating to ethics, accountability, transparency and disclosures as well as organisations' social and environmental impact (IoDSA, 2009; Raemaekers, 2014).

The Organisation for Economic Co-operation and Development (hereafter OECD) (2015) states that effective corporate governance is meant to guide those charged with governance in their decision-making processes in order to create sustainable, long-term value through market confidence and business integrity. It forces companies to actively engage with the society in which they exist and not only consider financial prosperity in a strategic objective setting but to also take into account social and environmental value creation systems (Raemaekers, 2014). Kakabadse and Korac-Kakabadse (2002) agree, stating that good governance requires processes and procedures that serve as guidelines for accepted behaviour for both companies and society as well as, if appropriately applied, an environment for creating opportunities. Good corporate governance should therefore be of a diverse nature that is inclusive in its decision-making, developing the weaker parts of society towards the achievement of the common good (Frederikson, 1992).
In simple terms, good corporate governance is characterised by ethical and effective leadership. It requires those charged with governance to exemplify ethical leadership in discharging their responsibilities by demonstrating high levels of integrity, competence, responsibility, accountability, fairness and transparency. Good corporate governance also requires those charged with governance to lead their companies towards the achievement of strategic objectives (IoDSA, 2016). For the purposes of this study, the focus is steered towards transparency and accountability of the governing body.

The importance of transparency and accountability has been widely recognised by both academics and market regulators (Fung, 2014). This follows two decades of corporate failures and scandals such as falling stock markets, dubious accounting practices, fraud and the abuse of corporate power associated with various global companies such as WorldCom, Arthur Anderson, Enron, Murray and Roberts and more recently, Steinhoff and KPMG (Arjoon, 2005; Monahan, 2012; Lungisa, 2017; Steyn, 2015). These acts of self-interest have undermined the confidence of all stakeholders, resulting in a relationship of broken trust between themselves and governing bodies (Arjoon, 2005; Monahan, 2012).

Transparency and accountability are important elements of a robust corporate governance regime (Fung, 2014). These two traits assist governing bodies to minimise agency problems by reducing information asymmetry between those charged with governance and corporate stakeholders and to enhance goal congruence by aligning the goals of the company with those of society (Ntim, Lindop & Thomas, 2013).

According to Fung (2014), a framework for good corporate governance which is characterised by a commitment to effective corporate control, transparency and accountability can be used as a tool to restore the relationship of trust between governing bodies and stakeholders by providing a basis for informed decision-making for shareholders, stakeholders and potential investors in relation to the company’s operations. This will in turn result in enhanced performance and improved corporate reputation and goodwill (Ntim et al., 2013).

The United Nations Economic and Social Commission for Asia and the Pacific (2009) states that transparency means decisions taken and enforced by the governing body
are done so in a manner that is consistent with the established laws and regulations. Transparency also suggests that information is easily available and accessible to stakeholders who are affected by the decisions taken by the governing body and their enforcements.

Patel (2013) argues that transparency creates and maintains a level of openness and non-secrecy of information in companies. It is an effective way of protecting the interest of stakeholders by promoting disclosure of non-financial information necessary to hold governing bodies be accountable for the decisions that directly or indirectly affect them (Frederick, 2000; Fung, 2014).

Accountability is the obligation of a company to answer for and accept responsibility for its activities and disclose the outcomes in a manner that is transparent to all stakeholders (Patel, 2013). Accountability cannot be achieved without transparency; as such, the two concepts should be regarded as inseparable, for if a company’s governance system is committed to transparency, it will promote accountability as well (Ally, 2016; Millar, Eldomiaty, Choi & Hilton, 2005).

The OECD (2015) states that the integrity of businesses and markets is essential to the health and stability of the global economy. It is therefore important to ensure sound corporate governance through rules and practices which promote transparency and accountability in companies. Many countries and market regulators began the journey of corporate governance reforms as far back as the 1990s, when the United States, issued the Principles of Corporate Governance and the United Kingdom produced the Cadbury Report (Crous, 2017). South Africa’s journey to institutionalise corporate governance in local companies began not long thereafter (Marx, 2008).

2.2.3 Developments in corporate governance in South Africa

The notion of corporate governance and the development of corporate governance guidelines and codes has been a prominent feature in South Africa’s business environment since the early 1990s (Marx, 2008). The reasons for its prominence are indicated by various researchers as:
• The need to restore confidence and trust in South African institutions following the apartheid era (Burk & Clark, 2016);
• The need for robust market discipline and corporate reform in order to attract and retain foreign investors (Marx, 2008; Maseko, 2015);
• The expectation for South African companies to play a role in addressing the socio-economic challenges facing the country (Croucher & Miles, 2010);
• The call to respond to the first corporate governance code issued in the United Kingdom, namely the Cadbury Report, in 1992 (Marx, 2008; Miles & Jones, 2009).

2.2.3.1 King Report on Corporate Governance (King I)

The first King Report on Corporate Governance (hereafter King I) was published in 1994. It was considered ahead of its time (Marx, 2008) as it set an international benchmark for standards and best practice (Jansen van Vuuren & Schulschenk, 2013). King I drew extensively on the Cadbury Report and similarly adopted a self-regulatory approach of ‘comply or explain’ (Mangena & Chamisa, 2008). This meant that companies which complied with the report needed to disclose their level of compliance, and in instances where they did not comply, explain their reasons for non-compliance.

The report was, however, different from its British counterpart insofar as it looked beyond the financial and regulatory facets; it was the first to successfully conceptualise the need for companies to acknowledge the societies and the environment in which they operate as inseparable components to value creation (IoDSA, 2002).

King I included aspects that addressed the need for increased transparency and segmental disclosures required of local companies to counter to the declining ethics within the corporate environment. It also set measures to prevent non-executive directors, who represent the majority of shareholders, from overpowering the interests of the minority shareholders (Crous, 2017).

As of 1995, the JSE adopted King I and effectively, all listed companies on the securities exchange were required to comply with the recommended principles (Crous, 2017). While the report drew unprecedented interest in South Africa’s corporate
governance landscape (Rossouw, van der Watt & Malan, 2002) and was hailed as a potential catalyst to “enhance the stability and legitimacy of South Africa’s economic systems” (Andreasson, 2011), various researchers highlighted the shortcomings of King I (Kakabadse & Korac-Kakabadse, 2002; Marx, 2008; Maseko, 2015):

- It encouraged a ‘tick-box’ approach to compliance;
- It put too much emphasis on disclosure rather than encouraging best practice as its main incentive;
- It protected the vested interest of corporate groups in South Africa;
- It lacked wider consultation, did not invite public discussion and did not draw on external expertise, and thus did not directly address issues of corporate governance.

Together with the list provided above, the report was criticised for two other shortcomings which are important motivations for this study:

- Transparency and disclosures of certain issues was found to be lacking in most South African companies, with only the top 30 or 40 JSE-listed companies introducing certain performance measures. In general investors were given little information to adequately assess the performance of the different units across the companies (Kakabadse & Korac-Kakabadse, 2002);
- The report did not address IT-related issues. Maseko (2015) excuses the absence of IT governance in the report as at that time, IT was regarded as an enabling function rather than a strategic partner, and hence it was not yet a critical issue worth addressing in any great detail.

In response to the above criticisms, as well as the need to evolve with global trends, the Institute of Directors in Southern Africa (hereafter, IoDSA) decided to review King I. This resulted in the second report on corporate governance, the King Report on Corporate Governance for South Africa 2002 (hereafter King II) (Crous, 2017; Maseko, 2015).
2.2.3.2 King Report on Corporate Governance for South Africa 2002 (King II)

King II was drafted in 2001 and issued in 2002. Its effective date of implementation was 1 March 2002. Marx (2008) and Vaughn and Ryan (2006) described it as a more comprehensive report, which was built on the foundation laid by its predecessor. King II maintained its original stance and was not in favour of legislation which forced companies to comply with its recommendations but rather, it stayed true to the ethos of self-regulation (Miles & Jones, 2009). However, the report expanded on its ‘inclusive approach’ to corporate governance, recommending the introduction of ‘triple bottom line’ reporting to incorporate the economic, environmental and social aspects of a company’s activities (Hendricks & Wyngaard, 2010; Miles & Jones, 2009). It put a stamp on the theme introduced in King I, stressing that companies ought to recognise that they do not exist independently from the societies in which they operate and, although the primary duty of governing bodies is to protect the interests of the shareholders, the interests of other stakeholders such as the community, customers, employees and suppliers all need to be considered when developing company strategy. As a result, King II was hailed for its enhanced focus on transparency and disclosures of non-financial information through the adoption of integrated reporting which, according to Crous (2017), had not been included in any other corporate governance codes and documents around the world.

Furthermore, King II motivated its push for more inclusive corporate governance practices by reinforcing the idea that companies which embraced inclusivity and demonstrated concern for non-financial issues were more likely to build an atmosphere of trust and a better understanding of their corporate objectives amongst stakeholders “so that when the next crisis comes (and these are inevitable for big companies) there will be a greater goodwill to help the company survive” (IoDSA, 2002).

While the King Committee went to great lengths to overcome some of the criticism levelled against King I (Maseko, 2015), King II was nonetheless criticised for its self-regulatory nature as well as the lack of enforcement through statutory channels (Marx, 2008). Another critical shortfall of the report was that although it mentioned IT and acknowledged the emergence of IT as a key driver of business strategy and decision-making, no further guidance was provided on the management of IT risks, the
delegation of responsibility for IT governance or disclosure of IT-related matters (Maseko, 2015).

King II was reviewed in 2009 and subsequently, King III, the third report on corporate governance, was introduced (IoDSA, 2009).

2.2.3.3 King Report on Governance for South Africa 2009 (King III)

The third report on corporate governance in South Africa came as a result of the new Companies Act of 2008 and changes in international trends in governance (IoDSA, 2009). King III, which was initially issued in 2009, promoted an integrated approach to governance and reporting, providing extensive guidance on integrated reporting and disclosures of governance-related matters (Maseko, 2015; PWC, 2009).

Unlike its predecessor, King III became applicable to all entities irrespective of their size or whether they were listed or not. However, King III placed no statutory obligation on companies to comply with its recommendations and principles, thus moving away from the traditional ‘comply or explain’ approach to an ‘apply or explain’ basis of reporting (PWC, 2009). This allowed governing bodies to apply the recommendations differently or to apply other practices, where they consider such practices to be in the best interests of the company while still abiding by the overarching principles of fairness, accountability, responsibility and transparency. However, according to Walker and Meiring (2010), proper compliance required adequate explanation of how the principles and recommendations were adopted and applied or, in cases where they were not applied, the reasons for deviating from best practice.

Among the developing governance trends and issues included into King III were alternative dispute resolution, risk-based internal audit, shareholders’ approval of company remuneration policy, board evaluations, business rescue and importantly, an expansion of IT related matters, with a chapter on IT governance (IoDSA, 2009).

Turel and Bart (2014) state that as technology continues to increase in strategic importance and concomitant risk to companies, the rapid deployment of emerging technologies within companies can have a significant impact on sustainability. Thus IT
governance should be an inseparable part of corporate governance, which justifies the inclusion of IT governance in the report.

One critical consideration is that although King III addressed IT governance extensively, it did not provide any guidance to simplify IT governance disclosures. Instead companies were only required to disclose their application of the principles and recommendations (IoDSA, 2016).

As a result of significant changes in both business and society, and in an effort to improve the shortcomings of King III, King IV was introduced in 2016.

2.2.3.4 King Report on Corporate Governance for South Africa 2016 (King IV)

The most recent of the King reports, King IV, was published on 1 November 2016. The report replaced King III altogether and is applicable to companies with financial years commencing on or after 1 April 2017 (IoDSA, 2016).

According to Deloitte (2016), King IV takes a bolder approach than King III insofar as:

- The report follows a principle- and outcome-based approach as opposed to being rule-based. This is consistent with current global opinions which advocate heightened accountability and transparency. It also recommends that practices ought to contribute to the performance and sustainability of a company.
- The report is resolute in its unyielding effort to reinforce the idea that corporate governance should be seen as a holistic set of arrangements that embraces ethical leadership, attitude, mindset and behaviour.
- The report continues to stress increased transparency and targeted disclosures in all areas, including IT governance.

From an application perspective, King IV is a framework which can be adopted across listed and unlisted companies, profit and non-profit as well as public and private entities (IoDSA, 2016).

King IV steps away from the ‘apply or explain’ approach and recommends an ‘apply and explain’, relieving governing bodies from the burden of compliance by reducing the 75 recommended practices in King III to 16 basic principles. The 16 principles can
be adopted by any company and are all necessary to substantiate the practice of good governance (IoDSA, 2016). The required explanation gives effect to each principle and enables stakeholders to make an informed decision on whether a company is well governed or not. The explanation also helps in shifting the focus of companies from a compliance mindset to a qualitative mindset, which encourages the achievement of objectives through careful consideration of the entity’s circumstances (IoDSA, 2016; Piek, 2016).

King IV identifies and acknowledges IT as an inseparable component of a company’s DNA and it is therefore important that IT governance remains a recurrent topic on any governing body’s agenda (IoDSA, 2016).

2.3 THE IMPORTANCE OF IT GOVERNANCE

IT has become a critical component for the transformation and sustainability of most business processes. This is evident by the growing reliance on IT systems by most companies across all sectors of industry, commerce and government and the gradual increase in IT investments in order to keep up with an ever-evolving digital ecosystem (Kappelman et al., 2014; ITGI, 2008). According to Marx (2008), due to the nature of IT and the rapid rate of its adoption, modern companies have been exposed to new challenges and risks. These challenges and risks have led to the rise of the concept of IT governance which, according to the ITGI (2009), is critical in ensuring that IT delivers value to the business and IT risks are adequately addressed.

2.3.1 Definition of IT governance

Maseko (2015) mentions that, no standard definition of IT governance exists. The concept of IT governance is therefore broadly defined and tends to be ambiguous at times. For the purposes of this study, it is important to attach a clear meaning to the concept in order to establish its importance and necessity. Therefore, various definitions are examined below.

“IT governance is responsibility of the board of directors and executive management. It is an integral part of enterprise governance and consists of the leadership and
organisational structures and processes that ensure that the organisation’s IT sustains and extends the organisation’s strategies and objectives” (ITGI, 2003:10).

“Enterprise governance of IT is an integral part of corporate governance, exercised by the board, overseeing the definition and implementation process, structures and relational mechanism in the organisation that enable both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of business value from IT-enabled business investments” (De Haes & Van Grembergen, 2015:2).

For the purposes of this research, IT governance is defined as:

A set of responsibilities and practices instituted by the governing body in order to ensure that IT investments are strategically aligned to the business in order to add value and assist in the achievement of objectives.

2.3.2 Characteristics of good IT governance

IT governance, like other governance topics, is the responsibility of the governing body and executives (ITGI, 2008). It should not be regarded as an isolated discipline or activity, but rather as an integral part of organisational governance, with specific reference to improving the management and control of IT for the benefit of key stakeholders (De Haes & Van Grembergen, 2015; National Computing Centre, 2003).

IT governance is an important foundation to ensure companies derive optimal value from IT investments (de Souza Bermejo et al., 2012). It is also important insofar as it helps companies to effectively address major business issues and protect their strategic information systems (Buckby, Best & Steward, 2005).

The ITGI (2008) relate IT governance to two specific outcomes, namely, IT’s delivery of value to the company and the mitigation of IT-related risks. Both outcomes are enabled by the strategic alignment of IT with the business, and the availability of sufficient resources. Management then needs to ensure that it measures the performance of IT in order to monitor progress towards desired goals (ITGI, 2008).
Brisebois, Boyd and Shadid (2008) state that the primary objective of IT governance is to provide assurance that investments in IT are creating value for the business and to minimise the risks inherent in IT ventures. This can be achieved by implementing an organisational structure with clearly defined roles and responsibilities for information, business processes, applications and infrastructure. Deloitte (2013) agree, adding that IT governance can assist companies to define who is responsible for what and how IT decisions are made. This thus enables IT to adhere to organisational objectives, to help drive those objectives and to maximise the value from IT investments (Deloitte, 2013).

The ITGI and ISACA have both contributed to developing guidance for good IT governance, issuing frameworks such as COBIT, the Information Technology Infrastructure Library (hereafter ITIL) and supplementary guidance such as the Board Briefing on IT Governance 2nd Edition publication. According to ITGI and ISACA, good IT governance extends across the culture, organisation, policy and practices that make provision for IT management and control (ITGI, 2003). It is characterised by the following focus areas and stakeholder values (ITGI, 2003):

- Strategic Alignment;
- Value Delivery;
- Risk Management;
- Resource Management; and
- Performance Measurement.

These five focus areas and stakeholder values are discussed further in section 2.3.3.3.

Transparency is a critical aspect of good IT governance. It helps to ensure effective communication with stakeholders on effective IT decision-making, management control, IT investment priorities and IT risk management (Joshi et al., 2013). The practice of transparency also ensures that companies comply with legislation requiring them to disclose their IT governance (Ally, 2016). Governing bodies have a responsibility to protect stakeholder interests by providing them with sufficient information to understand the challenges and risks the company is exposed to as a result of IT and how those risks are mitigated in order to drive business value (Ngwenya, 2015).
De Haes et al. (2016) suggests that commitment to transparency on non-financial information, including IT governance practices, can have a positive effect on a company’s valuation. This is because transparent and accountable companies create a culture of openness and trust with their stakeholders, providing them with key information necessary to make informed decisions about the entity, which effectively protects their interests (Fung, 2014; Patel, 2013). As such, transparency and accountability are critical components of building stakeholder confidence and creating a positive image with the general public (Raghupathi, 2007).

de Souza Bermejo et al. (2012) concur that well-executed IT governance can help develop trust and transparency with stakeholders, deliver better results on IT-related projects by using IT in alignment with the company’s priorities and strategies. In order to achieve good IT governance, governing bodies need to take the time to acquire a deeper understanding of IT and its impact on their business and assume responsibility for its governance (Antwerp Management School, 2016). Adopting a robust IT governance framework can assist governing bodies to understand IT governance and discharge their responsibilities more consistently (de Souza Bermejo et al., 2012).

2.3.3 IT Governance frameworks

According to the ISACA (2012) and ITGI (2008), implementing good IT governance is almost impossible without implementing an effective IT governance framework. This is because frameworks guide those charged with governance and executives in developing policies and procedures to enhance the value of IT (Hamidovic, 2010; Wilkin, Couchman, Sohal & Zutshi, 2016). Researchers in the IT field frequently cite the following frameworks as best practice (De Haes & Van Grembergen, 2015; Hamidovic, 2010; Maseko, 2015):

- COBIT;
- Val IT;
- ITIL;
- ISO/IEC27001; and
- Board Briefing on IT Governance.
Hamidovic (2010) argues that although these are regarded as IT governance frameworks, some are in fact management frameworks. Management frameworks are different from IT governance frameworks insofar as they provide more practical guidance on the day-to-day management of IT-related activities (Terblanche, 2011). IT management is often a responsibility delegated to executive management and entails the implementation, running and monitoring of IT activities to ensure their alignment with the overall IT governance objectives (ISACA, 2012).

Notwithstanding this range of best practice frameworks, many countries have also codified and regulated IT governance, including South Africa. The King Reports on Corporate Governance and the King Codes on Corporate Governance can be used as a frame of reference by South African companies as these reports regulate the practice of IT governance for JSE-listed companies in the country. For the purposes of this research, only King III, King IV, COBIT and Board Briefing on IT Governance will be discussed further.

2.3.3.1 IT governance in King III & King IV

As discussed in section 2.2.3.3, the King Reports on Corporate Governance and the King Codes on Corporate Governance have gradually accepted IT as an integral part of organisational sustainability and success. King III was the first report on corporate governance to provide extensive guidance on IT-related matters, with Chapter 5 of the King code dedicated to IT governance (Giles, 2009).

King III provided companies with seven IT governance principles each of which is supplemented by a list of recommended practices. King III required companies to comply and disclose their implementation of the IT governance principles and recommended practices, which are set out in the code, based on an ‘apply or explain’ basis (Ally, 2016).

Ally (2016) and Ngwenya (2015) argue that King III did not provide sufficient guidance on comprehensive transparency and disclosure of IT-related matters. This is because the King III principles and practices were vague with regards to how companies ought to implement IT governance principles in their companies (Maseko, 2015). As a result, companies treated IT governance principles and disclosure as a mindless exercise
resulting in critical, IT-related matters not being disclosed (Ally, 2016). While the IoDSA (2009) encouraged companies to disclose material and sufficient information regarding all aspects of the company’s operations, findings of both Ally (2016) and Ngwenya (2015) prove that disclosures related to key IT-related matters were found to be lacking due to insufficient guidance in the report. Appendix A1 provides a summary of the IT governance recommended principles and practices as per the King III code.

King IV, which effectively replaced King III from the financial years commencing on 1 April 2017, places greater emphasis on disclosures relating to IT governance (IoDSA, 2016). King IV acknowledges that technology is in the process of transforming businesses. It also takes cognisance of the fact that information has become a growing source of competitive advantage (IoDSA, 2016). Consequently, King IV separates the two terms ‘technology’ and ‘information’, moving away from the combined term ‘IT’. This is because the writers of the report argue that information and technology are separate sources of value creation, each with its own risks and opportunities. While the two may overlap, it is important that governing bodies recognise that they can stand on their own (Giles, 2016).

In efforts to promote enhanced transparency, King IV indicates specific disclosure items which listed companies ought to comply with. For example, principle 12 of King IV (technology and information governance) addresses IT governance through principle numbers 12.10-12.16 which recommend practical ways of governing IT while 12.17 outlines what companies need to disclose in relation to IT (IoDSA, 2016). Appendix A2 provides a summary of IT governance principle 12 and its recommended practices as per the King IV code.

Ally (2016) suggests that the disclosure requirements of King IV are similar to those of King III, however, the King IV requirements are open for greater interpretation and are not as prescriptive as those of King III. It can therefore be assumed that companies which fully understood the King III IT governance and disclosure requirements and fully applied their minds to IT reporting would not have trouble complying with King IV.
For the purposes of this research, the King IV IT governance targeted disclosures are used in order to determine the extent to which telecommunications companies disclose their IT-related matters.

2.3.3.2 IT governance in COBIT 5

COBIT 5 is regarded as the most widely accepted best-practice framework for IT governance (De Haes & Van Grembergen, 2015). Some researchers refer to it as the only framework for corporate governance outside of the reports and regulations available in different countries (Ngwenya, 2015; Steenkamp, 2009). The reasons for COBIT 5 being regarded as the only governance framework are listed by Steenkamp (2009) below:

- King III points to COBIT as one of the IT governance frameworks which can be applied jointly with the report to achieve IT governance;
- COBIT is the most comprehensive framework; it covers all critical aspects of IT governance rather than focusing on specific segments such as ISO and ITIL;
- It is business-orientated;
- It is internationally recognised and acclaimed;
- It is freely available;
- It includes the input of experts in the field of IT; and
- It can be applied by any company irrespective of size, level of IT deployment, complexity or needs.

COBIT 5 was developed by the ITGI in collaboration with ISACA (ISACA, 2012; ITGI, 2008). It consists of a set of tools which are arranged into a framework that helps businesses create maximum value from IT by striking a balance between realising benefits and optimising risk and resource use (ISACA, 2012).

According to ISACA (2012), the five principles in COBIT 5 enable a company to build an effective and efficient IT governance and management framework to optimally leverage IT investments to benefit stakeholders. The five principles are described below (ISACA, 2012):
• **Principle 1: Meeting Stakeholder Needs** – Businesses are there to create value for their stakeholders. As such they should strike a balance between deriving value from IT, managing the risks associated with it and use of company resources.

• **Principle 2: Covering the Enterprise End-to-end** – The framework has integrated IT governance into the overall organisational governance framework by (i) incorporating all the operations and processes within the company and treating IT as an asset that needs to be dealt with just like any other critical asset of the company and (ii) considering all IT-related governance and management enablers as enterprise-wide (including external and internal stakeholders).

• **Principle 3: Applying a Single, Integrated Framework** – COBIT 5 aligns all IT-related standards and good practices into one single framework.

• **Principle 4: Enabling a Holistic Approach** – COBIT 5 is well rounded because it takes into account several components which interact with one another. It identifies and defines seven enablers to assist the implementation of a governance and management system that is comprehensive. The seven enablers are: Principles, Policies and Frameworks; Processes; Organisational Structures, Culture, Ethics and Behaviour; Information; Services, Infrastructure and Applications; People, Skills and Competencies.

• **Principle 5: Separating Governance from Management** – The COBIT 5 framework makes a clear distinction between the governance and the management of IT. It classifies the two components as two separate disciplines which include different types of activities, require different organisational structures and serve different purposes.

The IT governance framework in COBIT 5 is further separated into five governance processes. These form the governing body’s responsibilities in terms of IT and include (i) setting the governance framework, (ii) handling responsibilities in terms of value (e.g. investment criteria), risk (e.g. risk appetite) and resources (e.g. resource optimisation) and (iii) ensuring transparency on IT-related matters to stakeholders (De Haes et al., 2016).
COBIT 5 thus requires governing bodies to ensure that IT performance and conformance measurements and reporting are done transparently, with all stakeholders approving the goals and metrics and the necessary remedial actions (ISACA, 2012).

### 2.3.3.3 Board Briefing on IT Governance 2nd Edition

Section 2.3.2 introduced the five focus areas and stakeholder values of (i) Strategic Alignment, (ii) Value Delivery, (iii) Risk Management, (iv) Resource Management and (v) Performance Management which were identified by the ITGI and ISACA as characteristics of good corporate governance. These are discussed in greater detail below.

The Board Briefing on IT Governance 2nd Edition was developed by the ITGI and ISACA in 2003. The Briefing, which is consistent with COBIT, supplements and simplifies IT governance after findings showed that the complexity of IT and the intangible value of information make IT a more challenging area to govern (ISACA, 2012; ITGI, 2003). The framework stresses that IT governance is the responsibility of the governing body and recommends that it be included in strategy and risk management. It further identifies the characteristics outlined in section 2.3.2 (Strategic Alignment, Value Delivery, Risk Management, Resource Management and Performance Management) as the key focus areas and stakeholder values which should drive the company and IT strategy (ITGI, 2003). These five focus areas and stakeholder values are explained below:

- **Strategic Alignment** – This refers to the alignment of IT with the business and its collaborative solutions (ITGI, 2003). It is the integration of business strategy, IT strategy, business structures and IT structures (De Haes & Van Grembergen, 2015). PWC (2015) describes strategic alignment as the way in which the activities and functions of IT in the company are aligned in order to ensure that IT supports the objectives and priorities of the company. These activities include the governance arrangements and management lines that are established in order to ensure that maximum value is derived from IT (ITGI, 2008).
• **Value Delivery** – This refers to optimising costs and realising the value from IT projects (ITGI, 2003). The basic principle of value associated with IT is the on-time and within-budget delivery of acceptable, quality IT products and services while achieving the expected benefits (ITGI, 2003). Value delivery is closely linked to strategic alignment and is an important component of deriving value from investments in IT (De Haes & Van Grembergen, 2015). IT has to be aligned so that it supports the strategic objectives of the company by delivering on time, with appropriate functional capabilities and realising intended benefits (ITGI, 2003). Alignment of IT also creates value by delivering infrastructure that enables the business to tap into new markets, increase profitability, enhance customer satisfaction, guarantee customer retention and power competitive strategies. PWC (2015) states that good IT governance needs to ensure that IT delivers expected benefits against the strategy, that costs are optimised, that the relevant best practices are incorporated and that the value created for the company by its IT investment is maximised.

• **Risk Management** – This relates to how the company addresses IT-related risks and how IT is used to manage business risks (ITGI, 2008). According to the ITGI (2003), governing bodies ought to manage enterprise risks by:
  
  o Being cognisant of the fact the ultimate responsibility for risk management lies with the governing body, so when they delegate to such responsibility to executives, ensuring that the scope and limitations of such delegation are well communicated and understood;
  
  o Keeping in mind that the system of internal controls that are put in place for risk management should be able to generate cost-efficiency;
  
  o Taking into account that a transparent and proactive risk management approach bring a competitive advantage; and
  
  o Being resolute to risk management being rooted in the operation of the company in order to respond quickly to evolving risks and report these immediately to management in a pre-established manner (what to report, where and how). In support of the above, PWC (2015) states that governing bodies need to ensure risks associated with IT are adequately addressed across the entire company. A risk-aware culture needs to be
cultivated where compliance requirements are understood and all employees comprehend the impact of risk on the company.

- **Resource Management** – This relates to having the correct capability to execute the strategic plan, together with providing adequate, appropriate and effective resources (ITGI, 2008). IT resource management is embedded in all the other focus areas. It enables the focus areas to maintain all necessary IT resources, namely, people, applications, technology, facilities and data (ITGI 2003).

- **Performance Measurement** – This is the process of tracking the achievement of company objectives and compliance with specific external requisites (ITGI, 2008). A good IT governance framework needs to ensure that performance is optimally tracked and measured so that IT benefits can be achieved. This includes the implementation of strategic initiatives, resource utilisation and delivery of IT services (PWC, 2015).

The ITGI (2003) states that value has moved from tangible to intangible assets and the latter are often not measurable through conventional financial means. In order to properly measure the performance of IT, balanced scorecards need to be used as they turn strategy into action in order to achieve objectives with a performance measurement system that is beyond traditional accounting means, measuring the relationships and intellect-based assets necessary to remain competitive. These include customer focus, process efficiency and the ability to learn and get better (ITGI, 2003).

Like COBIT, the Board Briefing on IT Governance 2nd Edition promotes transparency in IT governance by placing the responsibility on governing bodies to create and sustain relationships and effective communication between the business, IT and external stakeholders. The report further states that the governing body should ensure transparency of IT risks and the internal controls in place to mitigate those risks (ITGI, 2003). The report does not, however, offer explicit guidance as to what companies need to report in terms of each of the IT governance focus areas and stakeholder values. The research of Joshi et al. (2013) provides a self-developed framework with specific disclosure items for each focus area.
For the purposes of this research, the framework for IT governance disclosures by Joshi et al. (2013), which is included in Appendix B2, is adopted in the empirical study in order to evaluate whether disclosures according to the King IV IT governance requirements are sufficient to satisfy stakeholder expectations.

2.4 IT GOVERNANCE IN TELECOMMUNICATIONS COMPANIES

The South African telecommunications industry is one of the fastest growing markets on the African continent (Fripp, 2012). Its growth is chiefly attributed to high mobile penetration of the market. According to the Mobile Economy Report for 2017 by research group GSMA Intelligence (2017), mobile penetration in South Africa is the second highest in the continent after Nigeria. At the end of 2016, South Africa reported 88.2 million mobile connections across all service providers (BusinessTech, 2017). This number is expected to double over the next three years, as rollout of new and affordable smartphones and tablets continues to reach the hands of a young and vibrant population (Ericsson, 2016).

Notwithstanding the growth in mobile subscriptions, the market has also experienced a growing appetite for other digital products such as data and fixed network connections as well as financial services and other entertainment offerings. This has forced service providers to expand and diversify their products in order to meet demands and remain profitable (McKinsey & Company, 2016; Vodacom, 2017).

According to Lancaster (2016), the South African telecommunications industry also boasts one of the most technologically advanced infrastructures on the continent. This comes as no surprise considering the significant IT investments made by local telecommunications companies. A report by ICASA on the State of Information and Communications Technology (hereafter ICT) in South Africa states that IT infrastructure investments by the telecommunications industry stood at R28 billion in 2016, an 18% increase from the R23 billion in the previous year (ICASA, 2017a). This total investment amount, also referred to as annual capital expenditure (capex), is made up of investments in upgrading property and networks of fixed, mobile and internet services (ICASA, 2017a).
As one of the top telecommunications companies in the country and in comparison to its competitors, MTN has consistently recorded the highest spend by a significant margin. According to the company’s General Manager for Network Deployment, Krishna Chetey, no other telecommunications company has spent more than MTN’s investment in its networks over the past few years, including 2017 (Gilbert, 2017). MTN planned to spend R11.5 billion on infrastructure in 2017 whilst it had previously recorded a total spend of R20 billion between 2015 and 2016 (Gilbert, 2017). These figures reflect the company’s capex investments in South Africa only.

In comparison to its competitors, Vodacom spent close to R8.5 billion on local capex in 2017, and another R8.7 billion in the previous year. Telkom’s capex spend for 2017 was recorded at R8.7 billion and R6 billion at the close of the 2016. EY (2015) and McKinsey & Company (2016) expect these numbers to be on the rise in the coming years due to technological advances and a growing market population.

While many of these telecommunications companies recognise the potential benefits of IT and as the speed of adoption continues to accelerate, concerns have been raised of over critical, IT-related issues. These issues are pervasive across the industry and could significantly affect the ability to create value and change the relationship between telecommunications companies and their customers, suppliers and other value chain partners (BDO, 2015).

The issue of high data costs and the transparency of these costs has been a long-standing debate in South Africa (Hawthorne, 2015). In 2016, South African citizens, under the banner #datamustfall, took to social media platforms calling for government and market regulator ICASA to regulate the prices of data in the country. The #datamustfall community conducted extensive research on data tariffs in South Africa which revealed that the country has the second highest data contract prices in a selected group of seven countries (Brazil, China, Russia, India, Kenya and Australia) (Van Zyl, 2016). South Africa had some of the second highest prices, coming only second to Brazil. The study further revealed that South Africa’s data prices were on average 134% more expensive than the cheapest prices in the group (Van Zyl, 2016). According to the #datamustfall community, these costs were exorbitant and to the detriment of low-income consumers (Gilbert, 2018). Since then, both ICASA and the
Parliament’s portfolio commission have responded to the public outcry and acknowledged that South Africa’s data costs are too high.

During an enquiry summoned by Parliament’s portfolio commission, both MTN and Vodacom governing body representatives argued that despite the public’s perceptions about the high cost of data, prices have decreased over the past few years (Gilbert, 2016). MTN’s Chief Operating Officer, Graham de Vries, claimed that data tariffs have decreased by 73% over the last five years, whilst voice tariffs have gone down by 58% over the same period of time (Gilbert, 2016). De Vries cited a lack of spectrum, investor pressure and the weak rand as reasons for current data prices.

Vodacom’s Head of Regulatory Affairs, Hennie Jacobs, echoed the arguments of De Vries, also citing the lack of spectrum as a major reason for South Africa’s data costs. He also mentioned to parliament that data prices in the country have been on the decline; for example, in 2015 alone, the average price a Vodacom customer paid for data fell by 13.6% (Gilbert, 2016).

Despite both Vodacom and MTN arguing that data costs have decreased over the years, new research from a biannual report by ICASA shows that there is a major difference between the cost per megabyte of data in different sized bundles, which inevitably favours South Africa’s rich over the poor (ICASA, 2017b). This legitimises the argument of the #datamustfall community.

The report provides an analysis of data tariff notifications between 1 July and 31 December 2017 and compares the prices of prepaid data bundles and out-of-bundle rates for South Africa’s four operators. According to ICASA’s findings, the unit cost of data rapidly goes down as the size of the bundle decreases, in other words, a subscriber receives more data per rand as the size of the bundle increased (ICASA, 2017b). This phenomenon is a disadvantage to low-income users who cannot afford to purchase bigger bundles and enjoy the savings they bring (Gilbert, 2018).

According to MTN, Vodacom and research conducted by ICASA, the high data tariffs in the country are attributed to the following factors (Gilbert, 2016; Nhlapo, 2017):
• **The limited availability of spectrum** – There is limited range of radio frequencies that allow for fast data transmission in South Africa. Only a small number of service providers has access to the market, and as such, prices are dictated by a small monopoly of companies.

• **Expensive infrastructure** – Mobile networks have invested heavily in IT infrastructure in order to expand their service portfolios, however, the operating costs associated with running these technologies are weighing heavily on them. Even though these companies install towers in urban and rural areas, their return on investment in rural areas is not as high as in urban areas so in order to compensate for the shortfall, the bill is passed to everyone equally.

Atanga (2017) states that the lack of transparency on data costs has undermined trust between telecommunications companies and their customers. McKinsey & Company (2016) state that it is important for telecommunications companies to improve their pricing, cost and capital efficiencies if they want to remain profitable and attract investor confidence.

The other significant risks posing a threat to the success and sustainability of the telecommunications industry collectively are identified by BDO (2015), KPMG (2016) and PWC (2013):

• **Cybersecurity** – The capabilities and techniques used by hackers continuously evolve with the introduction of new technologies. It is therefore important to ensure adequate controls are in place in order to avoid data breaches as the consequences would prove detrimental to the reputation and bottom line of the company.

• **Capital Expenditure** – Telecommunications companies have been facing significant challenges in investing in the right technologies to continue offering their services to customers. Many of these companies across the world have experienced inefficiencies and underwhelming returns on IT investments which have presented governing bodies with significant challenges relating to strategic alignment, accountability, financing and a suitable control environment. Macrocomm (2017) point to a complex financial and economic landscape as a key factor that is placing pressure on telecommunications
companies to optimise their operational and capital expenditure. They advise telecommunications companies to improve their network maintenance activities and to come up with strategic solutions that will reduce costs and streamline efficiencies (Macrocomm, 2017).

- **Data Governance** – Regulators and customers have become increasingly concerned about data security. With the emergence of big data, it is important that telecommunications companies keep up with the increasing inflow and outflow of data that is stored on their systems in order remain above reproach.

- **Regulatory Changes** – The telecommunications industry is continuously being imposed with new regulatory requirements to protect the interests of their stakeholders. For example, while ICASA investigates whether or not it should regulate the price of data, it has in the meantime imposed transparency obligations requiring mobile operators to inform customers about in- and out-of-bundle data costs (MyBroadband, 2017). The introduction the Protection of Personal Information Act of 2013, which will be effective on a date yet to be announced by the President, will pose significant compliance challenges and companies which fail to comply may be faced with substantial financial fines and irrecoverable reputational damage (Preston & Strumpher, 2017).

In order to respond effectively to these risks, BDO (2015) suggests that governing bodies across all telecommunications companies ensure that they have sound risk management and governance processes. This will place their companies in a better position to anticipate and respond to the changing needs of their customers.

Many of the risks discussed above have an impact on multiple governance areas, however, it is clear from the discussion that they all stem from the adoption of IT in telecommunications companies, and therefore in order to address them effectively, strong IT governance becomes important.

Effective IT governance can assist governing bodies in telecommunications companies to identify lucrative IT investments and mitigate risks in order to realise value from those investments. It can also assist governing bodies in re-establishing trust amongst themselves and stakeholders through transparency by means of disclosure of IT-related matters (De Haes et al., 2016).
Highlighting the value of transparency in South African companies, Matisonn (2018) states that both in politics and in business, the public reacts very strongly to what it perceives or realises to be injustice, criminal or unethical behaviour. The public is quick to judge politicians and businessmen. Companies are managed by people. People are not perfect and the public understands that. The public and investors are forgiving and will continue to show loyalty where a company admits to its challenges and shortcomings and addresses the matters swiftly and ethically.

Annual integrated reports provide companies with an opportunity to convey their commitment to high standards of corporate governance and ethics. A company that is committed to providing full disclosure on all governance areas is likely to be more sustainable than the one which holds back information (Matisonn, 2018).

The telecommunications industry reaches deep into the daily affairs of individuals, businesses and government (PWC, 2013). It is therefore important to establish the industry’s commitment to sound corporate governance and disclosures on IT-related matters by evaluating the companies’ compliance and application of King IV. When evaluating IT governance disclosures of the top three telecommunications companies, it is expected that some of the issues discussed above will be reflected in the disclosures.

2.5 CONCLUSION

The telecommunications industry has been transformed by technology over the past ten years as data-hungry customers with smart devices demand and consume ever more bandwidth (EY, 2015). Over this period, service providers have expanded their portfolios and significantly increased investment in IT infrastructure in order to meet the rising demands of this young and vibrant population (McKinsey & Company, 2016).

Amidst the myriad opportunities that have presented themselves as a result of IT, South African telecommunications companies have been faced with many challenges which have drawn the attention of key stakeholders. The high cost of data in the country and the failure of service providers to be transparent about those costs, the risks associated with new technologies such as cybersecurity, large and ineffective
capital expenditure, data governance and the constant developments in regulatory compliance all call for strong IT governance (Ngwenya, 2015).

IT governance forms an integral part of the overall governance process. It assists governing bodies to improve the management and control of IT for the benefit of all stakeholders involved in the value creation process. IT governance is an important foundation to ensure that companies derive optimal value from their IT investments and that IT-related risks are addressed adequately (de Souza Bermejo et al., 2012).

The adoption of an IT governance framework can assist governing bodies in effectively discharging their IT responsibilities. It can help drive value by ensuring returns on IT investments. It can also assist governing bodies in improving communication and building trust amongst key stakeholders by means of disclosure (Ally, 2016; de Souza Bermejo et al., 2012).

The purpose of this chapter was to inform readers of recent developments in the field of IT governance, establish the credibility of the researcher and argue the need and relevance of the study. This was achieved by means of a literature review which introduced the importance of good corporate governance by discussing various definitions and characteristics good corporate governance and developments in this field in South Africa. The review then went on to identify and discuss IT governance as an inseparable component of corporate governance. This was done by providing various IT governance definitions, identifying the characteristics of good IT governance and discussing frameworks for IT governance best practice. The chapter concluded by identifying telecommunications in South Africa as an industry heavily influenced by IT. It discussed the current IT-related challenges and risks faced by South African telecommunications companies in order to establish the need for strong IT governance and disclosure.

Chapter 3 describes the research design and methodology adopted in the study.
CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The purpose of this chapter is to provide an outline of the research design, approach and methodology adopted to achieve the research objectives. This includes a step-by-step explanation of the research process to evaluate the extent of IT governance disclosures in South African telecommunications companies’ annual integrated reports.

3.2 RESEARCH DESIGN

Numerous researchers link the choice of a research design with the research objectives derived from the research problem (Kothari, 2004; O’Leary, 2004). A research design is the overall plan for linking the theoretical research problem to the empirical study. It articulates the following critical components to achieving the research objectives (Kothari, 2004; Mouton, 2001):

- The data required;
- The methods that will be used to collect and analyse this data, and;
- How all these components will assist in answering the research question.

The research objectives derived from the research problem subscribe to the definition of ex post facto empirical research objectives. They intend to evaluate the extent of South African telecommunications companies’ IT governance disclosures according to King IV. They also intend to benchmark current King IV IT governance disclosures to the five IT governance focus areas and stakeholder values by the ITGI and ISACA to determine whether they are sufficient to satisfy stakeholder expectations. Conclusions regarding the companies’ disclosures will be drawn from their individual annual integrated reports which are published for the perusal of the public.

In order to achieve the research objectives, a document analysis forms the research design. A document analysis is a systematic review or evaluation of documents, both printed and electronic (Bowen 2009). The approach adopted in the document design is explained as follows:
To begin with, a qualitative research approach is used to obtain secondary information by means of a literature review. The purpose of the literature review is to (O'Leary, 2004):

- **Inform** readers of developments in the field of governance and IT governance by providing them with contextual information through an up-to-date account and discussion of relevant theories, methods and research studies from the body of literature on the topic at hand;
- **Establish** the researcher’s credibility through a thorough and critical evaluation of relevant research, demonstrated understanding of significant issues and the ability to outline the relationship of the researcher’s work to the rest of the field;
- **Argue** the need for the study and its relevance by setting the current study within the context of prior research. The literature review also identifies gaps which indicate that the study questions are relevant and significant. The review is also used to substantiate the research methodology approach by critically evaluating generally accepted methods adopted for this type of study, highlighting limitations that are common to previous studies and noting the possibility of unwarranted assumptions that could underpin the method.

Secondly, an evaluation of the top three telecommunications company’s annual integrated reports is conducted in order to assess the current IT governance and disclosure practices of telecommunications companies.

### 3.3 RESEARCH METHODOLOGY

According to Kothari (2004), a research methodology is a way of systematically solving the research problem. It can be understood as the science of studying how research is conducted scientifically and includes various steps that are adopted in the study of the research problem, along with the logic behind them. The methodology used in this study can be described in terms of the different steps in the research process. These steps are the following:
Step 1: Identify the research problem

The research problem identified in this study relates to IT governance and disclosures by telecommunication companies as per King IV, and the extent to which current disclosures satisfy the five IT governance focus areas and stakeholder values by ITGI and ISACA. The research topic and questions were formulated through a scientific enquiry to understand the problem thoroughly through an inductive literature review and a rephrasing of the problem in meaningful terms from an analytical point of view.

Step 2: Conduct extensive literature survey

A literature review was conducted in Chapter 2. The purpose of the literature survey, outlined in section 3.2, is to inform readers of recent developments in the field of study, establish the credibility of the researcher and argue the need and relevance of the study. The research is conducted by means gathering secondary data from the University of Johannesburg’s online library catalogues as well as other online academic articles, publications, reports, working papers, textbooks and the internet.

Step 3: Prepare the research design

The design adopted for the purposes of this research is explained in section 3.2.

Step 4: Determine sample design

In order to generalise the findings of the research, a sample needs to be drawn from the population as a representative (O'Leary, 2004). According to Kothari (2004), a population can be described as all items under consideration in any field of inquiry. Additionally, a population can be described as the larger group from which a sample is drawn. For the purposes of this research, the population is identified as all telecommunications companies in South Africa.

Step 5: Sample design

A sample is described as a selection of a few items from the universe for the study purposes (Kothari, 2004). A sample design is the process through which a sample is drawn from the population (Alvi, 2016). For the purposes of this study, a non-
probability sample is drawn from the top telecommunications companies. This sample is the best representative of all the South African telecommunications companies as it is made up of the leading companies in the sector. The sample which is drawn consists of the top three telecommunications companies in the country which are listed on the JSE, namely, Vodacom, MTN, Telkom.

**Step 6: Collect the data**

This study gathers data using a qualitative research approach by examining existing literature and then performing a secondary analysis by means of a checklist and the framework for IT governance disclosures by Joshi et al. (2013). The checklist is used to evaluate the extent to which South African telecommunications companies comply with the King IV IT governance targeted disclosure requirements. The questions are formulated by the researcher based on the disclosure requirements in King IV, principle 12.17. The framework for IT governance disclosures by Joshi et al. (2013) is used to benchmark current disclosures to the five IT governance focus areas and stakeholder values provided by the ITGI and ISACA (Strategic Alignment, Value Delivery, Risk Management, Resource Management and Performance Measurement).

**Step 7: Process and analyse data**

During this process, the annual integrated reports of the top telecommunications companies are analysed to evaluate compliance with King IV IT governance disclosure requirements and assess the extent to which current disclosures satisfy the five IT governance focus areas and stakeholder values of the ITGI and ISACA.

To determine compliance with King IV IT governance disclosures, a checklist, which was formulated from the specific disclosure requirements in King IV 12.17, is be used for appraisal. The checklist can be found in Appendix B1.

To benchmark current disclosures to the five IT governance focus areas and stakeholder values by the ITGI and ISACA, the framework for IT governance disclosures developed by Joshi et al. (2013) is used. This framework can be found in Appendix B2.
The aim of the checklists is to evaluate the precise extent to which the top three South African telecommunications companies comply with the IT governance disclosures of King IV and to determine the extent to which such disclosures satisfy stakeholder expectations according to the five IT governance focus areas and stakeholder values.

Step 8: Interpret the data

In this process, the results of the research are interpreted and connected to the frameworks derived from the literature survey. These include the King IV IT governance targeted disclosure requirements and the Board Briefing on IT Governance 2nd Edition.

The checklist and the IT governance disclosure frameworks are compared with the top three telecommunications companies’ annual integrated reports to determine whether they comply with the King IV IT governance disclosure requirements and whether such disclosures satisfy the five IT governance focus areas and stakeholder values.

3.4 ETHICAL CONSIDERATIONS

It is of the utmost importance that the rights of the companies participating in this study be protected. All ethical concerns were carefully considered and the author is confident that no such issues have arisen as only publicly available sources were used and no alterations were made to that information. Furthermore, no direct links were made between the information disclosed and the top 3 telecommunication companies listed on the JSE which were selected as a sample.

the identities of the companies have been kept confidential and numerical values have been used as a means of identification, e.g. Organisation 1 of the top telecommunications companies.

3.5 CONCLUSION

The purpose of this chapter was to provide an outline on the research design, approach and methodology used to conduct the study. The chapter discussed the steps followed to conduct the research. The population as well as the sample, which consists of South African telecommunications companies, was described. The sample
is based on non-probability sampling of the top three telecommunication companies in South Africa as these are regarded to be a true representative of all telecommunications companies in the country.

The chapter also addressed ethical considerations to ensure that the rights of the companies were protected. The companies’ rights were not breached as their annual integrated reports are available for public perusal. No direct links were made between the information obtained in the analysis and the top three telecommunications companies listed on the JSE that were selected as a sample.

Chapter 4 examines the extent to which South African telecommunications companies demonstrate compliance with the IT governance and disclosure requirements of King IV. It then benchmarks these disclosures to the five IT governance focus areas and stakeholder values of the ITGI and ISACA.
CHAPTER 4: EMPIRICAL STUDY AND RESEARCH FINDINGS

4.1 INTRODUCTION

The background to the study in Chapter 1 and the literature review in Chapter 2 have argued that IT is a critical tool to transform and sustain a company’s business processes. In today’s business environment, it is impossible to remain competitive without the leverage of IT as a strategic enabler (Antwerp Management School, 2016). IT governance is key in ensuring that IT aligns and adds value to business processes. It is an inseparable component of good corporate governance and governing bodies need to apply their minds to understand how IT affects the sustainability of their businesses. Furthermore, as part of the discharge of their responsibilities, governing bodies need to maintain transparency regarding their IT-related activities in order to comply with regulatory requirements and fulfil the expectations of external stakeholders. It was established in the previous chapters that South African listed companies need to disclose their IT governance practices in order to comply with the requirements of King IV. It is therefore critical to evaluate whether the top three telecommunications companies comply with King IV, and the extent to which current disclosures satisfy the five IT governance focus areas and stakeholder values provided by the ITGI and ISACA.

This chapter discusses the empirical study and research findings which evaluate whether the top three telecommunications companies fully comprehend the IT governance disclosure requirements of the King IV report and the extent to which current disclosures satisfy the five IT governance focus areas and stakeholder values.

The data presented below was gathered through an analysis of the top three telecommunications companies’ 2017 annual integrated reports. An evaluation of the annual integrated reports was conducted based on a checklist and the IT governance framework by Joshi et al. (2013) in order to determine whether the companies disclose their IT governance practices.
4.2 IT GOVERNANCE DISCLOSURE REQUIREMENTS

4.2.1 Recommended IT governance disclosure requirements

Companies are increasingly dependent on IT for the creation of business value (Antwerp Management School, 2016). IT is a key source of competitive advantage for companies to increase their intellectual property (IoDSA, 2016). As a result, the need for strong IT governance, which ultimately promotes good corporate governance, has become ever more important (Ally, 2016). The transparency and accountability of IT-related matters is an important component of good IT governance practice (Joshi et al., 2013). Not only is it a method of communicating and building trust with internal and external stakeholders, it is also sign of compliance with regulatory and legislative requirements (Ally, 2016; Joshi et al., 2013).

One of the regulatory requirements that listed telecommunications companies need to comply with is the application of the recommended principles and practices of King IV (Dlamini, 2017). According to King IV, companies ought to comply with the recommended principles and practices by being transparent in how judgement was exercised when considering the practice recommendations of the King IV code (IoDSA, 2016). Companies are also required to show commitment to transparency by providing information on their IT operations according to the requirements of principle 12.17 of the King IV code. Based on the telecommunications companies’ compliance with principle 12.17, conclusions can be drawn as to whether the companies understand the King IV IT governance disclosure requirements and whether they are committed to transparency of IT-related matters.

4.2.2 IT governance disclosure requirements for the purpose of testing

All entities, regardless of their size or structure, should adhere to IT governance practices to ensure that IT sustains and extends their strategies and objectives (Marnewick & Labuschagne, 2011). The adoption and level of sophistication of IT governance practices, however, may vary according to size, industry and relevant regulatory requirements. In general, larger and more regulated companies require more detailed IT governance structures as compared to smaller companies (Ngwenya, 2015).
The King IV report can be applied by all companies, regardless of their nature or size (IoDSA, 2016). The report provides supplementary guidance for sectors that cannot adopt in full the recommended principles and practices in the King IV code (IoDSA, 2016). For JSE-listed companies, King IV requires compliance with the recommended principles and practices based on the ‘apply and explain’ basis (IoDSA, 2016). This means that companies should apply the recommended principles and practices and explain in a narrative account, with reference to the practices that demonstrate application of the principle, how good governance was achieved (IoDSA, 2016). Based on this, telecommunications companies should first apply principle 12 of the code, which states that the governing body should manage information and technology in a way that supports the organisation in setting and achieving its strategic objectives (IoDSA, 2016). Secondly, the companies should put into practice principle 12.17 of the code which sets out what needs to be disclosed in relation to IT governance. All this information should be provided in narrative form and should be material and sufficient enough for stakeholders to make an informed assessment of the company’s IT operations (IoDSA, 2016).

Table 4.1 below contains the IT governance disclosure requirements for the purpose of testing. The first column of Table 4.1 below provides details of the King IV IT governance disclosure requirements. These requirements were used to evaluate the compliance of telecommunications companies. The second column of Table 4.1 contains the checklist with the compliance questions (described in Step 6, section 3.3). The purpose of the test is to determine whether telecommunications companies comply with the King IV IT governance disclosure requirements. The analysis is conducted through a “yes” or “no” method, where a disclosure item is either present or not in the annual integrated report. The last column of Table 4.1 directs the reader to the specific paragraph in this chapter where the research findings and recommended requirements are discussed.
Table 4.1: IT governance disclosure requirements for the purpose of testing

<table>
<thead>
<tr>
<th>TEST</th>
<th>COMPLIANCE REQUIREMENTS</th>
<th>PARAGRAPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. An overview of the arrangements for governing and managing technology and information.</td>
<td>Does the company disclose in its annual integrated report, an overview of the arrangements for governing and managing technology and information?</td>
<td>4.3.1</td>
</tr>
<tr>
<td>2. Key areas of focus during the reporting period, including objectives, significant changes in policy, significant acquisitions and remedial actions taken as a result of major incidents.</td>
<td>Does the company disclose in its annual integrated report the key areas of focus during the reporting period, including objectives, significant changes in policy, significant acquisitions and remedial actions taken as a result of major incidents?</td>
<td>4.3.2</td>
</tr>
<tr>
<td>3. Actions taken to monitor the effectiveness of technology and information management and how the outcomes are addressed.</td>
<td>Does the company disclose in its annual integrated report the actions taken to monitor the effectiveness of technology and information management and how the outcomes were addressed?</td>
<td>4.3.3</td>
</tr>
<tr>
<td>4. Planned areas of future focus.</td>
<td>Does the company disclose in its annual integrated report the planned areas of future focus?</td>
<td>4.3.4</td>
</tr>
</tbody>
</table>
4.3 EMPIRICAL STUDY FINDINGS OF COMPLIANCE WITH KING IV IT GOVERNANCE DISCLOSURE REQUIREMENTS

The results of the compliance test are shown in Table 4.2 below.

Table 4.2: Results on compliance with King IV IT governance disclosures test

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company 1</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Non-compliant*</td>
</tr>
<tr>
<td>Company 2</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Partially Compliant</td>
</tr>
<tr>
<td>Company 3</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Partially Compliant</td>
</tr>
</tbody>
</table>

*Company still applies the recommended principles and practices of King III

Source: (MTN, 2017; Vodacom, 2017; Telkom, 2017)

The numbers in the first row of the table represent the requirements, as numbered in Table 4.1 above. The analysis of results for each King IV IT governance disclosure requirement are presented and explained in the following section.

4.3.1 Test 1-An overview of the arrangements for governing and managing technology and information

Giles (2016) states that in order for companies to comply with this requirement, governing bodies need to disclose how IT is governed and managed in their entities. This includes an overview of their IT governance framework (Brandt, 2016). The King IV report does not provide further detail or explanation of what should be disclosed in terms of IT governance and management arrangements. However, Hamidovic (2010) states that IT governance arrangements include relevant structures, processes and mechanisms to enable IT to deliver value to the business and mitigate IT-related risks. It was therefore expected that the top three telecommunications companies would disclose the structural arrangements that are in place to govern and manage IT in their companies.

Figure 4.1 below illustrates the percentage of the top three telecommunications providers that showed compliance or non-compliance with this requirement in their annual integrated reports.
The results from the analysis of this disclosure item reveal that only two of the three telecommunications companies were compliant and provided an overview of their arrangements for the governance and management of technology and information in their annual integrated reports. The two companies who were compliant included an overview of the boards responsibility towards IT and mentioned that this responsibility is delegated to management through the Chief Information Officer (hereafter CIO). The one company that did not comply with this requirement was still applying the principles and practices of King III due to its financial year end being 31 March 2017.

4.3.2 Test 2-Key areas of focus during the reporting period, including objectives, significant changes in policy, significant acquisitions and remedial actions taken as a result of major incidents

Key focus areas refers to areas that the company specifically pays attention to in order to achieve strategic objectives (Latham, 2017). By establishing key focus areas, a company has a clear strategy for the direction of the entity and clear goals that can be measured for progress (Groom, 2017). A clear focus on specific business areas also ensures that available resources are aligned to the overall strategy of the company to ensure that the resources are used effectively in achieving the objectives (Groom, 2017). By identifying key focus areas in terms of IT, the governing body will ensure
that IT is aligned to the overall strategy of the organisation and as such, any significant changes in IT will support organisational objectives.

Based on the above, it was expected that the top three telecommunications companies would report on any recent IT developments and their impact on the companies’ strategic objectives. This could include recent laws and regulations such as the Protection of Personal Information Act of 2013 or any recent developments by ICASA as discussed in section 2.4.

Figure 4.2 below illustrates the percentage of the top three telecommunications providers which showed compliance or non-compliance with this requirement in their annual integrated reports.

![Figure 4.2: Analysis of key areas of focus during the reporting period, including objectives, significant changes in policy, significant acquisitions and remedial actions taken as a result of major incidents](image)

The findings from the analysis of this disclosure item reveal that only one of the three top telecommunications companies disclosed their key focus areas during the 2017 reporting period. The company identified three key focus areas during 2017 namely: independent assurance of outsourced services; compliance with the Protection of Personal Information Act of 2013 and technology security. Of the two companies that failed this compliance test, one was still applying the principles and practices of King III due to its financial year end being 31 March 2017. The other that did not comply has a financial year end of 31 December 2017. The company mentions that its current
application of King IV is in anticipation of the formal compliance in 2018 and any gaps identified during the year will be identified and addressed during 2018.

4.3.3 Test 3-Actions taken to monitor the effectiveness of technology and information management and how the outcomes are addressed

COBIT 5 states that the effectiveness of IT can be determined by monitoring IT performance against the achievement of strategic objectives (ISACA, 2012). Governing bodies need to establish effective performance measurement processes to ensure that performance is monitored consistently and reliably (ISACA, 2012). When reporting on the effectiveness of IT, governing bodies need to consider IT expenditures and investments and explain how these investments are tracked in order to achieve organisational objectives and create value for stakeholders. They also need to explain how they comply with specific external requirements (ISACA, 2012).

Of the top three telecommunications companies which were evaluated, the expectation was that in this section, governing bodies would disclose recent IT acquisitions, the high operating costs of IT infrastructure and measures taken to ensure that IT remains an effective, value-adding tool for the business. These issues were discussed in section 2.4.

Figure 4.3 below illustrates the percentage of the top three telecommunications companies that showed compliance or non-compliance with this requirement in their annual integrated reports.
Figure 4.3: Analysis of actions taken to monitor the effectiveness of technology and information management and how the outcomes were addressed

The results from the compliance test show that none of the three telecommunications companies disclosed actions they had taken to ensure that technology and information management remained effective and how the outcomes of performance measurement were addressed. The reason non-disclosure could relate to the financial year ends of the companies being before the effect date of 1 April 2017. The two companies who applied King IV have done so in anticipation of the legal compliance in 2018 and any gaps identified will be rectified during 2018. The one company that did not disclose still applies the recommended principles and practices of King III.

4.3.4 Test 4-Planned areas of future focus

These are IT-related areas which the governing body has identified as areas of focus in the short, medium and long term. It was expected that the three telecommunications companies would disclose on future IT projects and issues which they planned to address in the near future.

Figure 4.4 illustrates the percentage of the top three telecommunications companies that showed compliance or non-compliance with the disclosure requirements in their annual integrated report.

Figure 4.4: Analysis of planned areas of future focus
The results from the compliance test revealed that only one of three telecommunications companies complied with this disclosure requirement. The company that complied included details of planned areas of future focus including: Maturity journey to King IV alignment and application; continued focused on independent assurance of wider outsourced services and cybersecurity. Of the remaining two companies that did not comply, one company was still applying the principles and practices of King III due its financial year end being 31 March 2018. The other company has a financial year end of 31 December 2017 and its current application of King IV is in anticipation of the formal compliance in 2018. Any gaps identified during the current period will be addressed in 2018.

**4.4 ANALYSIS OF THE TOTAL COMPLIANCE OF THE TOP THREE TELECOMMUNICATIONS COMPANIES**

The literature review in Chapter 2 discussed the significance of IT governance. It highlighted the impact of IT on organisations and identified IT governance as an inseparable component of a company's corporate governance. The chapter also discussed the importance of IT governance transparency. IT governance transparency is important in ensuring that companies comply with legislative requirements such as King IV, which requires them to disclose their IT-related matters. It is also a sign of good faith to stakeholders as it maintains effective communication of critical, IT-related matters necessary for stakeholders to make an informed assessment of the company's operations.

From the analysis provided above, it is clear that none of the top three telecommunications companies in the country were fully compliant (100%) with the IT governance disclosure requirements of King IV. The low levels of compliance can be explained by the following factors:

- One of the three telecommunications companies still apply the recommended principles and practices of King III due to its financial year end being 31 March 2018; and
- The two companies that were partially compliant also had a financial year end that is before the King IV effective date of 1 April 2018.
Both companies state that current application of the code is in anticipation of the legal compliance in 2018 and it is expected that items that were not applied will be identified and rectified in 2018.

As a result of the low levels of compliance, only a few IT governance issues which were discussed in section 2.4 were addressed in the IT governance disclosures of the top three telecommunications companies.

4.5 RECOMMENDED IT GOVERNANCE FOCUS AREAS AND STAKEHOLDER VALUE DISCLOSURES

De Haes et al. (2016) argue that IT governance disclosures are a critical piece of non-financial reporting. This is because investors have become increasingly aware of the critical impact of IT on business and are willing to invest more in companies that have their digital assets under control (De Haes et al., 2016). The ITGI (2003) has identified five IT governance focus areas which are useful to both internal and external stakeholders (Strategic Alignment, Value Delivery, Risk Management, Resource Management and Performance Measurement). According to the ITGI (2003), these five focus areas are important in ensuring that IT sustains and adds value to the business. The ITGI (2003) also encourage companies to create constructive relationships and effective communication between the business and IT as well as with external stakeholders. This can be achieved by reporting on each focus area to afford stakeholders the opportunity to assess the extent to which their expectations in the context of IT governance are being met by company practices (Joshi et al., 2013).

As discussed in section 2.3.3.3, while the ITGI provides guidance on how IT should be governed in companies and encourages the transparency of IT governance practices, it does not provide a framework for disclosure of IT-related matters. Joshi et al. (2013) have since developed their own framework based on the five IT governance focus areas and stakeholder values, which can be used to assess the disclosure of IT governance practices in companies. This framework is adopted in this study to evaluate whether the current King IV IT governance disclosures of the top three telecommunications companies are sufficient to satisfy stakeholder expectations.
4.6 IT GOVERNANCE FOCUS AREAS AND STAKEHOLDER VALUE DISCLOSURES FOR THE PURPOSE OF TESTING

In their self-developed framework for IT governance disclosures, Joshi *et al.* (2013) have adopted the five IT governance focus areas and stakeholder values as a basis for reporting. Joshi *et al.* (2013) further identify expected items of disclosure for each of the five focus areas. It is important to note that because Resource Management is embedded in all the other focus areas, the framework of Joshi *et al.* (2013) does not evaluate this focus area on its own but rather incorporates all essential issues of resource allocation across all the other focus areas.

Table 4.3 below illustrates the framework for IT governance disclosures by Joshi *et al.* (2013).

**Table 4.3: Framework for IT governance disclosures by Joshi, Bollen and Hassink (2013)**

<table>
<thead>
<tr>
<th>Test</th>
<th>EXPECTED ITEMS OF DISCLOSURE</th>
<th>PARAGRAPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IT Strategic Alignment</td>
<td>• Information on IT governance structural arrangements e.g. existence of Chief Information Officer (CIO), IT steering committee.</td>
<td>4.7.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. IT Value Delivery</td>
<td>• Information on new and existing IT projects.</td>
<td>4.7.2</td>
</tr>
<tr>
<td></td>
<td>• Information on the role of IT in achieving business goals.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Information about IT outsourcing, IT performance evaluation and IT training.</td>
<td></td>
</tr>
<tr>
<td>3. IT Risk Management</td>
<td>• Information on IT risk management, for example, security plan and policy.</td>
<td>4.7.3</td>
</tr>
<tr>
<td>4. IT Performance Measurement</td>
<td>• Explicit information on IT expenditure.</td>
<td>4.7.4</td>
</tr>
</tbody>
</table>
The first column of Table 4.3 represents the four focus areas and stakeholder values. The second column represents the specific items of disclosure for each of the focus areas which must be reported on. These items are used as the basis to benchmark whether the current King IV IT governance disclosures of the top three telecommunications companies are sufficient to satisfy stakeholder expectations. The analysis is conducted through a “yes” or “no” method where a disclosure item is either present or not in the King IV IT governance disclosures of the telecommunications companies.

4.7 RESEARCH FINDINGS ON DISCLOSURES OF IT GOVERNANCE FOCUS AREAS AND STAKEHOLDER VALUES

The results of the disclosure test are reflected in the Table 4.4 below.

Table 4.4: Results on disclosures of IT governance focus areas and stakeholder values

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company 1 (Applies King III)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Company 2</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Company 3</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

The numbers in the first row of the table represent the requirements as numbered in Table 4.3 above. The analysis of results for each focus area and their expected items of disclosure are presented and explained in the following section.

Source: (MTN, 2017; Vodacom, 2017; Telkom, 2017)

4.7.1 Test 1- IT Strategic Alignment

IT strategic alignment typically refers to how companies integrate IT strategy, business strategy, IT structures and business structures (De Haes & Van Grembergen, 2015). Joshi et al. (2013) state that when disclosing IT strategic alignment, companies seldom describe guidelines or procedures relating to IT business alignment under this category. They do, however, very often disclose the structural arrangements that are in place in order to achieve IT business strategic alignment across the business (Joshi et al., 2013). A typical example of IT strategic alignment disclosure would be on the
existence of a chief information officer, IT steering committee or collaborations with other committees or departments (Joshi et al., 2013). It is important to disclose such information as it provides assurance to stakeholders that the company has an IT governance structure and policies in place to achieve IT business alignment (Joshi et al., 2013).

Figure 4.5 below illustrates the percentage of the top three telecommunications companies that disclosed the expected items of disclosure for IT Strategic Alignment according to King IV.

![Figure 4.5: Analysis of expected items of disclosure for IT Strategic Alignment](image)

The results of the disclosure test revealed that two of the three telecommunications companies disclosed IT Strategic Alignment in their current King IV IT governance disclosures. This information was to comply with the King IV IT governance disclosure requirement: An overview of the arrangements for governing and managing technology and information. The company that did not disclose this information was still applying the principles and practices of King III.

### 4.7.2 Test 2-IT Value Delivery

As discussed in section 2.3.3.3, value delivery is chiefly associated with the on-time and within-budget delivery of acceptable quality IT products and services (ITGI, 2003). Under this category, companies are expected to report on different IT value-adding issues such as the role of IT in achieving business objectives and the strategic importance of IT in creating a competitive advantage (Joshi et al., 2013). Such
disclosure should include the discussion of new and existing IT projects and how they add value to the company. De Haes and Van Grembergen (2015) further add that effective IT value delivery can only be achieved when the use of IT resources is optimised. As such, companies should also disclose IT resource issues such as productive, progressive and effective practices which add value, for example, IT training, IT outsourcing and IT performance. From a stakeholder’s perspective, information on IT value delivery is useful as it enables stakeholders to make a better assessment of the company’s financial stability as well as its current and future plans on IT and information management.

Figure 4.6 below illustrates the percentage of the top three telecommunications companies that disclosed on the expected items of disclosure for IT Value Delivery under their King IV IT governance disclosures.

![Figure 4.6: Analysis of expected items of disclosure for IT Value Delivery](image)

The results of the disclosure test show that only one of the three telecommunications companies disclosed IT Value Delivery. The information was disclosed under the King IV IT governance disclosure requirements: key areas of focus during the reporting period, including objectives, significant changes in policy, significant acquisitions and remedial actions taken as result of major incidents and planned areas of future focus. Of the two companies that did not disclose, one company was still applying the principles and practices of King III.
4.7.3 Test 3-IT Risk Management

IT risk management was described in section 2.3.3.3 as the way in which a company addresses IT-related risks and how IT is used to manage business risks (ITGI, 2003). Examples of IT risks include IT project risks, IT infrastructure risks, business continuity and information risk (Parent & Reich, 2009). When reporting on IT risk management, the ITGI (2003) states that top management is responsible for planning and developing IT risk policies and for providing insight into all IT-related business risks. It is therefore expected that companies disclose information on their risk management policies, including their IT system security policies and plans (Joshi et al., 2013).

Figure 4.7 below illustrates the percentage of the top three telecommunications companies that disclosed the expected items for IT risk management under their King IV IT governance disclosures.

Figure 4.7: Analysis of expected items of disclosure for IT risk management

The results of the disclosure test revealed that none of the three telecommunications companies disclosed IT risk management. This is because none of the four IT governance disclosure requirements explicitly requires companies to disclose items such as IT security plans and policies. While such information can be disclosed under the King IV IT governance disclosure item: An overview of the arrangements for governing and managing technology and information, companies only disclose their structural arrangements and collaborations between functions, including risk management. Updates and significant changes in IT risk management policies can also be reported under: Key areas of focus during the reporting period, including
objectives, significant changes in policy, significant acquisitions and remedial actions taken as a result of major incidents. One of the three companies that failed the disclosure test was still applying the principles and practices of King III.

4.7.4 Test 4-IT Performance Measurement

This is the process of tracking the achievement of the objectives of the company and compliance with specific external requisites. IT performance measurement is specifically related to the transparency of IT budgets and IT investments (De Haes et al., 2016). Given that IT budgets and IT investments are matters for the governing body, they should also be disclosed under IT governance disclosures (Joshi et al., 2013). It is important to note, however, that companies naturally report on their IT expenditure in their financial statements and as such, information on IT expenses may not necessarily be reflected under IT governance.

Figure 4.8 below illustrates the percentage of the top three telecommunications companies that disclosed the expected items for IT performance measurement under their King IV IT governance disclosures.

![Figure 4.8: Analysis of expected disclosure items for IT performance measurement](image)

The results of the disclosure test revealed that none of the top three telecommunications companies disclosed IT performance measurement. King IV provides for the disclosure of IT performance measurement under the requirement: Key areas of focus during the reporting period, including objectives, significant
changes in policy, significant acquisitions and remedial actions taken as a result of major incidents. One of the three companies that was assessed was still applying the principles and practices of King III.

4.8 DEDUCTIONS FROM BENCHMARKING BETWEEN KING IV IT GOVERNANCE DISCLOSURES AND THE FIVE IT GOVERNANCE FOCUS AREAS AND STAKEHOLDER VALUES

Based on the assessment above, a conclusion can be drawn that the King IV IT governance disclosure requirements are aligned to the five IT governance focus areas and stakeholder values of the ITGI and ISACA. Therefore, companies which comply with the disclosure requirements should provide sufficient information to satisfy stakeholder expectations. The King IV IT governance disclosure requirements may provide for more comprehensive disclosures in companies, however, the low levels of compliance by the three telecommunications companies indicate that governing bodies may need greater clarity on certain items of disclosure. It is recommended that companies consider the five IT governance focus areas and stakeholder values when applying their minds to what needs to be disclosed in order to comply with King IV requirements.

4.9 CONCLUSION

This chapter established the extent to which the top three telecommunications companies in South Africa comply with the IT governance disclosure requirements of King IV. The chapter also benchmarked current King IV IT governance disclosure requirements with the five IT governance focus areas and stakeholder values to establish whether they were sufficient to satisfy stakeholder expectations.

In the analysis of their annual integrated reports, it was found that none of the top three telecommunications companies was fully compliant with the IT governance disclosure requirements of King IV. The reasons for the low levels of compliance can be attributed to the two of the companies assessed having a financial year end which falls before 1 April 2017. These companies were not legally required to comply with King IV. One of these companies has already begun the process of applying King IV however there are still areas which need to be improved. It is unclear why the third company has not
fully complied with the IT governance disclosure requirements of King IV as its financial year end falls under the effective date.

The results of the benchmarking of the King IV IT governance disclosure requirements and the five IT governance focus areas and stakeholder values of the ITGI and ISACA indicate that the requirements of King IV are sufficient to satisfy stakeholder expectations. Where companies require clarity on specific disclosure items of King IV, they can refer to the five IT governance focus areas and stakeholder expectations.

Chapter 5 which follows presents a summary of the key findings of the research and explains how the objectives of the study were achieved.
CHAPTER 5: CONCLUSION

5.1 INTRODUCTION

The primary objective of this research was to evaluate the extent to which telecommunications companies comply with the King IV IT governance disclosure requirements and to benchmark current disclosures against the five IT governance focus areas and stakeholder values in order to determine whether they are sufficient to satisfy stakeholder expectations. This chapter summarises the research findings of the literature review in Chapter 2 and the empirical study in Chapter 4. Future areas of research are also identified.

5.2 DEDUCTIONS

5.2.1 Literature Review

The literature review in Chapter 2 indicates that IT presents many opportunities for South African telecommunications companies. The evolution of technology and the increase in digitised products has led to a high investment in IT infrastructure in order to maintain a competitive advantage. However, IT-related activities have also brought about important risks and governance issues that call for stronger IT governance.

The key findings from the literature review are as follows:

- Transparency and accountability are important elements of robust corporate governance;
- The governing body’s willingness to maintain transparency and accountability is a sign of good faith to external stakeholders who rely on the information disclosed by the company to make informed decisions regarding the company’s operations;
- IT governance is the responsibility of the governing body and an inseparable component of good corporate governance;
- IT governance can assist governing bodies to identify the right IT investment opportunities, aligned to the overall objectives of the business;
• IT governance can also assist governing bodies to derive value from their IT investments through the reasonable allocation of resources and the effective mitigation of risks associated with IT;

• Transparency of IT-related matters has become a critical part of IT governance, with stakeholders demanding enough information on IT to make an informed decision about a company’s overall governance;

• Adopting an IT governance framework can assist governing bodies in discharging their IT governance responsibilities;

• COBIT 5 and the Board Briefing on IT Governance 2nd Edition are two frameworks developed by the ITGI and ISACA which can be used for effective IT governance in companies;

• While both of the above frameworks promote transparency and encourage companies to communicate their IT-related activities, none of them provide disclosure items on IT governance;

• The Board Briefing on IT Governance 2nd Edition does, however, identify five IT governance focus areas and stakeholder values which companies should consider when reporting on their IT governance;

• The King Reports on Corporate Governance have progressively focused on IT and have come to provide guidance on IT governance and disclosures.

• King III was the first corporate governance report to provide information on IT governance and disclosures, however, it did not provide guidance on what companies needed to disclose regards to IT governance. This resulted in disclosure being treated as a ‘tick box’ exercise, with critical information not being disclosed;

• King IV now has specific IT governance disclosure items. It has an increased focus on transparency, requiring companies to give a narrative account of how IT is governed and managed;

• It is unclear whether the King IV governance disclosure requirements will enable companies to disclose sufficient information to satisfy stakeholder expectations;

• The top three South African telecommunications companies need to comply with King IV as they are listed companies;
There has been a significant increase in IT investment in the telecommunications industry, with the top three telecommunications companies leading the way. Much of this spend is due to increased demand for digitised products from the South African market;

Telecommunications companies have, however, faced significant IT governance challenges such as high operating costs, cybersecurity, inefficient and minimal returns on capital expenditure, data governance and regulatory changes.

Much of these issues have drawn the attention of stakeholders who have demanded transparency in this regard.

5.2.2 Empirical Study

None of the top three telecommunications companies is fully compliant with the IT governance disclosure requirements of King IV;

One of the three companies is still applying the principles and practices of King III due to its financial year end being before the King IV effective date of 1 April 2018;

The two companies that were partially compliant also have financial year ends which fall before the King IV effective date however the companies applied the King IV IT governance disclosures in anticipation of legal compliance in 2018 and any gaps will be identified and rectified accordingly.

The King IV IT governance disclosure requirements and the five IT governance focus areas and stakeholder values are of a similar nature and therefore sufficient to satisfy stakeholder expectations; and

Companies which do not fully understand the King IV IT governance disclosure requirements can refer to the five IT governance focus areas and stakeholder expectations for greater clarity.

5.3 POSSIBLE AREAS FOR FUTURE RESEARCH

The following possibility for future research is recommended:

An analysis of the top 40 JSE-listed companies and their compliance with King IV IT governance disclosures.
5.4 CONCLUSION

This study investigated the IT governance disclosures of the top three telecommunications companies. The results identified a number of risks and IT-related issues in the telecommunications industry that point to a need for strong IT governance and increased transparency. With telecommunications companies under increased pressure, it important that they build and sustain trust with external stakeholders by communicating sufficient information on their IT governance operations. The annual integrated report, supplemented by the King IV IT governance disclosure requirements, provides an opportunity for companies to provide a narrative account of IT governance matters.

Based on the study findings, the top three telecommunications companies are not fully complaint with the IT governance disclosure requirements of King IV. One company still continues to apply King III due to its financial year end falling before the official effective date of 1 April 2017. The other companies also have financial year ends which falls outside the effective date, however the companies applied King IV in anticipation of legal compliance in 2018. The companies state that any gaps identified during this period will be rectified in 2018. In order to better understand the requirements for future application and compliance, the companies should consider applying their minds to the five IT governance focus areas and stakeholder values of the ITGI and ISACA. By carefully considering the expectations of stakeholders, telecommunications companies will be able to disclose sufficient, relevant and material information necessary to earn and maintain the trust of stakeholders.
REFERENCE LIST


A1: Summary of IT governance principles and recommended practices in King III

<table>
<thead>
<tr>
<th>IT GOVERNANCE PRINCIPLE</th>
<th>RECOMMENDED PRACTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5.1 The board should be responsible for IT governance</strong></td>
<td>5.1.1 The board should assume responsibilities for the governance of IT and place it on the board agenda</td>
</tr>
<tr>
<td></td>
<td>5.1.2 The board should ensure that an IT charter and policies are established and implemented</td>
</tr>
<tr>
<td></td>
<td>5.1.3 The board should ensure promotion of an ethical culture and awareness and of a common IT language</td>
</tr>
<tr>
<td></td>
<td>5.1.4 The board should ensure that an IT internal control framework is adopted and implemented</td>
</tr>
<tr>
<td></td>
<td>5.1.5 The board should receive independent assurance on the effectiveness of the IT internal controls</td>
</tr>
<tr>
<td><strong>5.2 IT should be aligned with the performance and sustainability objectives of the company</strong></td>
<td>5.2.1 The board should ensure that the IT strategy is integrated with the company’s strategic and business processes</td>
</tr>
<tr>
<td></td>
<td>5.2.2 The board should ensure that there is a process in place to identify and exploit opportunities to improve</td>
</tr>
<tr>
<td>5.3 The board should delegate to management the responsibility for the implementation of an IT governance framework</td>
<td>the performance and sustainability of the company through the use of IT</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>5.3.1 Management should be responsible for the implementation of the structures, processes and mechanisms for the IT governance frameworks</td>
<td>5.3.2 The board may appoint an IT steering committee of similar function to assist with its governance of IT</td>
</tr>
<tr>
<td>5.3.4 The CEO should appoint a CIO responsible for the management of IT</td>
<td>5.3.4 The CIO should be a suitably qualified and experienced person who should have access to and interact regularly on strategic IT matters with the board and/or appropriate board committee and executive management</td>
</tr>
<tr>
<td>5.4 The board should monitor and evaluate significant IT investments and expenditure</td>
<td>5.4.1 The board should oversee the value delivery of IT and monitor the return on investment from significant IT projects</td>
</tr>
<tr>
<td>5.4.2 The board should ensure that intellectual property contained in information systems is protected</td>
<td>5.4.3 The board should obtain independent assurance on the IT governance and controls supporting outsourced IT services</td>
</tr>
</tbody>
</table>
| 5.5 IT should form an integral part of the company's risk management | 5.5.1 Management should regularly demonstrate to the board that the company has adequate business resilience arrangements in place for disaster recovery  
5.5.2 The board should ensure that the company complies with IT laws and that IT-related rules, codes and standards are considered. |
|---|---|
| 5.6 The board should ensure that information assets are managed effectively | 5.6.1 The board should ensure that there are systems in place for the management of information which should include information security, information management and information privacy  
5.6.2 The board should ensure that all personal information is treated by the company as an important business asset and is identified  
5.6.3 The board should ensure that an Information Security Management System is developed and implemented |
| 5.7 A risk committee and audit committee should assist the board in carrying out its IT responsibilities | 5.7.1 The risk committee should ensure that IT risks are adequately addressed  
5.7.2 The risk committee should obtain appropriate assurance that controls are in place and are effective in addressing IT risks |
5.7.3 The audit committee should consider the use of technology to improve audit coverage and efficiency

Source: IoDSA (2009: 39-41)

A2: Summary of IT Governance Principle 12 and its recommended practices per King IV

**Principle 12:** The governing body should govern technology and information in a way that supports the organisation setting and achieving its strategic objectives.

**RECOMMENDED PRACTICES**

10. The governing body should assume responsibility for the governance of technology and information by setting the direction for how technology and information should be addressed in the organisation.

11. The governing body should approve policy that articulates and gives effect to its set direction on technology and information.

12. The governing body should delegate to management the responsibility to implement and execute effective technology and information management.

13. The governing body should exercise ongoing oversight of technology, and information management and, in particular, oversee that it results in the following:

   a) Integration of people, technologies, information and processes across the organisation.

   b) Integration of technology and information risks into organisation-wide risk management.

   c) Arrangements to provide for business resilience.

   d) Proactive monitoring of intelligence to identify and respond to incidents, including cyber-attacks and adverse social media events.
<p>| | |</p>
<table>
<thead>
<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td>14.</td>
<td>The governing body should exercise ongoing oversight of the management of information and, in particular, oversee that it results in the following:</td>
</tr>
<tr>
<td></td>
<td>a) The leveraging of information to sustain and enhance the organisation's intellectual capital.</td>
</tr>
<tr>
<td></td>
<td>b) An information architecture that supports confidentiality, integrity and availability of information.</td>
</tr>
<tr>
<td></td>
<td>c) The protection of privacy of personal information.</td>
</tr>
<tr>
<td></td>
<td>d) The continual monitoring of security of information.</td>
</tr>
<tr>
<td>15.</td>
<td>The governing body should exercise ongoing oversight of the management of technology and, in particular, oversee that it results in the following:</td>
</tr>
<tr>
<td></td>
<td>a) A technology architecture that enables the achievement of strategic and operational objectives.</td>
</tr>
<tr>
<td></td>
<td>b) The management of risks pertaining to the sourcing of technology.</td>
</tr>
<tr>
<td></td>
<td>c) Monitoring and appropriate responses to developments in technology, including the potential opportunities and the management of disruptive effects on the organisation and its business model.</td>
</tr>
<tr>
<td>16.</td>
<td>The governing body should consider the need to receive periodic independent assurance on the effectiveness of the organisation's technology and information arrangements, including outsourcing services.</td>
</tr>
<tr>
<td>17.</td>
<td>The following should be disclosed in relation to technology and information:</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>a)</td>
<td>An overview of the arrangements for governing and managing information technology and information.</td>
</tr>
<tr>
<td>b)</td>
<td>Key areas of focus during the reporting period, including objectives, significant changes in policy, significant acquisitions and remedial actions taken as a result of major incidents</td>
</tr>
<tr>
<td>c)</td>
<td>Actions taken to monitor the effectiveness of technology and information management and how the outcomes were addressed.</td>
</tr>
<tr>
<td>d)</td>
<td>Planned areas of future focus.</td>
</tr>
</tbody>
</table>

*Source: IoDSA (2016: 62-63)*
APPENDIX B: King IV Self-Developed Checklist and Framework for IT Governance Disclosures by Joshi, Bollen and Hassink (2013)

B1: King IV self-developed checklist

<table>
<thead>
<tr>
<th>King IV IT governance disclosure compliance questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the company disclose in its annual integrated report an overview of the arrangements for governing and managing technology and information?</td>
</tr>
<tr>
<td>2. Does the company disclose in its annual integrated report the key areas of focus during the reporting period, including objectives, significant changes in policy, significant acquisitions and remedial actions taken as a result of major incidents?</td>
</tr>
<tr>
<td>3. Does the company disclose in its annual integrated report the actions taken to monitor the effectiveness of technology and information management and how the outcomes were addressed?</td>
</tr>
<tr>
<td>4. Does the company disclose in its annual integrated report the planned areas of future focus?</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>FOCUS AREA</th>
<th>EXPECTED ITEMS OF DISCLOSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Strategic Alignment</td>
<td>- Information on IT governance structural arrangements e.g. existence of CIO, IT steering committee.</td>
</tr>
<tr>
<td>IT Value Delivery</td>
<td>- Information on new and existing IT projects.</td>
</tr>
<tr>
<td></td>
<td>- Information on the role of IT in achieving business goals.</td>
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<td>IT Performance Measurement</td>
<td>- Explicit information on IT expenditure</td>
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