



Department of Computing Sciences

# Sustainability Reporting Guidelines for Higher Educational Institutions in South Africa

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# Declaration of Own Work

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### DECLARATION:

In accordance with Rule G5.6.3, I hereby declare that the above-mentioned treatise/ dissertation/ thesis is my own work and that it has not previously been submitted for assessment to another University or for another qualification.

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DATE: 4 December 2018

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## **Abstract**

In the higher education sector, a number of Higher Education Institutions (HEIs) are playing a leading role in promoting sustainable initiatives. Managing these initiatives effectively can be a complex task and requires data and information from multiple sources. HEIs must ensure financial sustainability, social sustainability, environmental sustainability and educational sustainability. HEIs in South Africa are required to produce a sustainability report for the Department of Higher Education and Training (DHET) on an annual basis. HEIs are not required to use a specific set of guidelines to create a report that complies with the DHET reporting requirements.

HEIs face a number of challenges in effectively managing and reporting on sustainability information, such as poor sharing and communication of information and combining information from different sources to form an integrated report. Well-structured guidelines that adheres to institution standards and governmental reporting requirements can effectively streamline the sustainability reporting process. This study investigates the requirements and challenges of effective sustainability reporting for HEIs in South Africa. A set of Global Reporting Initiative (GRI) G4 guidelines were reworked to support effective sustainability reporting by South African HEIs.

Nelson Mandela University is one such HEI, which is affected by the challenges of managing and reporting on strategic sustainability information. Nelson Mandela University was therefore used as a case study in this research study. An in-depth study was done exploring how prominent international universities apply the GRI guidelines to contribute and generate integrated sustainability reports for their specific HEIs and general reporting needs and requirements. Additionally, an in-depth study of the German integrated reporting guidelines for HEI's was conducted. Furthermore, a study of the South African DHET reporting requirements was conducted to explore the similarities that exists between the GRI (G4) guidelines and DHET requirements. The guidelines were evaluated by Nelson Mandela University personnel and academics. The final product consists of a set of GRI guidelines that have been adapted to satisfy both GRI and DHET requirements for integrated sustainability reporting for South African HEIs.

The contributions from this study are a set of GRI G4 guidelines and examples for integrated sustainability reporting and management for HEIs in South Africa. The set of adapted GRI guidelines for HEIs in South Africa was created with the assistance of the strategic management departments at Nelson Mandela University. The GRI guidelines have been reworded to be specifically applicable to South African HEIs and contain instructions and guidelines on how to generate an integrated sustainability report for a South African HEI.

**Keywords:** Integrated Sustainability Reporting, Higher Education, Global Reporting Initiative.

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# Glossary

AASHE	Association for the Advancement of Sustainability in Higher Education
CERES	Coalition for Environmentally Responsible Economics
CSR	Corporate Social Responsibility
DHET	Department of Higher Education and Training
DMA	Disclosures on Management Approach
GASU	Graphical Assessment of Sustainability in Universities
GRI	Global Reporting Initiative
GULF	Global University Leaders Forum
HEI	Higher Education Institution
IoDSA	Institute of Directors in Southern Africa
ISCN	International Sustainable Campus Network
SD	Sustainable Development
SDIs	Sustainable Development Indicators
STARS	Sustainability Tracking, Assessment and Rating System
STARS	Sustainability Tracking, Assessment and Rating System
STAUNCH	Sustainability Tool for Auditing University Curricula in Higher Education
TBL	Triple Bottom Line

# Chapter 1. Introduction

## 1.1 Background

Sustainability development and concepts of sustainability have been addressed by many authors in different sectors (Belu, Chiou, Tseng, & Cioca, 2014; Biasutti & Frate, 2017; Cioca, Ivascu, Rada, Torretta, & Ionescu, 2015; Holdsworth & Thomas, 2016; Scott, 2014). The Brundtland Report contains one of the most recognised definitions of sustainable development defining it as: “development that meets the needs of the present without compromising the ability of future generations to meet their own need” (Brundtland, 1987, p. 41). The term sustainability integrates the three spheres of environmental, social and economic responsibilities (triple-bottom-line) (Gimenez, Sierra, & Rodon, 2012). These three spheres are interconnected and have equal importance. Development of sustainable practices must integrate environmental, social and economic responsibilities by achieving a balance between them (Ragazzi & Ghidini, 2017).

According to Kamala, Wingard and Cronjé (2015) listed South African companies that produce sustainability reports experience an expectation gap in their reports. There is a lack of information necessary to satisfy the decision-making needs of the users of the reports. Mearns (2016) conducted a study to investigate the sustainability reporting practices of three listed Johannesburg Stock Exchange companies. Three different evaluation techniques were used to evaluate the sustainability of each of the three companies. The study found that the Global Reporting Initiative (GRI) (Global Reporting Initiative, 2011a) was the most comprehensive technique used to satisfy sustainability reporting requirements in South Africa.

In the last decade, organisations have experienced a steady rise in public demand for transparency relating to the organisation’s ecological footprint (Mathibe, 2011). Organisations have met this worldwide trend by implementing sustainability reporting (Gilbert, Buck, & Gardiner, 2010). In South Africa, the Public Investment Corporation use a corporate governance rating matrix to evaluate the top 100 companies on the Johannesburg Stock Exchange to guide improvement in these companies (Network for Business Sustainability, 2017).

The implementation of sustainability reporting is vital for achieving a sustainable global economy (Global Reporting Initiative, 2014c). GRI (2011b, p. 2) states that the goal of sustainability reporting is to “meet the needs of the present without compromising the ability of future generations to meet their own needs”. Sustainability reporting has become widespread practice in listed organisations of all sizes. It acts as a means for indicating the health of an organisation and promotes sustainable and inclusive growth (Global Reporting Initiative, 2014c). Organisations can use these reports to boost their business strategies and promote growth. Sustainability reports drive innovation within the organisations by

informing the market of their progress. Sustainability reports also add value to a number of different areas within organisations namely (Global Reporting Initiative, 2014c):

- Building trust with stakeholders and customers by reporting on their non-financial performance, demonstrating leadership and accepting accountability for their actions;
- Improving processes and systems can lead to cost reductions, by continually monitoring energy consumption, materials used and waste produced;
- Progressing vision and strategy by analysing strengths and weaknesses, to determine more robust organisational visions by making sustainability reporting an integral part of their strategies;
- Reducing compliance costs by measuring sustainability performance, to ensure that organisations meet regulatory requirements; and
- Create a competitive advantage by being a leader and innovator, organisations have a stronger bargaining position for attractive investments and entering new emerging markets.

The Stockholm Declaration of 1972 (Stockholm 1972) was the first declaration to reference the importance of sustainability in the education sector. Although the sustainability initiatives of Higher Education Institutions (HEIs) were not directly mentioned, the principles in the declaration have relevance to this study. The declaration discussed the interdependence between the environment and humanity and is one of the first documents to recognise inter-generational and intra-generational equity amongst humans (Wright, 2002). The declaration has a clear human-centred focus stating: “The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world” (Stockholm 1972, p. 1). Most sustainability efforts in HE have their origins in the Stockholm Declaration of 1972. Since 1972 more than 1400 HEIs worldwide have signed a Sustainability in Higher Education Declaration (Grindsted, 2011). However, studies indicates that signing Sustainability in Higher Education Declarations does not necessarily lead to the implementation of the principles of sustainability set forth by the declaration (Bekessy, Samson, & Clarkson, 2007).

HEIs are among the world’s leading public institutions, responsible for the education of citizens and the advancement of knowledge. HEIs are encouraged to increase their transparency and accountability of their corporate business (King, 2009). Several mechanisms report on the performance of HEIs. Among these mechanisms are the Shanghai Jiao Tong University’s Academic Ranking of World Universities, The Times Higher Education’s World University Rankings and the Centre for Higher Education for German institutions (Bice & Coates, 2016).

Without shareholder investors organisations generally measure success, by managing long term performance issues which often include sustainability issues (Adams & McNicholas, 2007). Adams (2013) suggests some contributing factors namely:

- unimaginative, aging and male leadership restricting collaborative organisational focus that is required for sustainability initiatives;
- HEIs tend to adhere to traditional norms about appropriate institution structure leading to siloed thinking;
- territorialism leadership which works against collaboration which is required for sustainability integration;
- mandatory reporting requirements for HEIs focusing on trivial issues rather than the holistic material impacts of the institution;
- business case issues receiving less focus (such as: reducing energy consumption, increased staff satisfaction, employability of future students and attracting good staff); and
- little understanding of what a best practice for HEIs regarding sustainability might represent.

In certain instances there are concerns about over-reporting due to the proliferation of reporting requirements on HEIs (*Review of Reporting Requirements for Universities*, 2012). Others assert that more considered transparency is required on particular issues (Kuh, 2007; McPherson & Shulenburger, 2006). Much of the critique is focused on public disclosure of outcomes and academic standards by HEIs (Dill & Soo, 2005).

There are recognised repositories for reports ([www.corporateregister.com](http://www.corporateregister.com), [www.unglobalcompact.org](http://www.unglobalcompact.org) and [www.globalreporting.com](http://www.globalreporting.com)) compliant with the AA1000 Standards, United Nations Global Compact Principles and the GRI guidelines (De Villiers, Chen, Chenxing, & Zhu, 2014). As such, reporting institutions using one of these frameworks, will publish their reports in these databases, where a sector search revealed that only a small portion of HEIs, worldwide, publish sustainability reports. HEIs are lagging in reporting on sustainability issues in relation to concerning their corporate partners (Adams, 2013). HEIs websites and strategic statements only address sustainability issues on a superficial level, in which sustainability reporting neglects substantial environmental, social and governance footprints (Adams, 2013). This is also reflected by Bice and Coates, (2016) suggesting that HEIs' reporting of information is largely financial in nature and based around traditional reporting frameworks.

HEIs are in a unique position to demonstrate principles of stewardship and awareness of the natural environment (Neumayer & Dahle, 2001). The greening of campus environments is a means to accomplish these principles within HEI environments. Greening within the context of HEIs refers to the reduction of environmental impacts based on the decisions of the institution and promoting environmental awareness within the different human communities (Neumayer & Dahle, 2001).

## **1.2 Relevance of Research**

Nelson Mandela University in Port Elizabeth, South Africa, similar to other HEIs in South Africa, is affected by the heightened awareness in sustainability, which affects the manner of decision-making and reporting practices at the strategic level of the organisation. Decision-making at the strategic level of the organisation should consider all spheres of sustainability to ensure the long-term future of the institution.

The increased awareness in sustainability reporting at Nelson Mandela University is highlighted by the university's Vision 2020 strategic plan (Nelson Mandela Metropolitan University, 2008). Sustainability is a key theme throughout the Vision 2020 strategic plan, which is highlighted by the development of several strategic priorities that will aim to secure the long-term sustainability of the institution.

A large number of sustainability data is generated and recorded by Nelson Mandela University, however the use of sustainability data within the institution is limited. South African universities are required to produce an annual report to the Department of Higher Education and Training (DHET). The GRI guidelines are widely used, sustainability reporting guidelines, in the corporate world (Fuente, García-Sánchez, & Lozano, 2017). Combining the DHET requirements with the GRI guidelines will enable South African universities to produce integrated reports that can be used at a strategic level of governance.

## **1.3 Problem Statement**

Sustainability Reporting has emerged as a common practice of 21<sup>st</sup>-century business. In order for organisations to report on their sustainability, new information about the impact the organisation has on the environment must be gathered (Ernst & Young & Boston College Centre for Corporate Citizenship, 2013). Exploring these new avenues of information gathering can lead to a reduction in the use of natural resources and an increase in operational performance (Ernst & Young & Boston College Centre for Corporate Citizenship, 2013).

Organisations in the public and private sector create environmental accounts to keep track of the full economic costs of natural resources depleted versus environmental effects caused. These environmental accounts are used to identify sustainability concerns to the organisation's annual reporting (Karis & Poysti, 2013). The reports contain all the relevant financial information and the effects of organisation activities on the environment in a structured manner.

South African HEIs have limited compliance with sustainability reporting practices. According to Calitz, Cullen and Bosire (2015) aspects such as compliance with legislation and corporate social responsibility are not reported on. South African HEIs mostly focus on aspects of financial reporting.



A lack of reporting guidelines and tools are the main hindrance to sustainability reporting in South African HEIs (Calitz, Bosire, & Cullen, 2017).

Nelson Mandela University has a Vision 2020 goal to be more environmentally friendly (Nelson Mandela University, 2010). At the moment Nelson Mandela University does not make use of any GRI guidelines for sustainability reporting. The following problem statement was therefore formulated for this research:

*There is currently no set of guidelines available to assist in the creation of GRI sustainability reports for HEIs in South Africa.*

## **1.4 Research Aim**

Sustainability reporting is “the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development” (Global Reporting Initiative, 2011a, p. 2). Sustainability reporting practices will henceforth be used as a term, meaning: *A set of principles and procedures that will make use of tools and techniques to create a sustainability report.*

The aim of this dissertation is to:

*Examine techniques to use existing indicators to create sustainability reporting guidelines capable of producing a GRI sustainability report for HEIs in South Africa.*

An examination of the GRI guidelines and requirements for HEIs in South Africa aims to assist in creating a sustainability reporting system for HEIs in South Africa. Figure 1-1 presents a visualisation of a conceptual model of the research aim. By incorporating literature, experience from international and national HEIs and interviews from HEI officials, a suitable set of guidelines can be found to report on the required data. The process of determining the requirements for the sustainability reporting system and implementation process will influence the reporting structure.

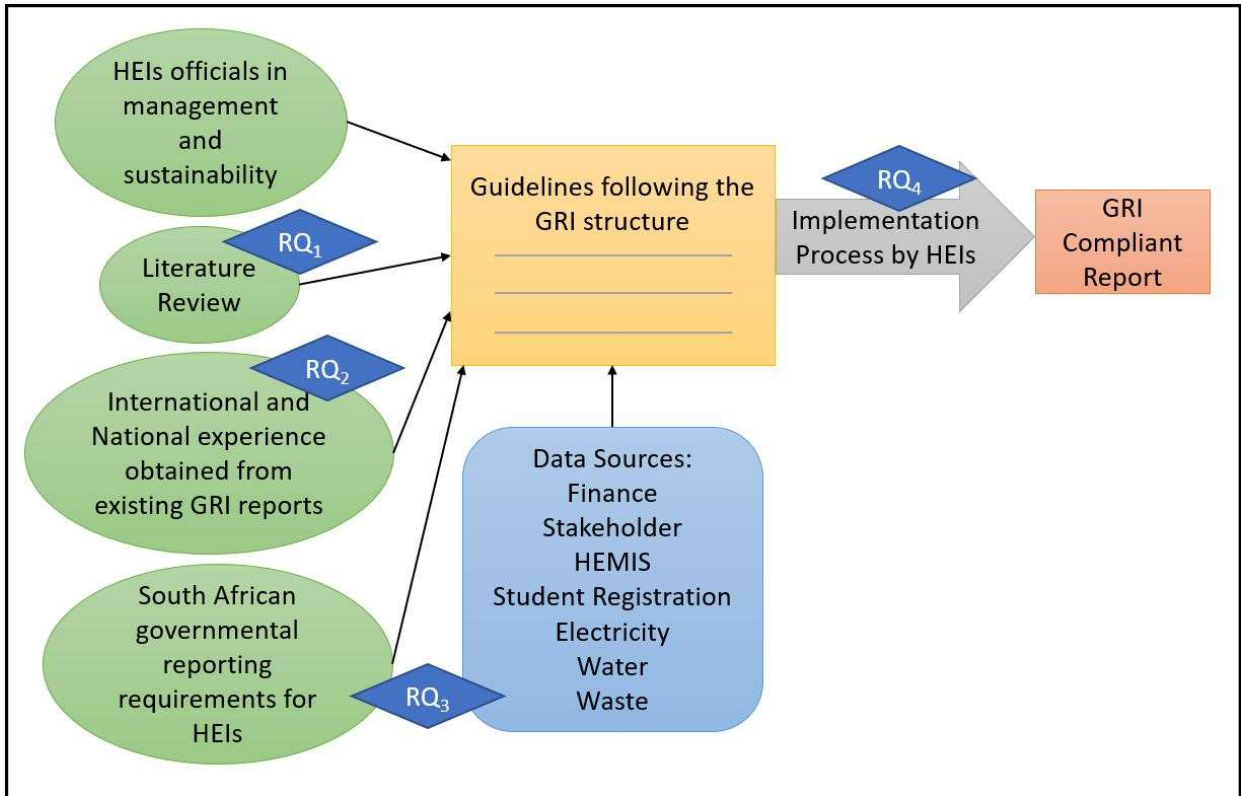


Figure 1-1: Conceptual Model

## 1.5 Research Objective and Research Questions

The main research objective of this study is to propose an integrated set of guidelines for creating GRI compliant sustainability reports for Higher Educational Institutions in South Africa. Understanding how international HEIs is currently implementing GRI guidelines in their sustainability reporting practices will subsequently increase South African HEIs efforts to implement sustainability reporting. This study is informed by practices of both international and local reporting practices of HEIs. The main research objective will be met when the following secondary research objectives are met:

RO<sub>1</sub>. Identify existing sustainability reporting practices for HEIs.

RO<sub>2</sub>. Investigate the requirements of sustainability reporting practices for HEIs.

Research objective 1 and 2 addresses the following research question:

RQ<sub>1</sub>. How is sustainability reporting currently being implemented within HEIs?

RO<sub>3</sub>. Compare global HEI implementations of GRI sustainability reports.

Research objective 3 addresses the following research question:

RQ<sub>2</sub>. What are the sustainability reporting practices applied by international HEIs?

RO<sub>4</sub>. Identify gaps in current sustainability reporting practices in South Africa.

Research objective 4 addresses the following research question:

RQ<sub>3</sub>. What are the GRI G4 disclosures required by South African HEIs?

RO<sub>5</sub>. Identify the sustainability reporting requirements and indicators at Nelson Mandela University.

RO<sub>6</sub>. Identify the appropriate disclosures for sustainability reports for HEIs in South Africa.

RO<sub>7</sub>. Analyse the proposed guidelines ability to produce sustainability reports for Nelson Mandela University in South Africa.

Research objective 5, 6 and 7 addresses the following research question:

RQ<sub>4</sub>. How suitable is the proposed guidelines for Nelson Mandela University in South Africa?

## **1.6 Scope and Envisioned Contribution**

The study will focus specifically on South African HEIs and the case study for this research will be based on Nelson Mandela University. The requirements for GRI reporting will be identified through a literature review. The selected set of guidelines will be based on the literature review and interviews with relevant stakeholders at Nelson Mandela University. The sustainability reporting system will use multiple data sources to extract the necessary information needed to create a GRI report. These data sources include international reports from HEIs that use the GRI guidelines as well as governmental requirements that South African HEIs must adhere to.

## **1.7 Data Collection**

The data collected for this study come from three sources. Firstly, international HEI practices regarding sustainability reporting were analysed. The second source of information were an analysis of the current reporting practices of South African HEIs. Lastly, the Institutional Planning Office officials at Nelson Mandela University were interviewed to get their inputs on sustainability reporting within the university.

## **1.8 Ethics**

The research process should adhere to acceptable standards of conduct (Cooper & Schindler, 2014). The rights and welfare of research subjects, confidentiality of data and risks to people involved are some of the aspects that need to be considered (Collis & Hussey, 2014).

The research process followed utilised documents that are publicly available. Meetings and workshops conducted with HEIs officials do not warrant the need to obtain ethical clearance from Nelson Mandela

University. Furthermore, processes that involved communication between different departments within Nelson Mandela University involved electronic communication methods that are covered under the policies governing conduct of the institution. Therefore, no formal ethics application was submitted to the university ethics committee as no vulnerable groups formed part of this study.

## 1.9 Research Methodology

The research methodology will address the research approach as well as the collection and analysis of data. The validity of the research depends on the methodology and existing literature (Thody, 2006). A literature review and data collection form part of the research process. The literature review opened a new perspective to the researcher (Kumar, 2011; Leedy & Ormrod, 2010). Data was collected from multiple sources, including: International HEIs' sustainability reports; South African HEIs sustainability reports; South African governmental reporting requirements for HEIs and focus groups with HEIs officials in the fields of sustainability and management. Data collection took various forms from reading data into a spreadsheet to manipulating data to adhere to an objective. Each stage of data collection served to form a basis of information to reach the research aim.

## 1.10 Dissertation Structure

Figure 1-2 presents the structure of the dissertation. The research methods, research objectives and research questions (deliverables) are specified for each chapter.

**Chapter 1: - Introduction:** Chapter 1 contains an introduction of environmental sustainability as well as providing a background for the necessity of environmental sustainability. The introduction highlights the important aspects of generating GRI sustainability reports in HEIs.

**Chapter 2: - Research Methodology and Design:** Chapter 2 will focus on how the research is conducted. The methodology, philosophy and processes are identified and explained. The relevance of the research onion will also be explained. Reference is made to the Table (Appendix C) that was constructed during the research process.

**Chapter 3: - Sustainability Reporting by Higher Educational Institutions:** Chapter 3 will investigate the requirements of sustainability reporting practices for HEIs to achieve RO<sub>1</sub> and RO<sub>2</sub>. Furthermore, the chapter will investigate existing reporting methods in a comparative review. Chapter 3 will answer RQ<sub>1</sub> explaining how sustainability reporting is currently being implemented within HEIs.

**Chapter 4: - Sustainability Reporting by International Higher Education Institutions:** The focus of Chapter 4 is to identify and learn from internationally used sustainability reporting methods

to advance the integration process of GRI in South African HEIs to achieve RO<sub>3</sub>. Chapter 4 will answer RQ<sub>2</sub> by investigating the impact of GRI on international HEIs.

**Chapter 5: – Sustainability Reporting by South African Higher Education Institutions:** Chapter 5 will analyse sustainability reporting in South African HEIs (RO<sub>4</sub>). The reporting requirements of the Department of Higher Education and Training will be compared to the GRI G4 disclosures. Chapter 5 will answer RQ<sub>3</sub> highlighting the GRI guidelines that is appropriate for South African HEIs.

**Chapter 6: - Design and Development of Sustainability Reporting for Nelson Mandela University:** Chapter 6 present the list of selected GRI G4 disclosures for South African HEIs sustainability reporting. Chapter 6 will also discuss how interviews with Nelson Mandela University officials played an integral role in the refinement of the selected GRI disclosures to achieve RO<sub>5</sub> and RO<sub>6</sub>. Chapter 6 will analyse the appropriateness of the selected disclosures to achieve RO<sub>7</sub> and answer RQ<sub>4</sub>.

**Chapter 7: - Conclusions and Recommendations:** The findings of the study will be discussed. Recommendations regarding limitations and future research for this project will also be acknowledged.

In this chapter the Research Problem has been identified. The Research Objectives and Research Questions were discussed. In the following chapter, the research methodology and design will be discussed.

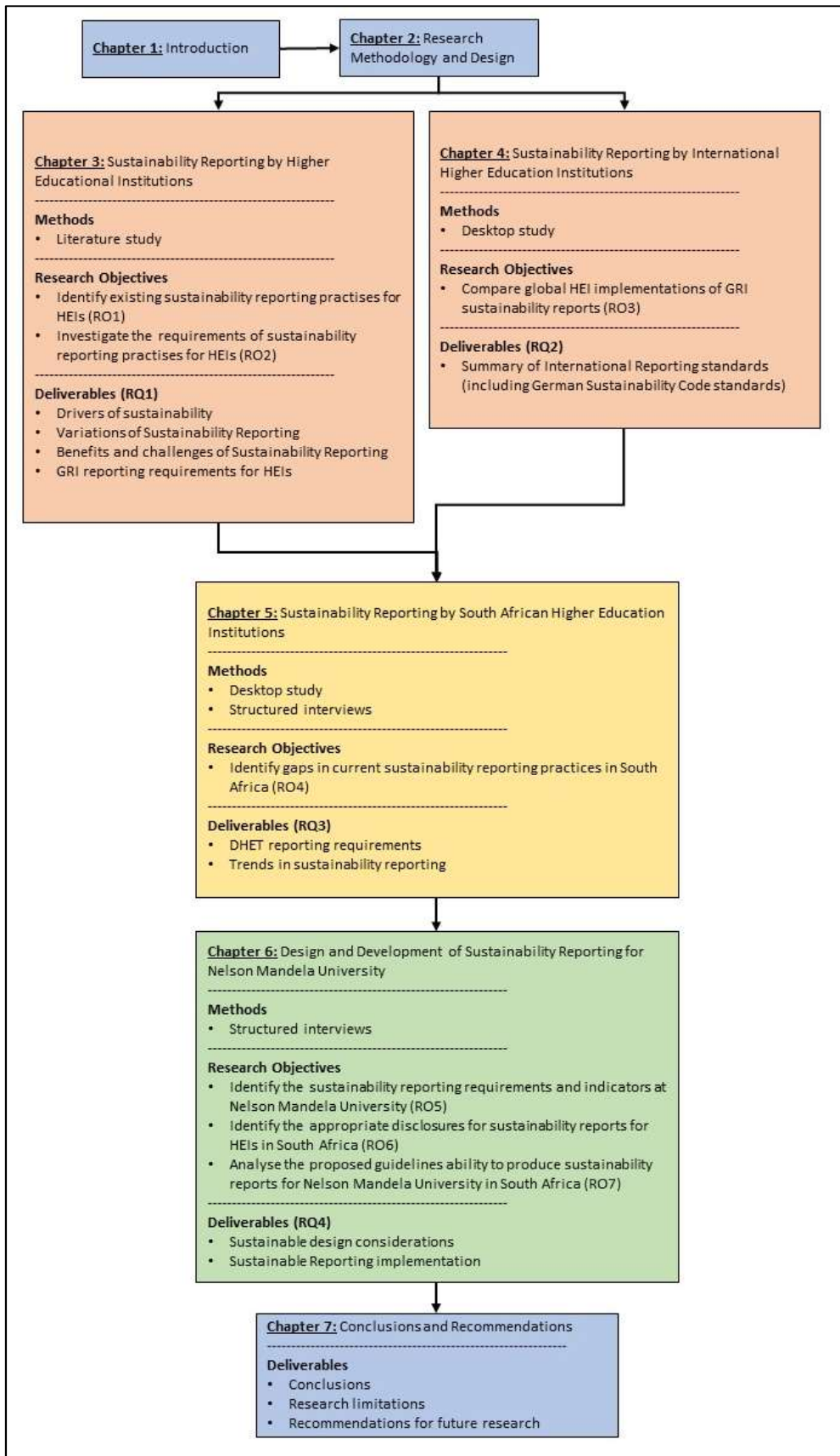


Figure 1-2: Dissertation Structure

## Chapter 2. **Research Methodology and Design**

### **2.1 Introduction**

The previous chapter provided an overview of the research study. The research problem and objectives and research questions were further identified. In this chapter, the research methodology and design process will be outlined. The research design describes the structure and motivation for the research process followed. The process of research must contribute to existing theory to make a notable scientific contribution. Apart from the research methodology, this chapter also outlines the relevance of the research to make a notable contribution to the research area.

The first section (Section 2.2) describes the research concepts and methods. Different research strategies were combined to incorporate different data- analysing components. The research paradigm explains why the combination of the different strategies is required. Section 2.3 expands on the literature review, clarifying the role literature contributes to the findings and assumptions of the researcher. Section 2.4 the data preservation technique is discussed. A spreadsheet (Appendix C) was created where each stage of the research contributed to populating the spreadsheet with the relevant findings. This section briefly discusses how the spreadsheet was constructed.

Section 2.5 describes the data collection and analysis processes followed in the study. The use of different Global Reporting Initiative (GRI) reports from both international and national universities are introduced as well as how these reports contributed to the findings. Section 2.6 describes the reliability of the techniques used and explains why these combined techniques are worthy of the research. Lastly Section 2.7 is a summary of Chapter 2. Figure 2-1 presents a full outline of this chapter.

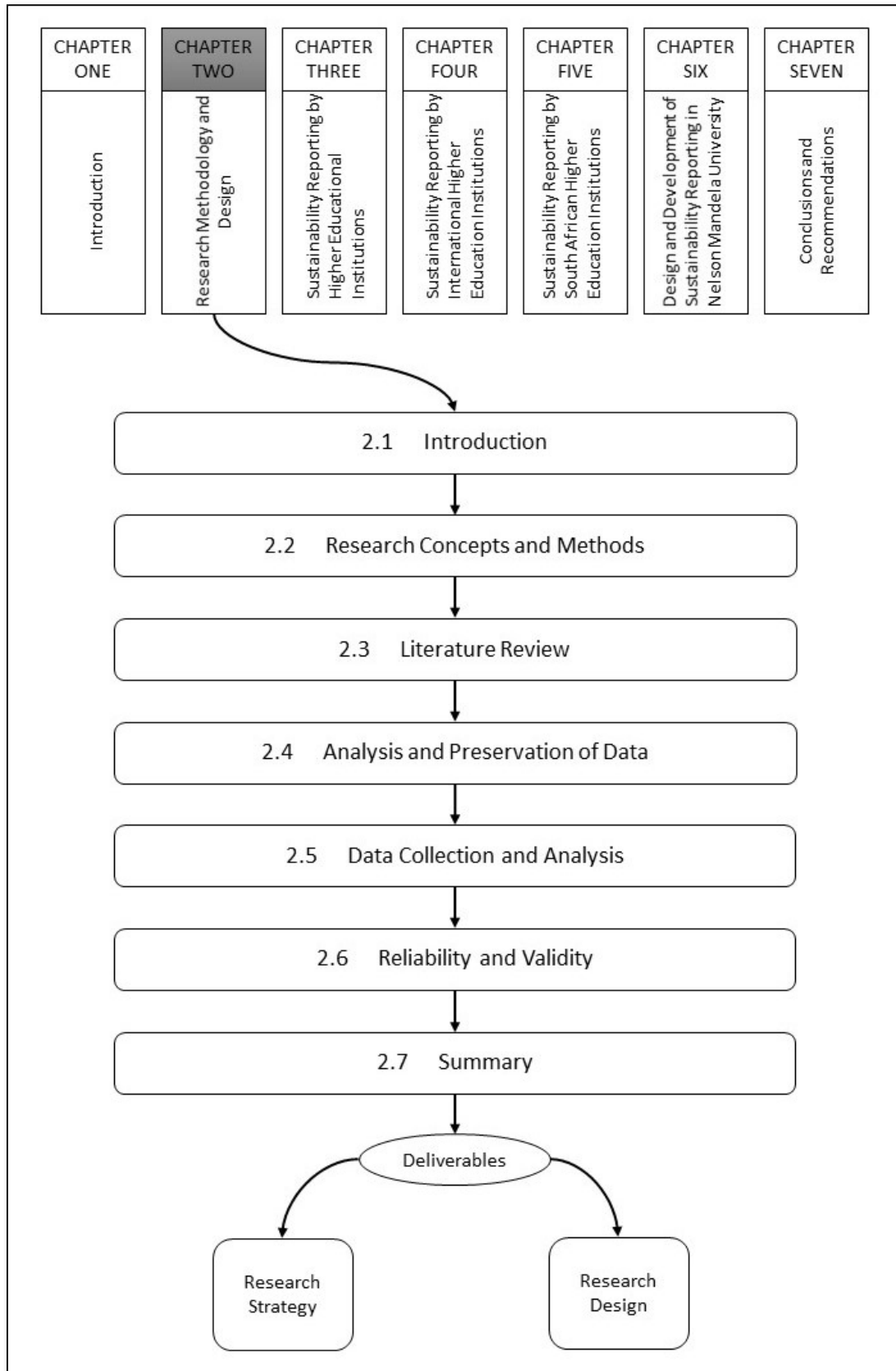


Figure 2-1: Chapter 2 Layout



## **2.2 Research Concepts and Methods**

### **2.2.1 Definition of Research**

Research is defined by Leedy and Ormrod (2010, p. 2) as “a systematic process of collecting, analysing and interpreting information (data) in order to increase our understanding of a phenomenon”. Research is applied in every discipline in order to advance the professional knowledge base (Kumar, 2011). The validity of the research depends on the suitability of the research method applied. Kumar (2011) suggests that a suitable research method uses a framework of a set of philosophies and methods and techniques that are reliable, unbiased and objective.

According to Leedy and Ormrod (2010) research typically has eight characteristics:

- Research advances the solution to a problem;
- Research endeavours to accomplish a goal;
- Research occurs in a structured method;
- Research accepts certain critical assumptions;
- Research inspires the collection and interpretation of data for the purpose of resolving the research problem; and
- Research is a cyclic process.

Saunders, Lewis and Thornhill (2009) proposed the research onion to depict a systematic process for conducting research. Similar to a real onion the research onion consists of layers, where each layer contains different possibilities for conducting research at that layer. Figure 2-2 depict the different layers of the research onion.

The outer most layer of the research onion consists of the research philosophies. Research philosophy is an over-arching term that “relates to the development of knowledge and the nature of that knowledge” (Saunders et al., 2009, p. 107). Therefore, the first stage of designing the research contains assumptions about the researcher’s view of the world. The philosophy the researcher adopts depends on how the researcher views the relationship between knowledge and the process by which it is developed (Saunders et al., 2009).

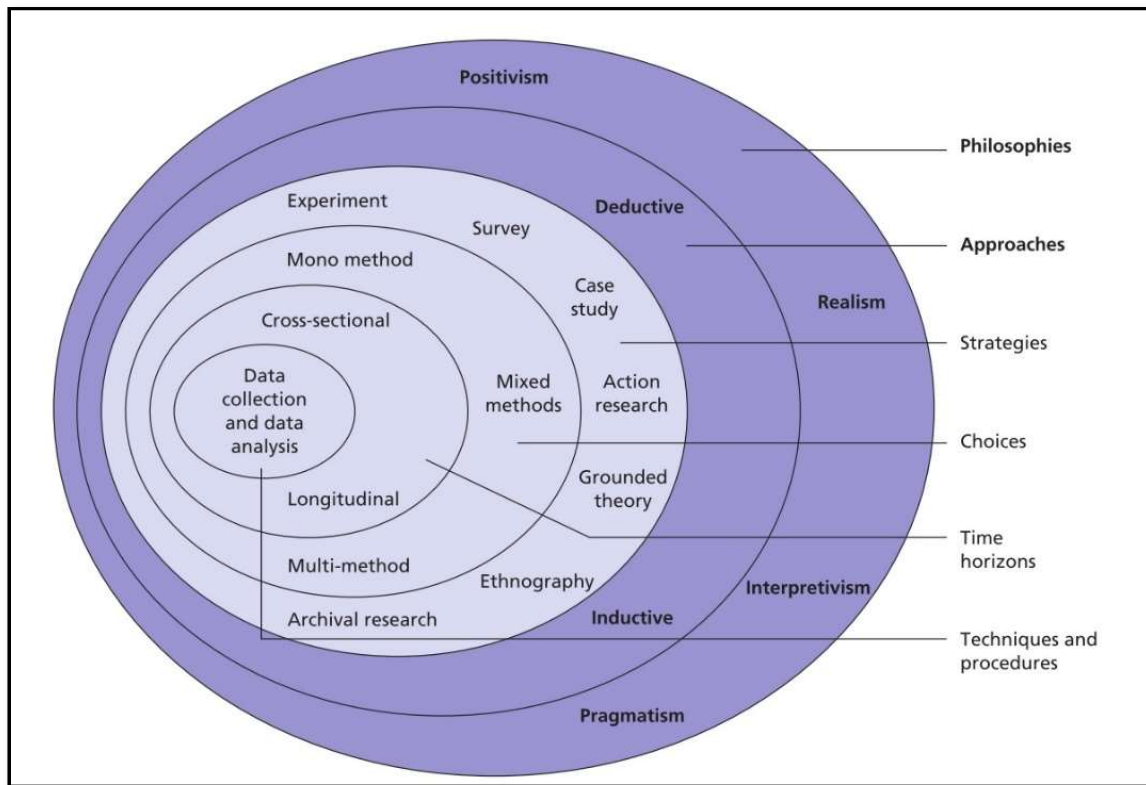


Figure 2-2: The research onion (Saunders et al., 2009)

The research paradigm is the basic belief system that guides the investigation in the choices of methods and epistemology (Saunders et al., 2009). There are four main research philosophies from which an understanding can be gained to explain the paradigm. These philosophies are positivism, realism, interpretivism and pragmatism (Saunders et al., 2009).

Johannesson and Perjons (2012) suggests that positivism and interpretivism are the two philosophies that are used in information systems research. Positivism uses observable data to generate research strategies. These research strategies together with existing theory are used to develop hypotheses and understand phenomena (Saunders et al., 2009). The developed hypotheses will go through a process where it is tested and confirmed or rejected which leads to further development. The objectivity of the researcher is the key requirement necessary for the success of the positivist approach (Tekin & Kotaman, 2013). Without objective truth the researcher will be unable to increase his/her understanding of phenomena (Tekin & Kotaman, 2013).

On the other hand, interpretivism is a subjective research philosophy, which argues that research occurs among people rather than objects and is thus susceptible to social realities. In an interpretivist approach the researcher attempts to understand the social world of the research subject by adopting an empathetic stance (Saunders et al., 2009). Interpretivism is relevant when compiling the guideline, because the researcher's interpretation of the results can be susceptible to social realities.

Saunders et al. (2009) suggest two approaches to research, namely the deductive and inductive approach. The deductive approach revolves around designing research strategies to test a theory or hypotheses. On the other hand the inductive approach collects and analyses data to develop a theory (Saunders et al., 2009). Common to both above-mentioned research approaches is the use of a theory. Research philosophy defines the framework that determines how qualitative and quantitative methods are used within the research paradigm (Saunders et al., 2009). The question of how methods are implemented is secondary to that of the research paradigm.

## **2.2.2 Strategies of Research Design**

### **2.2.2.1 Qualitative Research**

Understanding the behaviour of institutions often requires getting to know the people involved. The necessity of understanding people's behaviour is a motivation for conducting qualitative research (Myers, 2009). Berg and Lune (2011) writes that "qualitative research focuses on innovative ways of collecting and analysing qualitative data collected in natural settings" (Berg & Lune, 2011, p. 3). Extracting meaning from qualitative data can only be done in context (Collis & Hussey, 2014). Therefore, qualitative research is primarily exploratory in nature.

Qualitative research is focused on developing hypotheses and insights into a problem. Greater understanding about a problem is gained through opinions and a motivation to solve the problem (Collis & Hussey, 2014). In general, qualitative research is subjective and follows a non-linear research path. Qualitative research tends to direct the focus of the research as new hypotheses come to light (Neuman, 2011). The following are common factors in qualitative research (Kumar, 2011; Leedy & Ormrod, 2010):

- Qualitative research examines phenomena;
- Qualitative research is done in the phenomena's natural setting;
- Qualitative research does not quantify the phenomenon;
- Qualitative data consists of characteristics of the phenomena; and
- Qualitative data is measured through ordinal or nominal scales.

### **2.2.2.2 Grounded Theory**

Grounded theory was pioneered by Glaser and Strauss (1967) as a methodology to develop theory from the systematic discovery of social research data. Despite the authors' (Glaser & Strauss, 1967) initial take on grounded theory being targeted on social research, the main point around the build of grounded theory is a method to reach an adequate theory for its eventual use (Carvalho, Scott, & Jeffery, 2005). The goal is building an inductive model grounded in the data and the researcher's theoretical experience (Gioia, Corley, & Hamilton, 2013). The resulting model should be one that outlines relevant data-to-theory connections and relationships among concepts of the phenomenon of interest (Gioia et al., 2013).

According to Strauss and Corbin (2014) the researcher needs to observe grounded theory from a subjective and interpretative perspective. The process of building theory relies on the researcher's interpretation of the work (Roman, Osinski, & Erdmann, 2017). It is possible to notice that, grounded theory and the principles of the interpretative paradigm share similarities (Burrell & Morgan, 1979).

The process of theoretical sampling consists of how the researcher searches for data to build theory (Roman et al., 2017). During the theoretical sampling process, the researcher develops sensitive abilities to support decision making regarding the best cases in emergent data (Roman et al., 2017). The ability of the researcher mentioned above present funnel characteristics according to evidences of theoretical saturation (Roman et al., 2017).

### **2.2.2.3 Triangulation**

It is often required to view a problem from different perspectives. Using different methods to gain understanding about a problem can reveal different facets of the same reality (Berg & Lune, 2011). By combining different perspectives, researchers obtain a better picture of the theoretical concepts surrounding the problem (Berg & Lune, 2011). The use of different methods to analyse the same problem is called triangulation.

Commonly, triangulation uses multiple techniques of data-gathering to investigate a phenomenon. Triangulation is not only used to understand a phenomenon but also to introduce validity and relation to the use of different data sources (Berg & Lune, 2011).

### **2.2.3 Research Paradigm for this study**

This sub-section serves to clarify and justify the reason for the selected research methodology. The nature of the research requires both the positivistic and interpretative paradigms to be used. During the research process a study of GRI implementation in different settings was conducted to understand the needs of Higher Education Institutions (HEIs) in the environment. Specific findings from international and national research areas were required to be combined under the guidance of HEIs officials.

The researcher's interpretation of the GRI guidelines will have a direct effect on the success of the interpretivist approach. Both the researcher and the HEIs officials involved in the selection and evaluation of the guidelines will have different perspectives on how to approach the implementation of the GRI guidelines. A clear understanding of the social world where these guidelines will have to be implemented is necessary for a successful implementation thereof.

An inductive approach is used to analyse data before a theory is drawn. It was necessary to use triangulation and observational techniques to combine the different sources of information into a holistic approach for GRI sustainability guidelines.

## **2.3 Literature Review**

### **2.3.1 Literature Review defined**

The body of existing knowledge on a particular topic is defined as literature (Machi & McEvoy, 2016). The purpose of literature is to produce a position on the state of that knowledge. Included literature sources are:

- Books;
- Computer Programs;
- Conference Proceedings;
- Encyclopaedia Articles;
- Films;
- Journal Articles;
- Magazine Articles;
- Patents;
- Reports; and
- Web Pages.

Literature sources that are indirectly related to the research topic can be summarised and used in a literature review (Collis & Hussey, 2014; Thody, 2006). Machi and McEvoy (2016) suggest six steps for conducting a literature review:

- Step 1: Select a topic for the problem;
- Step 2: Define the process for developing tools for the argument;
- Step 3: Collect information from a literature search;
- Step 4: Discover evidence from a literature survey;
- Step 5: Draw conclusions by critiquing the literature; and
- Step 6: Communicate those conclusions by writing a review.

### **2.3.2 Purpose of Literature Review**

A literature review is necessary to gain insight into the background and usages for GRI. The literature review reveals approaches and perspectives that are not initially apparent to the researcher (Kumar, 2011; Leedy & Ormrod, 2010). However, even before the researcher can gain insight into the specific areas of the research, a literature review is critical to designing the research methodology for the study (Collis & Hussey, 2014). Gaps and deficiency in the knowledge base will steer the research, thereby creating a need for a suitable research methodology. The methodology and literature reviewing process will lend validity to the study (Thody, 2006).

By conducting a literature review the researcher will gain knowledge about the workings of the GRI guidelines. The literature review will form the basis of the working theories that will expand to be inclusive of South African HEI environments.

## **2.4 Analysis and Preservation of Data**

The aim of the study is to examine techniques to use existing indicators to create sustainability reporting guidelines capable of producing a GRI sustainability report for HEIs in South Africa. In order to achieve this data regarding GRI implementation and requirements for sustainability reporting in South African HEIs needs to be known. The main deliverable is in the form of a table. This section defines and elaborate on the process of the table layout and design. It was necessary to incorporate a variety of international and national data sources to achieve a holistic view of how GRI is implemented in HEIs. The process of constructing the spreadsheet occurred in several stages, each stage setting the groundwork for the next stage to follow.

During the first stage a review of the GRI G4 (Global Reporting Initiative, 2014b) guidelines led to Table 2-1 being populated with all the GRI G4 disclosures. Both the standard and specific disclosures were recorded as specified in the guidelines document (Global Reporting Initiative, 2014b). During the second stage existing GRI reports created by several international HEIs from America and Europe were analysed and mapped onto the table according the disclosures the HEIs reported on respectively. During the next stage the German Sustainability Code (German Council for Sustainable Development, 2013) was mapped to the table. The Council responsible for creating the German Sustainability Code initially used the GRI guidelines as a backbone for the finished product (German Council for Sustainable Development, 2013). During each stage the information gathered was systematically added to the spreadsheet in a manner that allows for the comparison of the data.

South African HEIs are required by the Department of Higher Education and Training (DHET) to publish reports annually (Department of Higher Education and Training, 2014). The next stage mapped annual report contents of several South African HEIs and included them in Table 2-1. The DHET requirements for HEIs in South Africa were also mapped to the table with the assistance of HEIs' officials. Finally, data sources were mapped and included in Table 2-1. These data sources are internal to the Nelson Mandela University and represent current and future data. Table 2-1 presents a brief overview of the final layout describe above. The full table is in Appendix C.

Table 2-1: Table Layout

<b>GRI Standard Disclosure</b>	<b>GRI Disclosure Title</b>	<b>International Universities</b>	<b>German Sustainability Code</b>	<b>South African Universities</b>	<b>DHET requirements</b>
G4-1					
...					
G4-PR9					
G4-DMA					

## 2.5 Data Collection and Analysis

### 2.5.1 The concept of Data Analysis

Data analysis is a process used to evaluate data by implementing logical and analytical reasoning (Wegner, 2015). The quality and utility of research depends on the data collection methods and the analysis of the data (Kumar, 2011). Data collection and analysis is the sixth layer of the research onion (2.2.1). At this layer the researcher determines the type and methods of data collection that are required (Saunders & Tosey, 2013). In order to maintain the integrity of the research, a description of the process of data collation and its analysis are essential (Wegner, 2015).

Quantitative data are quantifiable, expressing an number or range. Quantitative data can be analysed inferentially and descriptively, and are usually grouped into nominal, ordinal, interval and ratio scaled data types (Lehman, O'Rourke, Hatcher, & Stepanski, 2013). Each of these data types is used under specific conditions (Lehman et al., 2013):

- Nominal scaled data places objects into mutually exclusive categories. The categories can be quantified, however the object itself does not provide any qualitative information;
- Ordinal scaled data much like nominal scaled data consist of objects in different categories, the difference is the categories have an assigned rank order. The rank order represents the construct of effectiveness;
- Interval scaled data provides more quantitative information, where equal distances between scaled values exists. Interval scaled data does not have a true zero point; and

- Ratio scaled data is similar to interval scaled data with the exception that true zero adds meaning to the ratio between scales.

Non-numerical data requires a different analytical approach. Alternative analysis tools such as narrative analysis, interpretative analysis and grounded theory analysis can be used to extract meaning from qualitative data (Healey, 2015).

## **2.5.2 Data Analysis methods used in this study**

The goal of this study is to incorporate GRI guidelines into HEIs in South Africa. Various data has been collected and used to understand how the HEI community in general approach sustainability reporting. A literature review, an examination of existing GRI sustainability reports of HEIs (United States of America, Europe and South Africa) and workshops with Nelson Mandela University officials are just some of the techniques used to guide the process of incorporating GRI in HEIs in South Africa.

A detailed evaluation of existing GRI reports generated by international HEIs reveals how the current GRI G4 guidelines are used in the international community. Chapter 4 discusses the processes and findings of the evaluation and techniques used. To bring a South African perspective to the research a closer analysis of South African HEIs is required. The Department of Higher Education and Training (DHET) requires all South African HEIs to produce sustainability reports annually (Department of Higher Education and Training, 2014). Chapter 5 reveal the requirements of the DHET reports, how the HEIs have implemented their reporting strategies and how these requirements can be incorporated into a GRI compliant report.

During each step of data analysis, South African HEIs officials were consulted. The meeting minutes (Appendix E) of each consultation played a role in the next phase of research. Consultation was in the form of meetings and structured interviews. All officials of HEIs consulted were from various departments (Institutional Planning, Computing Sciences, Sustainability Engineer, Information and Communication Technologies and Transformation Monitoring and Evaluation) of the Nelson Mandela University.

## **2.6 Reliability and Validity**

### **2.6.1 Reliability**

Reliability refers to the consistency of an experiment or procedure. If an experiment is conducted multiple times a reliable result is one that repeatedly provides the same result (Mohamad, Sulaiman, Sern, & Salleh, 2015). However, a reliable result is not always meaningful. In order for the researcher to draw conclusions about a reliable result, the validity of the result must be established (Mohamad et al., 2015). The technique used when measuring reliability is inter-rater reliability. Inter-rater reliability refers to the similarity of the reports of different observers of the same phenomenon (DeVellis, 2005).



During the research process, interpretation of existing GRI reports was part of the process. Over several iterations, including interviews with HEIs officials and workshop meetings the essential aspects of the GRI guidelines were refined. Although researcher bias comes into play, the extent of the bias in the final product represents a large portion of national and international standards and is therefore negligible.

## **2.6.2 Validity**

The validity of the research is important to contribute to the existing body of knowledge. The variables measured must accurately reflect reality for application outside of this research environment (Creswell et al., 2007). The finding and conclusions of the research are backed by validity when making deductions or inferences.

Reports generated according to the GRI framework are required to include a list of all GRI guidelines that were addressed in that report. Working from those lists the researcher acquired an accurate composition of the analysed reports and was able to populate the spreadsheet (Section 2.4) with high accuracy. Furthermore, with the assistance of HEIs officials the DHET, requirements were mapped onto the GRI layout where several versions of refinement occurred (Section 5.2).

## **2.7 Summary**

This chapter discusses the research methodology and design structure implemented. The research onion is used throughout the research process starting from a positivistic and interpretative paradigm following inductive approaches of data collection and analysis.

Section 2.1 provided a brief overview of Chapter 2 and the necessity for the research methodology. In Section 2.2 the research onion and implementation strategies were discussed. Furthermore, the research paradigm was explained setting the tone for the research process. Section 2.3 defined a literature review and outlined the necessity and purpose of a literature review's relevance. The main research contribution was introduced in Section 2.4 highlighting the data preservation method. Section 2.5 and 2.6 describe the data collection and analysis, and the reliability and validity of the data collected respectively.

Chapter 3 will be a literature review on current sustainability reporting efforts in HEIs and how these efforts came to be. The chapter will closely analyse the different sustainability reporting techniques and indicate why GRI reporting was selected to be the base set of guidelines for this research.

# Chapter 3. Sustainability Reporting by Higher Educational Institutions

## 3.1 Introduction

In Chapter 2, the research methodology and design were discussed and indicated that a literature review is required to gain a better understanding of the scope of the research. Chapter 2 also discussed the data collection techniques as well as the reliability and validity considerations for this study. This chapter consists of the literature review for this study, regarding sustainability reporting by Higher Education Institutions (HEIs).

HEIs are increasing their publications of sustainability reports however, sustainability reporting within HEIs is still in its early stages (Kim Ceulemans, Lozano, & Alonso-Almeida, 2015). HEIs that are reporting on their sustainability practices adopt a variety of frameworks however. Alonso-Almeida et al. (2015) indicated that European HEIs, adopting the Global Reporting Framework (GRI) framework have improved their visibility and ability to raise funds from stakeholders.

This chapter contains a literature review creating a basis of current knowledge in the field and sets the tone for the theoretical and practical research to follow. This chapter also expands on the Global Reporting Initiative (GRI) framework by having an in-depth analysis of the terminology used, as well as the implementation process of the GRI G4 framework (Section 3.6).

The following research question will be answered in this chapter:

RQ<sub>1</sub>. How is sustainability reporting currently being implemented within HEIs?

This chapter seeks to address the following research objectives:

RO<sub>1</sub>. Identify existing sustainability reporting practices for HEIs.

RO<sub>2</sub>. Investigate the requirements of sustainability reporting practices for HEIs.

Sustainability is a broad concept that have taken on various meanings for practitioners to date (Bolis, Morioka, & Sznalwar, 2014; Glavic & Lukman, 2007; Missimer, Robèrt, & Broman, 2017). Sustainability needs to be placed into a context that satisfies the pressure on HEIs to be more sustainable (Section 3.2). Sustainability efforts by organisations around the world have led the practice of taking on several forms. Each of these forms satisfied the need of organisations reporting needs at the time of implementation. Ultimately much can be learned from the practice of sustainability reporting and the challenges that go with it (Section 3.3). Globally some HEIs are reporting on their sustainability efforts (Beynaghi et al., 2016; Ferrer-Balas et al., 2010; Waas, Verbruggen, & Wright, 2010). Although the process has a slow adoption rate, HEIs have crossed the initial barrier that goes with implementing a

new practice in the sector (Section 3.4). So far various reporting frameworks have been developed and modified to suit needs of HEIs (Section 3.5). These frameworks use indicators as guidelines to measure progress (Section 3.7). The GRI framework is analysed in depth (Section 3.6). A full outline of this chapter is provided in Figure 3-1.

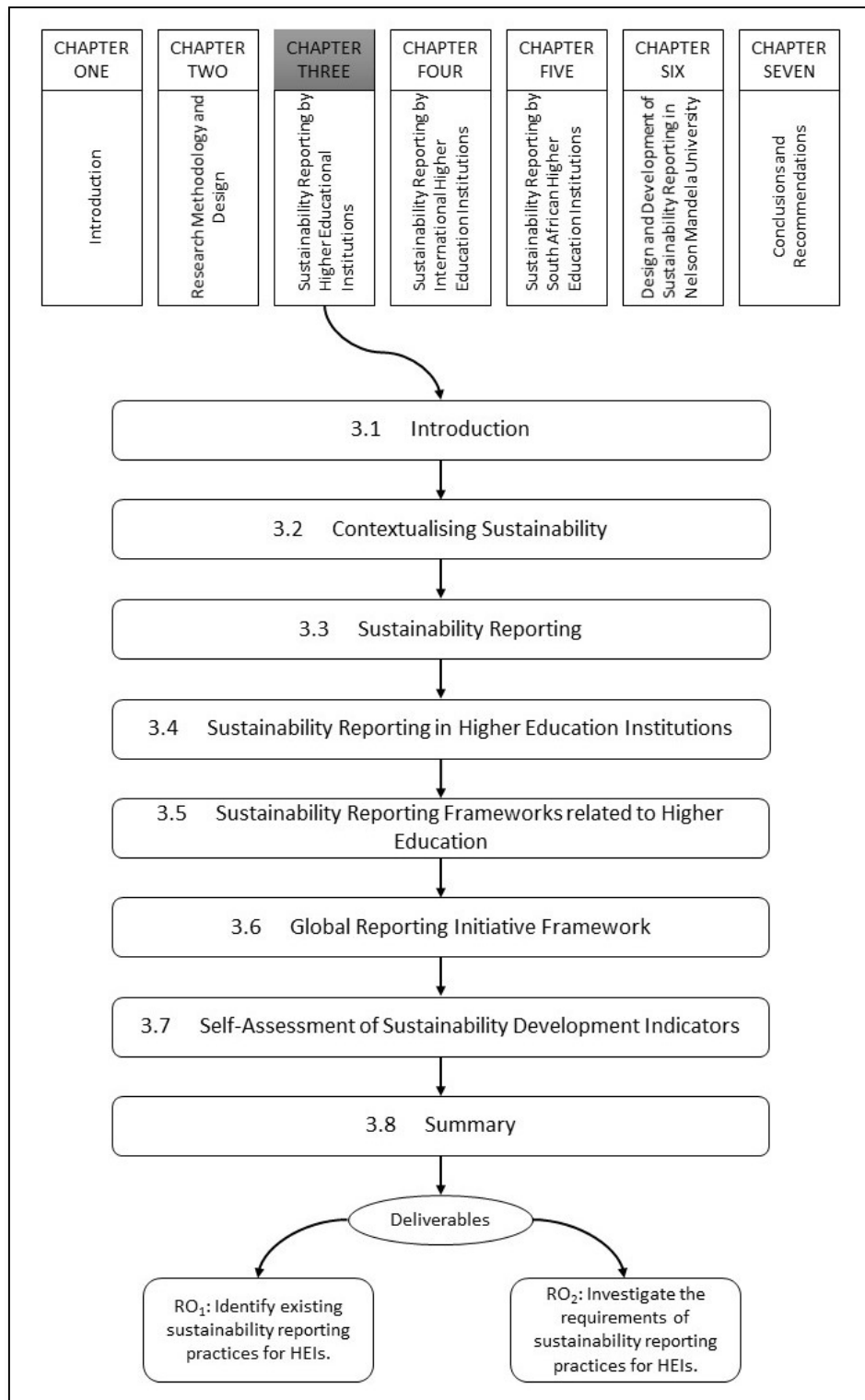


Figure 3-1: Chapter 3 Layout



- Reaffirm all the principles of past actions plans;
- Engage groups, stakeholders and individuals; and
- Promote sustainable economic development.

During the 2005 United Nations World Summit on Social Development in New York (United Nations, 2005), the three pillars of sustainable development were conceptualised. Figure 3-3 presents the integrated nature of social development, economic development and environmental protection. The intention behind the integrated nature is not a balancing act between the three pillars but realising the interdependent, systematic nature of these pillars.

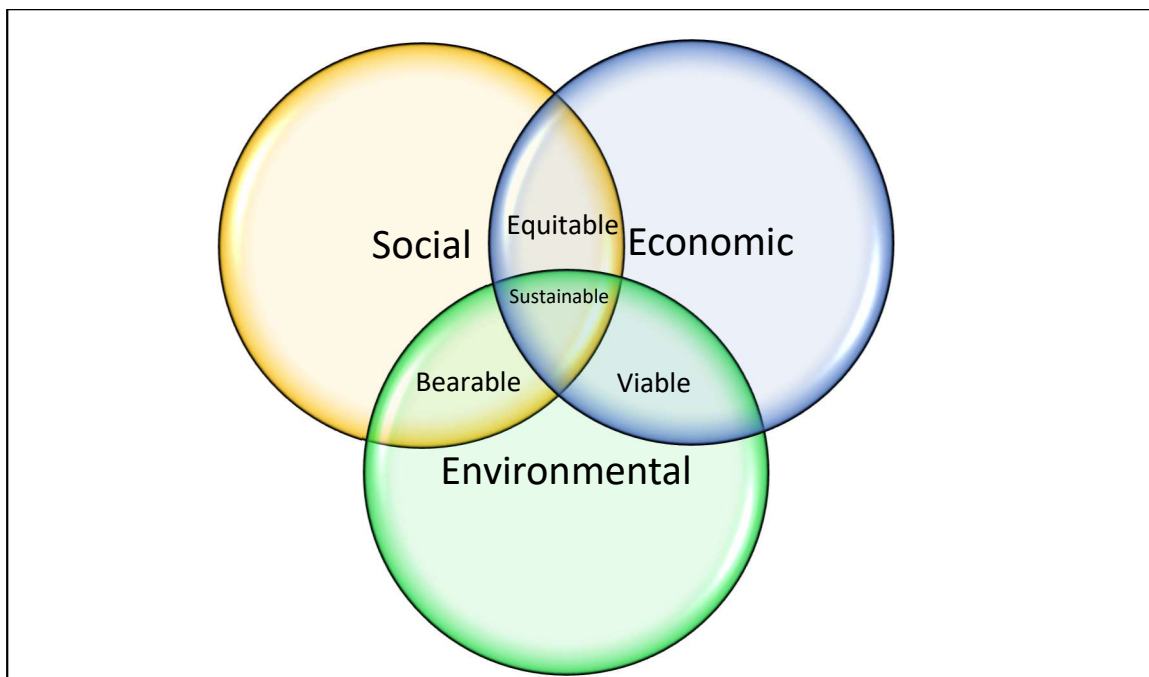


Figure 3-3: Sustainability Venn Diagram

Defining the concept of sustainability within and outside of academia is a controversial topic. Some scientists argue that in order to implement sustainability it must be explicitly defined (Bolis et al., 2014; Glavic & Lukman, 2007; Missimer et al., 2017). However, a single definition might be too vague for the broad concept of sustainability (Ramsey, 2015). The way sustainability is perceived varies depending on the socio-political-economic context (Glavic & Lukman, 2007).

Holden, Linnerud and Banister (2014, p. 131) view sustainability through four primary dimensions derived from the Brundtland Report: “safeguarding long-term ecological sustainability, satisfying basic human needs, and promoting intragenerational and intergenerational equity”. Any secondary dimensions that are context specific to instances of defining sustainability are subordinate to these primary dimensions.

During the evolution of sustainability reporting, many terms have been used to describe one or more aspects of sustainability reporting. Except for Section 3.3.1, the term sustainability reporting used in this dissertation will represent the accumulation of all terms mentioned in this Section 3.2.

### **3.3 Sustainability Reporting**

Sustainability reporting is becoming popular worldwide with over 95% of the worlds largest 250 organisations disclosing social responsibility information (KPMG, 2013). Financial, environmental and social categories are considered important by both the GRI and Triple Bottom Line sustainability frameworks.

#### **3.3.1 Variations of Sustainability Reporting**

There is no single, universally accepted method of how environmental reporting should be done. Environmental reporting can be undertaken in a number of different forms by organisation globally. The choice of the form of reporting used is based on the focus of the organisation in question.

##### **3.3.1.1 What is Sustainability Reporting?**

Sustainability reporting has only gained significant momentum since the inception of the first GRI guidelines (Department of Environmental Affairs and Tourism, 2005). Sustainability reporting and the Triple Bottom Line (Section 3.3.1.2) are similar in nature. The Triple Bottom Line provides a starting point for the GRI guidelines, by identifying actions that could contribute to the three facets of sustainability: environment, economy and social society (Stenzel, 2010). The GRI measures the behaviour of each facet, helping organisations to manage their overall impact on the facets and improve quality and transparency of sustainability reports.

##### **3.3.1.2 Triple Bottom Line**

The Triple Bottom Line (TBL) reporting method is used by stakeholders to expand their knowledge of an organisation (Jackson, Boswell, & Davis, 2011). The TBL goes beyond the traditional financial aspects of an organisation in that it is a “concerted effort to incorporate economic, environmental and social considerations into an organisation’s evaluation and decision-making processes” (Wang & Lin, 2007, p. 1064) (Figure 3-4). The objective is to accomplish sustainable development through these main subjects by identifying and correcting unsatisfactory results.

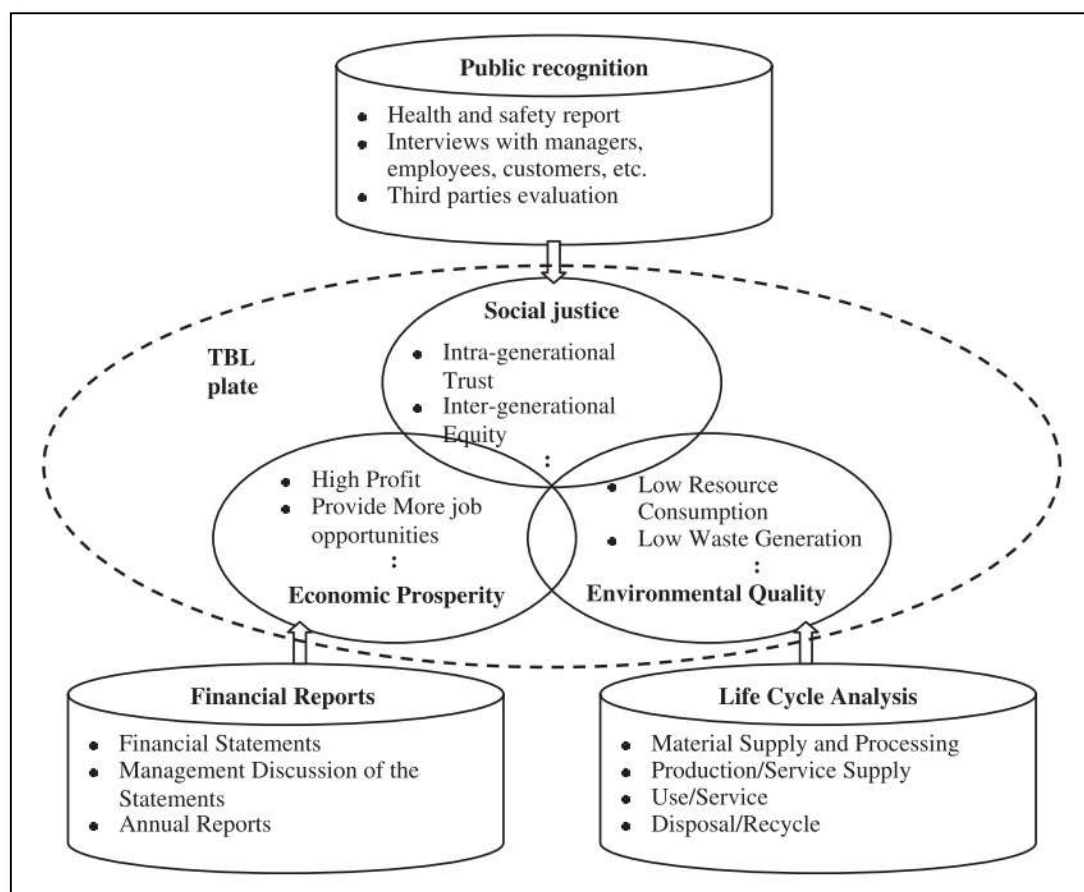


Figure 3-4: Framework for sustainability information tracking and categorising. (Wang & Lin, 2007)

Wang and Lin (2007) proposed a framework for industry management using TBL accounting. The information part (Figure 3-4) of the framework was extended to categorise and track sustainability performance. Information gets mapped and put into the three categories (Social justice, Economic prosperity and Environmental quality) of the TBL in a straightforward manner. However, these categories are inter-related, and assigning a value to determine how each concept contributes to the total value is very difficult (Wang & Lin, 2007). Wang and Lin (2007) solved the issue by developing an index that takes into account indicator importance as well as the objective of sustainable development, which is financial growth, ecological improvement and ethical equity.

TBL reporting will indicate areas where an organisation is doing well, along with the areas that require improvement (Jackson et al., 2011). This method of reporting increases transparency and demonstrates to stakeholders that the organisation is accepting more accountability.

### 3.3.1.3 Corporate Social Responsibility Reporting

Since the global financial crisis in 2008, investors have lost trust in corporate information (The Association of Chartered Certified Accountants, 2013; Yelkikalan & Kose, 2012). In general, the presentation of corporate information does not allow for meaningful comparison with their peers (The Association of Chartered Certified Accountants, 2013). Hence, as of late, the disclosure, social and

environmental aspects of corporate governance have become increasingly important. Organisations are under scrutiny from civil societies for their local and global impacts of the corporate activities (Baron, 2014).

Corporate Social Responsibility (CSR) is a term used by organisations for reflecting on the relations with stakeholders and their internal operations. Kitzmueller and Shimshack (2012) indicate that CSR is a voluntary action where organisations go beyond governmental reporting requirements and must indicate changes to the organisation's activities. The European Commission defined CSR as "actions by companies over and above their legal obligations towards society and the environment" (European Commission, 2011). According to KPMG (2013) organisations use various terminologies when reporting on their CSR activities, including: sustainability, sustainable development, corporate responsibility or corporate citizenship. The use of multiple terminologies indicates more elaborate strategies for CSR implementation in organisations (Baron, 2014).

The CSR concept (environment, social, financial, human rights) as it is known today is the result of intergovernmental processes<sup>1</sup> over the last several decades (Baron, 2014). CSR became more visible each time organisations were required to be more transparent regarding the disclosures of organisation conduct. Traditionally organisations assess performance through financial reports, however the large number of corporate failures has prompted questions regarding the adequacy of this method (Hazelton & Haigh, 2010; Hung Chen & Wongsurawat, 2011). However, today's stakeholders are increasingly demanding various performance-related information to make informed decisions (Braam, Uit De Weerd, Hauck, & Huijbregts, 2016; Cronje, Wingard, & Kamala, 2015). The availability of reporting standards and the sophistication of organisations to implement these standards play a role in promoting corporate responsibility. Additionally, the ability to generate integrated reports and the demand for professional auditing bodies to lend validity to corporate reports also contributes to emphasising corporate responsibility. A KPMG survey on sustainability adoption in corporate organisations indicates the following (KPMG International, 2017):

- 93% of the 250 largest global companies have adopted corporate responsibility;
- 60% of all industry sectors are participating by including corporate responsibility information into their annual financial reports;
- South African companies are leading global industry in producing integrated reports;
- There is a steady growth of companies seeking validation for their corporate responsibility reports, with 45% of companies currently adopting that practice; and

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<sup>1</sup> The most notable is the 1972 United Nations Conference on the Human Environment in Stockholm, the Brundtland Commission (Brundtland, 1987), the 1992 Earth Summit in Rio de Janeiro, the 2012 United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro and the 2016 Paris Agreement in Marrakech.



- The Global Reporting Initiative (GRI) remains the most popular framework for corporate responsibility reporting, with 63% of companies currently using the framework.

CSR has moved on from purely producing financial or stand-alone reports and has evolved to implementing integrated reporting. The Integrated Reporting Committee of South Africa (2015, p. 3) defines integrated reporting as: “A process founded on integrated thinking that results in a periodic integrated report by an organisation about value creation over time and related communications regarding aspects of value creation”. The theory of legitimacy suggests that the information which corporations supply to their stakeholders will conform to social expectations (Ashforth & Gibbs, 1990).

Today, stakeholders demand transparency and strategic information about organisational risks (Rupley, Brown, & Marshall, 2017). The International Integrated Reporting Committee developed a framework to make a broad range of information available to stakeholders (International Integrated Reporting Committee (IIRC), 2011). Integrated reports differ from isolated CSR reporting in that they consider human capital, intellectual capital, natural capital and social capital as part of the reporting requirements (Rupley et al., 2017). In 2011, South Africa required all the publicly listed corporations to issue integrated reports, while outside of South Africa integrated reporting is still voluntary (Rupley et al., 2017). The GRI is considered one of the best disclosure guidelines for integrated reporting (Dumay, Guthrie, & Farneti, 2010; KPMG International, 2017; Peters, 2017; Rupley et al., 2017).

### **3.3.2 The Benefits of Sustainability Reporting**

Countries worldwide are experiencing social degradation along with rapid economic development. Governments and organisations are taking sustainability issues more seriously, resulting in widespread attempts at sustainability reporting. To be truly sustainable, organisations need to address the benefits and challenges of short-term and long-term opportunities and problems towards sustainable development (Hörisch, Freeman, & Schaltegger, 2014).

The benefits of sustainability reporting are one of the key drivers of the practice. Ernst and Young (2013) conducted a study on the value of sustainability reporting. The study concluded that the benefits of sustainability reporting go beyond financial risk, including: better organisation reputation, increased waste reduction, improved risk management, social benefits and meeting the expectations of employees. Sustainability reporting efforts can be worth more than just complying with reporting regulations.

In order to realise the benefits from projects, it is important that organisations rely on projects aimed at innovation and value creation. The number of projects that meet business objectives is declining (Project Management Institute (PMI), 2016). Sustainable Development (SD) projects in organisations is an area of innovation and change (Rammel & Van Den Bergh, 2003), but is not apparent in management benefit discussions (Silvius & Schipper, 2014). From a management paradigm

perspective, SD fosters adaptive capability, by continuously creating new development paths with subsequent beneficial value (Rammel & Van Den Bergh, 2003).

Sustainable Development projects create benefits through stakeholder engagement (Artto, Ahola, & Vartiainen, 2016; Matinheikki, Artto, Peltokorpi, & Rajala, 2016), from integrative thinking by system actors provided that that no single individual in an organisation has complete control over all aspects of SD (Kemp, Loorbach, & Rotmans, 2007). Keeys and Huemann (2017) developed a framework for determining the benefits of sustainable development (Figure 3-5). The underlying assumption of the framework is that what benefits creation from sustainable development is an integrated process that starts with a group of stakeholders. Usually benefits are realised at the end of a project lifecycle however, with co-creation these benefits can be shaped during the project lifecycle by interacting with stakeholders.

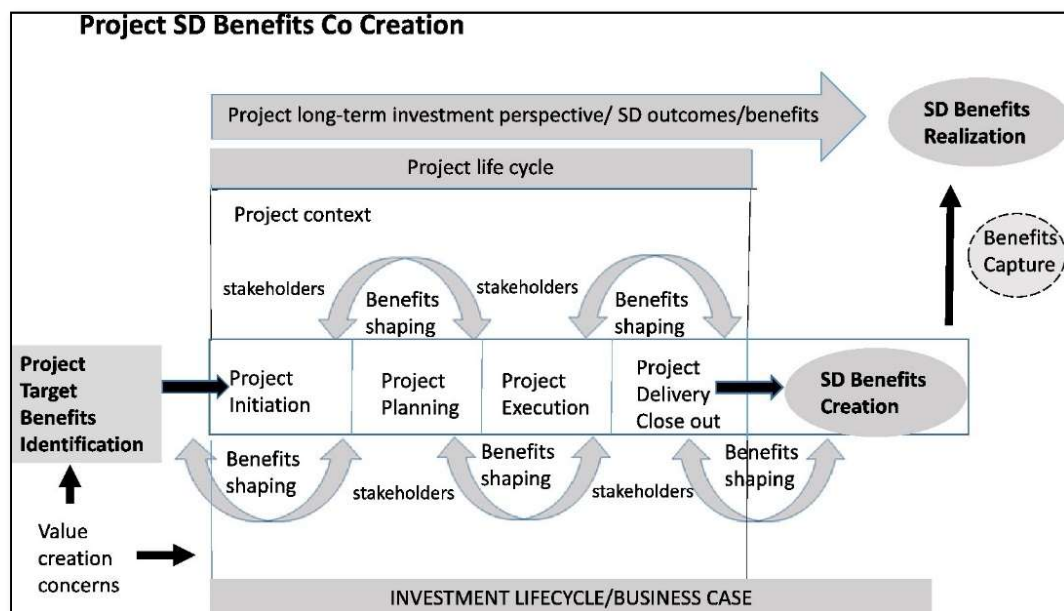


Figure 3-5: Conceptual Framework (Keeys & Huemann, 2017)

Satiability reporting practices can help an organisation to function more efficiently and drive progress towards inclusive growth. The integrated nature of sustainable development can lead to benefits creation before organisations can realise the benefits of projects. Sustainability reporting in HEIs is not yet on the level of corporate sustainability reporting (Azizi, Bien, & Sassen, 2018; Fonseca, Macdonald, Dandy, & Valenti, 2011; Lozano et al., 2015).

### 3.4 Sustainability Reporting in Higher Education Institutions

Multiple HEIs have issued the call for proper reporting of environmental and social impacts within academia (Universities South Africa, 2015). Reporting on these issues can increase awareness on environmental and social issues and in the process, be used as a powerful teaching aid. Sustainability

reporting allows students to be directly involved with the process and can greatly benefit the general opinion among academic institutions that sustainability reporting is important for the future.

Reporting at HEIs can take many forms, with obvious differences between the benefits of each form (Heilmayr, 2006). Environmental reporting seeks to demonstrate that an institution is fighting the adverse effects that their own activities have on the environment. Sustainability reporting on the other hand attempts to build on this notion by enlarging the scope of the evaluation to include social and economic concerns. The lack of standardisation and commonly understood definitions seems to prevent uniformity with each category (Kim Ceulemans et al., 2015). This seems to indicate the immaturity of sustainability reporting within academia.

### **3.4.1 Sustainability Reporting Internationally**

There is a growing trend to incorporate sustainability reporting at HEIs (Beynaghi et al., 2016; Ferrer-Balas et al., 2010; Waas et al., 2010). Sustainability has moved beyond just components of education, expanding into social learning processes within academia (Barth & Michelsen, 2013; Ferrer-Balas, Buckland, & de Mingo, 2009). The result of this growing trend in sustainability led HEIs to join sustainability networks (e.g. the International Sustainable Campus Network, the Environmental Association for Universities and Colleges, the Association for the Advancement of Sustainability in Higher Education), establishing sustainability centres within HEIs (Soini, Jurgilevich, Pietikäinen, & Korhonen-Kurki, 2018).

Sustainability centres (research institute/think tank) play an important role in knowledge production. According to Soini et al. (2018), sustainability centres reflect upon the academic and political concepts of sustainability in order to legitimise their work within HEIs. The above-mentioned reflection is accomplished by exploring sustainability through various perspectives (such as economic, social, cultural or ecological), ranging over different sectoral scopes (regional or global). In contrast to traditional science, sustainability science use a socially robust transformative approach to solve real-world problems (Adomssent, 2013; Barth & Michelsen, 2013; Ariane König, 2015). This often leads to collaboration with non-academic partners on the co-production of knowledge and measures that seek to transform society (Trencher, Bai, Evans, McCormick, & Yarime, 2014).

Cooperation between HEIs through collaboration at international conferences is important for sustainable development research and future joint projects. Berchin et al. (2017) analysed international academic conferences on sustainable development and determined that HEIs have increasing interest in establishing dialogues among institutions. Figure 3-6 presents the six continents where HEIs are promoting sustainable development in cooperation with other institutions.

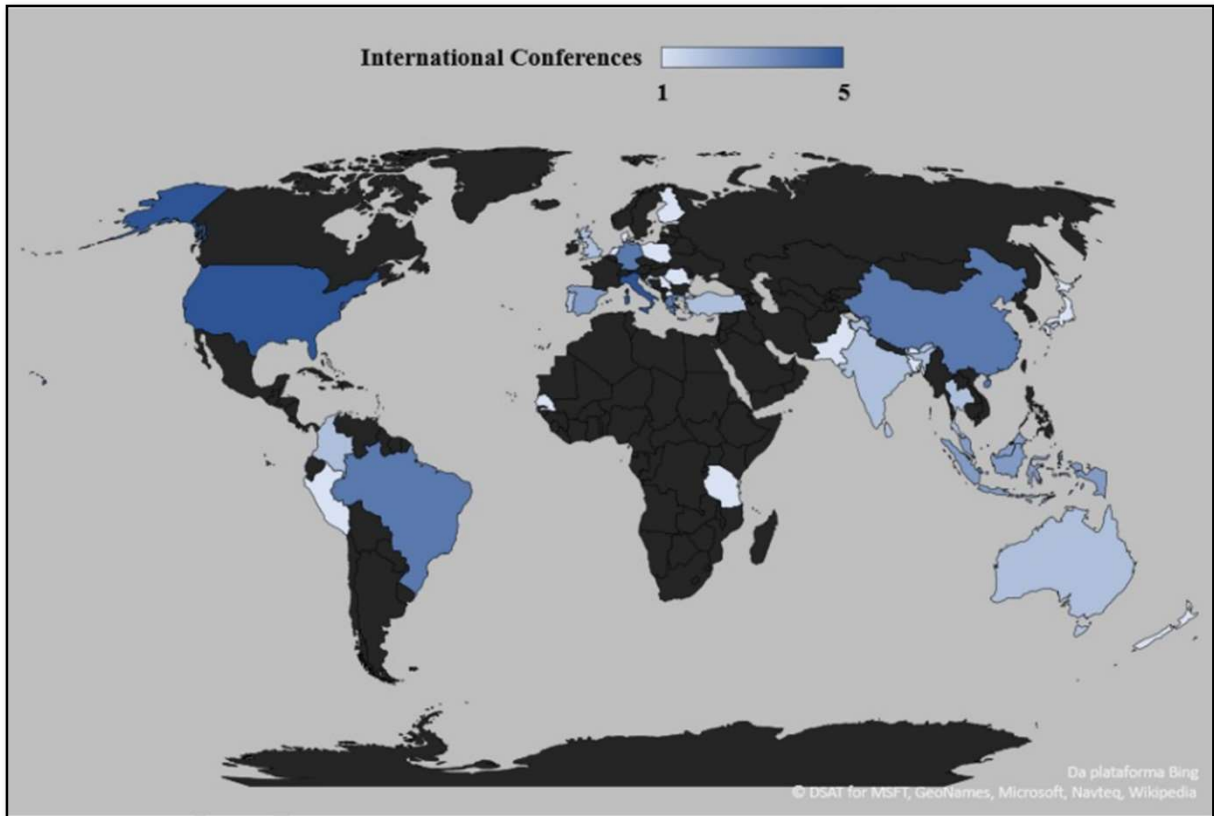


Figure 3-6: Number of sustainability conferences per world region among 69 conferences analysed (Berchin et al., 2017)

HEIs recognise the importance of collaboration to foster interdisciplinary and multidisciplinary approaches in their call for sustainability in higher education (Berchin et al., 2017). These interdisciplinary and multidisciplinary approaches provide a holistic view and are essential for sustainability (Azeiteiro, Bacelar-Nicolau, Caetano, & Caeiro, 2015; de Andrade Guerra et al., 2016; Gombert-Courvoisier, Sennes, Ricard, & Ribeyre, 2014; Kościelniak, 2014). Berchin et al. (2017) identified six recurrent strategies to promote sustainable development in HEIs:

- Research;
- Campus operations;
- Institutional agenda;
- Outreach; and
- Knowledge dissemination.

The adoption of sustainability reporting was slow and inconsistent during the early years of sustainability reporting in HEIs (Kemp & Volpi, 2008). HEIs have since passed the innovators threshold (2.5% of adopters are considered innovators' (Rogers, 1995)) and is in the early stages of adopting sustainability reporting (Alonso-Almeida et al., 2015). The upsurge in sustainability reporting in the corporate world contributed to the sustainability reporting efforts which HEIs are currently experiencing

(Aras & Crowther, 2009; K. Ceulemans, Molderez, & Van Liedekerke, 2015). Despite the growing trend, sustainability reporting in HEIs is still limited. Lozano (2011) suggests it is the result of poor quality reports produced by the few participating HEIs.

According to Alonso-Almeida et al. (2015) European HEIs are more commonly adopting the GRI standard, with some institutions publishing yearly reports. The German Sustainability Code (Section 4.3) is one such example that will be discussed in the next chapter. Sustainability reporting in South Africa has taken a step in the right direction after the implementation of mandatory reporting practices for HEIs by the Department of Higher Education and Training in 2014 (Department of Higher Education and Training, 2014).

### **3.4.2 Sustainability Reporting in South Africa**

Sustainability reporting practices in South African HEIs are still in their infancy (Calitz et al., 2015). The focus of HEIs reporting is still the financial aspect, regardless of the advances made in the corporate sector (Section 3.3.1.3). Principles and norms developed in the corporate sector as a consequence of the evolution of Corporate Social Responsibility (Section 3.3.1) are directing corporate actions on a global level (Petrini & Pozzebon, 2009). The globalisation of HEIs sustainability reporting should be embraced, to ensure the advancement of sustainability reporting in this sector.

Bosire (2014) conducted a study to gain understanding of South African HEIs sustainability reporting practices. Of the 23 public HEIs surveyed in South Africa, 70% of report data consists of financial information, while social and environmental data make up 20% and 10% respectively. The study found that the poor training of management responsible for implementing sustainability reporting contributed to the slow adoption rate of sustainability reporting. These findings are in line with studies that indicate, introducing sustainability reporting into any sector requires effective management and data acquisition processes (Fonseca et al., 2011; Lozano, 2006b). The study concluded that sustainability reporting is not embraced by South African HEIs and lists several influencing factors (Bosire, 2014):

- Lack of comparability;
- Lack of any HEIs reporting standards;
- The voluntary nature of sustainability reporting; and
- Difficulties in auditing sustainability reports.

The Department of Higher Education and Training (DHET) published a governmental notice in 2014 dictating that it will be mandatory for all public South African HEIs to produce an annual performance plan starting 2015 (Department of Higher Education and Training, 2014). This plan should outline the intentions for the institution's upcoming financial year, including the activities of the current year's events. The notice indicated that each public HEI must (Department of Higher Education and Training, 2014):

- Produce a strategic plan updated at least every 5 years;
- Submit an annual performance plan in line with the strategic plan;
- Identify a set of core institutional monitoring indicators; and
- Submit a mid-year performance report in line with the strategic plan and annual performance report.

HEIs policy development can no longer neglect the consequences of globalisation. Institutions can no longer just focus on globalising learning experiences for students, but should also focus on global development opportunities for faculties (AACSB International, 2011). The question for South African HEIs is no longer whether to globalise but how to globalise to strengthen intellectual capacities, reputations and competitiveness (Popescu, 2015). South African HEIs face considerable challenges regarding disseminating knowledge to make meaningful responses regarding developments posed by globalisation.

HEIs in the Southern African Development Community are currently focusing on revitalising their research capacities, moving infrastructure and governance in the 21st century for their diverse institutions (SARUA, 2012). Due to globalisation national boundaries are being transcended (Koehn & J.N., 2010), changing established assumptions and strategies. Popescu (2015) noted that globalisation would afford South African HEIs the opportunity to be world class universities, striving for better international ratings, by shaping a generation of socially engaged professionals. Sustainability reporting worthy of international scrutiny has the potential to advance South African HEIs goal of globalisation (Ramos et al., 2015).

### **3.4.3 Barriers to Sustainability Reporting**

Sustainability is a broad concept, one which most HEIs still associate with survival regarding the environment (Aleixo, Leal, & Azeiteiro, 2018). It is therefore, essential that HEIs have access to national and international good practices and examples of how sustainability is implemented by other HEIs to improve their own sustainability efforts. A holistic sustainability vision will make HEIs more attractive to students and organisations in the region. The commitment of HEIs leaders and main stakeholders plays a big role towards accomplishing organisational change favourable towards sustainability (Aleixo et al., 2018). Aleixo et al. (2018) and Ching (2013) list some barriers to sustainability in HEIs:

- Ambiguity surrounding the sustainability concept;
- Financial resources;
- Resistance to change;
- Rigid organisational structure;
- Lack of commitment, awareness, interest and involvement of stakeholders; and

- Lack of specialised training in sustainability.

Aleixo et al. (2018) mention that the challenges which HEIs face are intrinsically linked to the barriers to sustainability. Finance and management structures are seen as the main challenges of sustainability implementation in HEIs. The integration of sustainability in HEIs is a challenging concept that is not well understood (Aleixo et al., 2018; Lozano, 2008). Therefore, it is important to analyse the national and international practices to provide insight into sustainability implementation in HEIs.

Section 3.4 investigated sustainability reporting in HEIs on an international and national scale. The need to advance sustainability reporting practices in HEIs has seen a renewed collaboration between international HEIs. Globally the adoption of GRI practices has surpassed the innovators threshold as more HEIs are adopting the GRI guidelines (Section 3.4.1). In South Africa however, HEIs are not embracing sustainability reporting practices but are merely adhering to governmental reporting requirements (Section 3.4.2). The focus of reporting is still on finance and management structures, neglecting the importance of globalisation (Section 3.4.3). Section 3.5 reviews popular tools used by HEIs to support the practice of sustainability reporting.

## **3.5 Sustainability Reporting Frameworks related to Higher Education**

Sustainability can seem too broad and abstract to HEIs. Having a reporting framework specifically designed for HEIs could provide them with support and orientation. A framework could also standardise the process and allow for the comparability of reports across the HEIs' sector (Fonseca et al., 2011; Lopatta & Jaeschke, 2014). This section will investigate at three sustainability frameworks related to HEIs.

### **3.5.1 International Sustainable Campus Network**

The International Sustainable Campus Network (ISCN)<sup>2</sup> was founded in January 2007 with the aim of providing a global platform to assist Higher Education Institutions with integrating, sustainable practices in research and training (International Sustainable Campus Network, 2017b). The ISCN is a non-profit association with its Board of directors consisting mostly of members of Higher Education Institutions that support ISCN (Figure 3-7) (International Sustainable Campus Network, 2017a).

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<sup>2</sup> <https://www.international-sustainable-campus-network.org/>

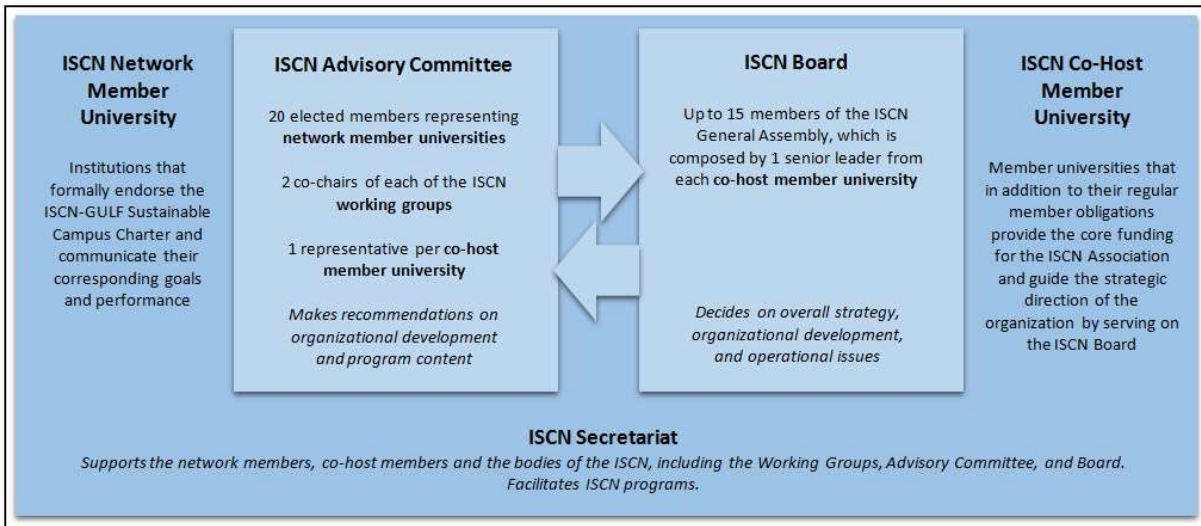


Figure 3-7: The ISCN Organisational Structure (International Sustainable Campus Network, 2017a)

ISCN promotes continuous improvement on all aspects of sustainability within Higher Education. The ISCN in conjunction with the Global University Leaders Forum (GULF), developed a Charter with three principles (Figure 3-8) to assist HEIs in setting targets and reaching their sustainability reporting goals (König et al., 2010). The first principles focus on sustainable campus infrastructure, demonstrating respect for nature and society. The second principle concentrates on campus development, analysing social integration, responsible operation and goals for impact management. The third principle encompasses the entire spectrum of Higher Education to align the core mission of HEIs with sustainable development.

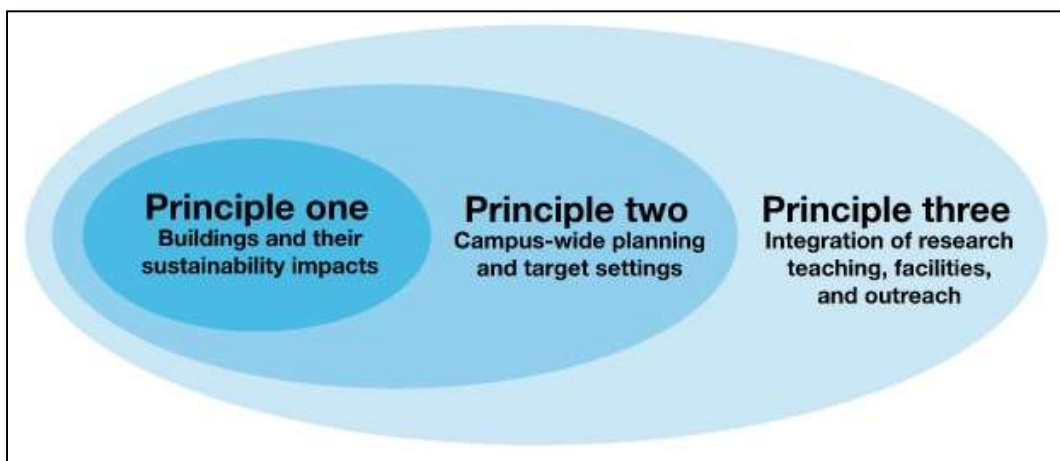


Figure 3-8: ISCN-GULF Sustainable Campus Charter principles (Global University Leaders Forum, 2016)

The ISCN Charter report was developed based on the Global Reporting Initiative (Section 3.5.4) with traces of the Sustainability Tracking, Assessment and Rating System (STARS) (Section 3.5.2) (König et al., 2010). The report structure requires an introduction with information about the organisation and



report frequency. The rest of the report consists of three sections based on the three principles (Figure 3-8) (Global University Leaders Forum, 2016). Appendix A provides a table of the ISCN reporting requirements and how they link up with the Global Reporting Initiative and Sustainability Tracking, Assessment and Rating System.

### **3.5.2 Sustainability Tracking, Assessment and Rating System**

The Sustainability Tracking, Assessment and Rating System (STARS) is a self-reporting sustainability framework for HEIs. STARS uses a set of common framework and criteria for meaningful comparisons across HEIs (Shi & Lai, 2013). The intention of STARS is to provide HEIs with a tool to measure their sustainability efforts and progress. STARS was initially developed in 2006 by the Association for the Advancement of Sustainability in Higher Education<sup>3</sup> (AASHE) with the intention of broad participation from HEIs in the United States and Canada (Association for the Advancement of Sustainability in Higher Education, 2017a).

STARS is designed to (Association for the Advancement of Sustainability in Higher Education, 2017a):

- Continually improve sustainability by creating incentives for participating HEIs;
- Create a means for meaningful comparison of institution performance;
- Understand sustainability across all sectors of HEIs;
- Develop a campus sustainability community in HEIs; and
- Share information across HEIs regarding sustainable practices.

STARS recognises sustainable progress by scoring an institution's progress by assigning either a Bronze, Silver, Gold or Platinum rating (Association for the Advancement of Sustainability in Higher Education, 2016). Participants need to register with AASHE in order to qualify for a STARS rating. AASHE strives to consistently allocate score ratings but it is inherently a subjective exercise. With the latest version of STARS, additional ways to accommodate regional variations of institutions types were considered. The STARS' score is based on a percentage of points earned across four categories (Association for the Advancement of Sustainability in Higher Education, 2016):

- Operations;
- Academia;
- Engagement; and
- Planning and Administration.

The four categories are divided into several subcategories that are used to assign credits to HEIs (Table 3-1). The STARS technical manual (Association for the Advancement of Sustainability in Higher

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<sup>3</sup> <http://www.aashe.org/>

Education, 2016) provides a detailed breakdown of the credit points and technical requirements for participating HEIs. Appendix B provides a more detailed list of the STARS Credit system.

Table 3-1: STARS Credits (Association for the Advancement of Sustainability in Higher Education, 2016)

<b>Operations 35%</b>	<b>Academia 29%</b>	<b>Engagement 21%</b>	<b>Planning and Administration 15%</b>
<ul style="list-style-type: none"> <li>- Air &amp; Climate (11 point)</li> <li>- Building (8 points)</li> <li>- Energy (10 points)</li> <li>- Food &amp; Dining (8 points)</li> <li>- Grounds (3-4 points)</li> <li>- Purchasing (6 points)</li> <li>- Transportation (7 points)</li> <li>- Waste (10 points)</li> <li>- Water (6-8 points)</li> </ul>	<ul style="list-style-type: none"> <li>- Curriculum (40 point)</li> <li>- Research (18 points)</li> </ul>	<ul style="list-style-type: none"> <li>- Campus Engagement (21 points)</li> <li>- Public Engagement (20 points)</li> </ul>	<ul style="list-style-type: none"> <li>- Coordination &amp; Planning (8 points)</li> <li>- Diversity &amp; Affordability (10 points)</li> <li>- Investment &amp; Finance (7 points)</li> <li>- Wellbeing &amp; Work (7 points)</li> </ul>

According to the Sustainable Campus Index produced by AASHE (Association for the Advancement of Sustainability in Higher Education, 2017b), two institutions have become platinum members which requires a credit score of between 85 and 100 points. Bronze, Silver and Gold require a score rating of 25 to 44, 45 to 64 and 65 to 84 respectively. Additionally, institutions may request to participate as a STARS Reporter if they do not want to make their scores public. The United States and Canada hold 88% and 10% of participating universities respectively.

### 3.5.3 KING III and KING VI Code

The King III report was created in 2009 by the Institute of Directors in Southern Africa (IoDSA) following changes in international governance trends and the enactment of the Companies Act 71 of 2008 in South Africa (The Institute of Directors in Southern Africa, 2009). The basis of the King III report suggests that organisations produce an integrated report rather than an annual financial and sustainability report. The philosophy of King III focuses on leadership, sustainability and corporate citizenship.

In order to understand the thought processes of creating the King III report, the following aspects should be considered. Effective leadership will give rise to a sustainable economic, social and environmental performance (The Institute of Directors in Southern Africa, 2009). Incremental changes in the advancement of sustainability are not enough, a fundamental shift is required to make sustainability the primary economic imperative of the 21st century (Trialogue, 2013). Lastly, based on the South African

Constitution, corporate citizenship should operate in a sustainable manner (Trialogue, 2013). The King III code comprises nine chapters including (The Institute of Directors in Southern Africa, 2009): Ethical leadership and corporate citizenship; Boards and directors; Audit committees; The governance of risk; The governance of information technology; Compliance with laws, codes, rules and standards; Internal audit; Governing stakeholder relationships; and Integrated reporting and disclosure.

The most important change that King III brought into effect is the responsibility that companies should take regarding sustainability issues. The CEO can no longer delegate sustainability reporting, instead the CEO and the board should take responsibility and apply their minds to review sustainability issues within the company (Trialogue, 2013).

The King VI reporting framework was published in 2016 by the IoDSA (Institute of Directors Southern Africa, 2016). According to Werksmans Attorneys (2016) organisations, private companies and public entities have experienced significant challenges in adapting to the King III framework. To make the King Code more accessible to all types of entities, the King VI Code was created. The King VI Code contains fewer principles that are well rounded, including sector supplements for easier implementation by organisations (Figure 3-9) (Werksmans Attorneys, 2016).

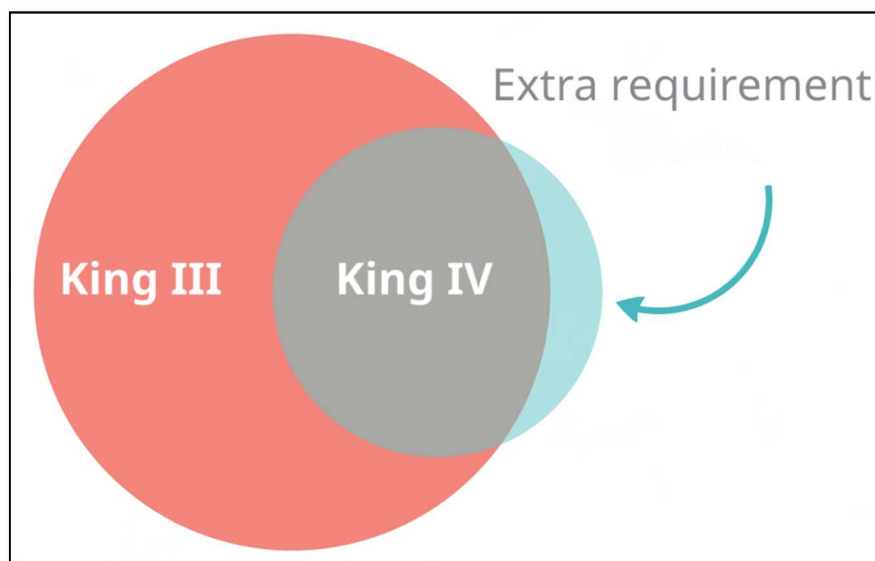


Figure 3-9: Difference between King III and King VI (Kula, 2018)

In the King VI Code the 75 King III principles have been reduced to only 17 principles linking to very distinct outcomes (Institute of Directors Southern Africa, 2016). King VI has been created to move beyond a compliance mind-set and more into describing how practices have been implemented. In the next section the Global Reporting Initiative is discussed.

### 3.5.4 Global Reporting Initiative

Globally, there is a growing need for sustainability reporting standards. In 2016, the Global Reporting Initiative (GRI) launched the first global standards for sustainability reporting developed by the Global Sustainability Standards Board (Global Reporting Initiative, 2017b). The GRI standards on economic, environmental and social impacts is a trusted reference for regulators and policy makers. The first set of GRI guidelines was developed in 2000, and since then have undergone multiple revisions. The most recent revision, the GRI G4 Guidelines offers a more flexible structure, with simpler language and clearer requirements (Global Reporting Initiative, 2014b).

The Global Reporting Initiative (GRI) was founded in Boston, USA in 1997 (GRI's History, 2016). The roots of GRI lie in the Coalition for Environmentally Responsible Economics (CERES), however the United Nations Environment Program was also involved in the establishment of GRI. The established GRI guidelines act as an accountability mechanism to ensure that corporations follow the CERES principles for responsible environmental conduct. The success of GRI is due to the ability of the GRI guidelines to maintain a balance between the individual and collective interests of their diverse constituencies (Brown, de Jong, & Lessidrenska, 2009). Furthermore, contributing to GRI's success, is the efficient pursuit of technical objectives that deter challenges in power relations between new and existing institutions.

The GRI is focussed on organisations of all types and sectors all over the world. There is a growing number of companies that publicly report annually on their sustainability strategies and achievements. Worldwide initiatives for bringing sustainability issues to the forefront are producing results (Kuzey & Uyar, 2016). The GRI guidelines are designed to meet the information requirements of multiple stakeholders. The GRI guidelines reflect the principles of balance, comparability, accuracy, timeliness, clarity and reliability. Benefits for organisations implementing GRI reporting can include (Global Reporting Initiative, 2017a):

- Increased understanding of risks and opportunities;
- Comparing performance internally and between organisations;
- Reducing cost and improving efficiency;
- Influencing policy and management strategy;
- Emphasising the link between financial and non-financial performance;
- Improving reputation;
- Enabling external stakeholders to understand an organisations true value; and
- Mitigating environmental impacts.

Lozano (2011) conducted a study to determine the state of sustainability reporting in Canadian HEIs. Lozano (2011) used a set of 56 indicators (obtained from the GRI G3 guidelines and the campus

sustainability assessment tool) over 10 categories to gain an initial insight into current Canadian HEIs sustainability reporting practices. It was necessary to add indicators from the campus sustainability assessment tool because the GRI G3 guidelines did not incorporate sustainability into research and the curriculum. Lozano (2011) concludes that the practice of how sustainability is incorporated in the research process is restricted and consequently, without policies from top management reports are likely to contain weak information.

There is a need for sustainability reporting in all organisations. GRI has not been designed specifically with HEIs in mind, but there is a lot to be learned from the practices of GRI implementation (Amaral, Martins, & Gouveia, 2015). Since the start of GRI's development, several reporting standards (Amaral et al., 2015) targeting specifically HEIs have spawned from the GRI's core principles. Similarly, the GRI's guidelines were modified to incorporate HEIs' requirements for reporting. In instances where GRI lacked the capacity to assess sustainability performance in the educational side of HEIs, assessment tools was developed to aid the process, as is discusses in the next section.

### **3.5.5 Assessment Tools for Sustainability Reporting**

#### **3.5.5.1 Sustainability Tool for Auditing Curricula in Higher Education**

Auditing of sustainability efforts in HEIs has taken many different forms. Regardless, the goal remains to assess progress, set goals and identify strengths and weaknesses (Glover, Peters, & Haslett, 2011). Since the creation of the Global Reporting Initiative (GRI), subscribing HEIs have searched for a tool to assess the educational aspect. Lozano and Peattie (2009) recognised that the focus of many of the initial auditing tools was on the environmental aspect of sustainability. Lozano developed the *Sustainability Tool for Auditing University Curricula in Higher Education* (STAUNCH) in 2007 at Cardiff University.

The STAUNCH software focused on quantifying curriculum content by scoring sustainability. The criteria selected fell under economic, environmental, social and crosscutting themes (Lozano & Peattie, 2011). STAUNCH offers either a summary of a detailed report where the report includes among other things, the percentage of courses contributing to sustainable development and the level of contribution (Lozano & Peattie, 2011).

#### **3.5.5.2 Graphical Assessment of Sustainability in Universities**

The *Graphical Assessment of Sustainability in Universities* (GASU) tool was created by Lozano (2006a) adapted from the GRI framework, providing a complete set of indicators. GASU serves as a foundation for a reporting tool to graphically present sustainability efforts in an HEI. GASU makes use of 126 indicators and rates an institution based on the appropriateness of the information used to describe each indicator (Lozano, 2006a).

Sustainability reports need to measure an organisation's progress towards sustainability and communicate that progress to stakeholders. The GASU tool analyses indicators, narrative assessments and raw data to generate sustainability reports. Lozano (2006a) found that overall indicator-based assessment produces the highest performance sustainability reports. There are some disadvantages to indicator-based assessment, most notably the time needed to gather extra resources and engage with stakeholders. By using the GASU tool, Lozano (2011) evaluated twelve reports of HEIs' sustainability and found that HEIs have a strong focus on the environmental aspect of sustainability reporting and care less about the social issues. The evaluation also revealed that the education dimension is the least addressed.

### **3.6 Global Reporting Initiative Framework**

The history and origin of GRI is explained in Section 3.5.4. This section will focus on the requirements and implementation process of the GRI G4 guidelines. Section 4.2 mentioned a study conducted to determine how international HEIs are using the GRI guidelines to fulfil their sustainability reporting needs. The results of that study will be presented in this section alongside the breakdown of the GRI G4 guidelines.

Demonstrating an organisations contribution towards a sustainable future is not an easy task. Accountability and transparency come with clear communication in reporting. In May 2013, GRI released the most recent version (G4) of the GRI reporting guidelines (Van Der Hoek, 2017). These guidelines serve as a basic framework for integrated sustainability reporting. Organisations implementing the GRI guidelines are required to use the G4 guidelines starting 2016 (Van Der Hoek, 2017).

In general, a leadership team will recognise the external pressure from government and society to be transparent. The implications are that clear progress on sustainability performance and achievements are necessary, by providing reliable non-financial data. Before an organisation can start implementing the GRI G4 guidelines however, buy-in of senior management is required provided that time and financial expenditures that goes with the implementation process. Managements commitments will act as a support base for future sustainability reporting efforts in the organisation.

Corporate reporting practices are becoming increasingly aware that embracing materiality is becoming more important in the reporting process. This is because of a direct result in corporate reporting practices evolving over time (Jones, Comfort, & Hillier, 2016). Ernst and Young (2014, p. 2) for example, argued that while "today's non-financial reporting environment can seem complex but there is one commonality amongst the various reporting initiatives- materiality." Materiality is indicative to environmental, social and economic issues that are at the heart of the stakeholders of a company (Jones et al., 2016).

A key step in the reporting process is establishing an up-to-date materiality matrix created using the GRI G4 methods. Material Aspects reflect the organization's significant economic, environmental and social impacts. The principles distinction between the GRI G3 and current G4 guidelines is the emphasis that organisations need to follow the outlines process of reporting (Global Reporting Initiative, 2015a). Reporting should focus on material issues that are relevant to key stakeholders and have a direct or indirect impact on the organisation's long-term success. Focusing on materiality will lead to more relevant and credible reports. However, that does not make past reporting experiences invalid. A thorough Gap-analysis of an organisations previous sustainability reports still contains valuable information for the GRI G4 implementation process.

The GRI released two documents for their G4 guidelines. The first part "Reporting Principles and Standards"<sup>4</sup> contains reporting principles, standard disclosures, and criteria to be applied by an organisation to prepare its sustainability report 'in accordance' with the guidelines. Definition of key terms are also included.

The second part is the "Implementation Manual". This manual contains explanations on how to apply the reporting principles, preparing the information to be released and how the various concepts in the guidelines should be interpreted.

The GRI records and public measurements which enable organizations to change the way they manage their impacts. The G4 Standards is about 'focus' to promote significant change (Global Reporting Initiative, 2014b).

### **3.6.1 In Accordance Criteria**

The GRI guidelines offer a Core or Comprehensive option with which to prepare an organisations sustainability report. Each option can be applied by all organisation's regardless of their size or location. The focus of both options is on the process of identifying material Aspects. The Core option provides a background for the essential elements of an organisations sustainability report. These included the impacts of its economic, environmental and social performance.

The Comprehensive option builds on the Core option by including strategy and analysis, ethics and integrity performance of an organisation. The Comprehensive option also requires the organisation to report more extensively on the identified material aspects. Regardless of the experience that an organisation has with sustainability reporting, the choice between the Core and Comprehensive options is determined by the reporting needs of the organisation. The choice between Core and Comprehensive 'in accordance' criteria does not affect the quality of the report, rather the compliance the organisations sustainability report will have with the GRI guidelines. Table 3-2 and Table 3-3 presents the minimum

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<sup>4</sup><https://www.globalreporting.org/resourcelibrary/GRIG4-Part1-Reporting-Principles-and-Standard-Disclosures.pdf>

requirements for the Core and Comprehensive options with regards to the general and specific standard disclosures respectively.

For standard disclosures with a (\*), omitting exceptional cases is acceptable with reasoning when disclosing the required information is not possible.

Table 3-2: Required general standard disclosures (Global Reporting Initiative, 2014b)

<b>General Standard Disclosures</b>	<b>‘In accordance’ - Core</b>	<b>‘In accordance’ - Comprehensive</b>
<b>Strategy and Analysis</b>	G4-1	G4-1, G4-2
<b>Organisational Profile</b>	G4-3 to G4-16	G4-3 to G4-16
<b>Identified Material Aspects and Boundaries</b>	G4-17 to G4-23	G4-17 to G4-23
<b>Stakeholder Engagement</b>	G4-24 to G4-27	G4-24 to G4-27
<b>Report Profile</b>	G4-28 to G4-33	G4-28 to G4-33
<b>Governance</b>	G4-34	G4-34; G4-35 to G4-55(*)
<b>Ethics and Integrity</b>	G4-56	G4-56; G4-57 to G4-58(*)
<b>General Standard Disclosure for Sectors</b>	Required, if available for the organisation’s sector(*)	Required, if available for the organisation’s sector(*)

Table 3-3: Required specific standard disclosures (DMA and indicators) (Global Reporting Initiative, 2014b)

<b>Specific Standard Disclosures</b>	<b>‘In accordance’ - Core</b>	<b>‘In accordance’ - Comprehensive</b>
<b>Generic Disclosure on Management Approach</b>	For material Aspects only(*)	For material Aspects only(*)
<b>Indicators</b>	At least one Indicator related to each identified material Aspect(*)	All Indicators related to each identified material Aspect(*)
<b>Specific Standard Disclosures for Sectors</b>	Required, if available for the organisation’s sector and if material(*)	Required, if available for the organisation’s sector and if material(*)

If the required information specified for the standard disclosures in the tables above can be found in another report prepared by the organisation, the organisation may elect not to repeat that information in the report provided that clear reference is made to where that information can be found. An organisation



would need to obtain an external assurance report if they would like the GRI report to indicate that it has been prepared 'in accordance' with the GRI guidelines.

The next section discusses the reporting principles of the GRI guidelines. The reporting principles should be applied by all organisation when preparing a sustainability report due to its capability to project transparency in the report.

### **3.6.2 Reporting Principles**

A fundamental part of sustainability reporting is ensuring that the GRI report adheres to the reporting principles. The principles are broken into two sections namely: Principles for defining report content and principles for defining report quality. The principles for defining report content considers the organisation's impacts on its environment as well as the needs of the stakeholders to define the report content. The principles for defining report quality ensures that the information in the report is accurate and properly presented, to enable stakeholders to make reasonable assessments.

#### **3.6.2.1 Principles for Defining Report Content**

According to GRI, a sustainability report content should reflect the following principles (Global Reporting Initiative, 2014b, 2014a):

- **Stakeholder Inclusiveness** can be defined as identifying the organisation's stakeholders and explaining how the expectations and interest of these stakeholders have been satisfied. The choices made when preparing the report are based on the expectations and interests of the stakeholders. Although the report must consider the reasonable expectations and interest of the stakeholders, it is unlikely that all stakeholders will use the report. Therefore, it is important to balance an individual stakeholder's needs and a broader accountability to all stakeholders.
- **Sustainability Context** requires the report to present the organisations performance in the wider context of sustainability. The underlying question of sustainability reporting: "how an organisation contributes, or aims to contribute in the future, to the improvement or deterioration of economic, environmental and social conditions, developments and trends at the local, regional or global level." (Global Reporting Initiative, 2014a, p. 10). Therefore, it is important that the sustainability performance of an organisation is placed into the broader context of sustainability to reflect on the underlining question. This can be achieved by discussing the performance of the organisation in context with the sector or regional performance. Usually it is most common for organisations to put their environmental data in context with global limits, however it is also possible it is also possible for organisations to report their social and economic objectives in context with the sector or government goals.
- **Materiality** requires the report to reflect on the organisations significant economic, environmental and social impacts with the goal of influencing the decisions of stakeholders.

Materiality is the threshold at which possible topics to be reported on becomes sufficiently important to consider putting it in the report. Once the wide range of topics have been narrowed down the importance of the remaining topics with regard to the emphasis it will receive in the report depends on the relative priority of each topic.

- **Completeness** of material aspects and their boundaries should be sufficient for stakeholders to measure the organisation's performance over the reporting period. Completeness mainly includes the proportions of scope, boundary and time. The combination of all the aspects should be sufficient to reflect on the organisations economic, environmental and social impacts. The aspect boundary refers to the description of where impacts occur within and outside of the organisation. Time refers to the need that the information chosen for each aspect be available for the period specified by the report.

### 3.6.2.2 Principles for Defining Report Quality

According to the GRI, a sustainability report should reflect the following quality principles (Global Reporting Initiative, 2014b):

- A **Balance** between the organisations positive and negative aspects is important to enable a reasoned assessment of the overall performance;
- **Comparability** requires the organisation to compile and report information consistently so that stakeholders can analyse the performance over time;
- **Accuracy** of reporting information is necessary for stakeholders to assess the organisations performance;
- The **Timeliness** release of the report will enable stakeholders to make informed decisions;
- The **Clarity** of the report information is necessary for stakeholder to understand the report; and
- The **Reliability** of the report is dependent on the on disclosing information related to the processes followed to compile the report.

### 3.6.3 The Process of Defining Report Content

The principles for defining report content (Section 3.6.2.1) outlines four criteria that should be applied when preparing a sustainability report. The process that an organisation will implement to identify the material aspects will vary based on the organisations sector, cultural context and the size of the organisation (Global Reporting Initiative, 2014a). Therefore, it is necessary to define systematic steps to define report content that can be replicated for each reporting period.

The GRI (2014a) offered four steps (Identification, Prioritisation, Validation, Review) as guidance on how to implement the principles for defining report content (Section 3.6.2.1). Figure 3-10 presents how

the process for defining material aspects relates to the principles for defining report content (Section 3.6.2.1). Following is an explanation for each step in the content defining process.

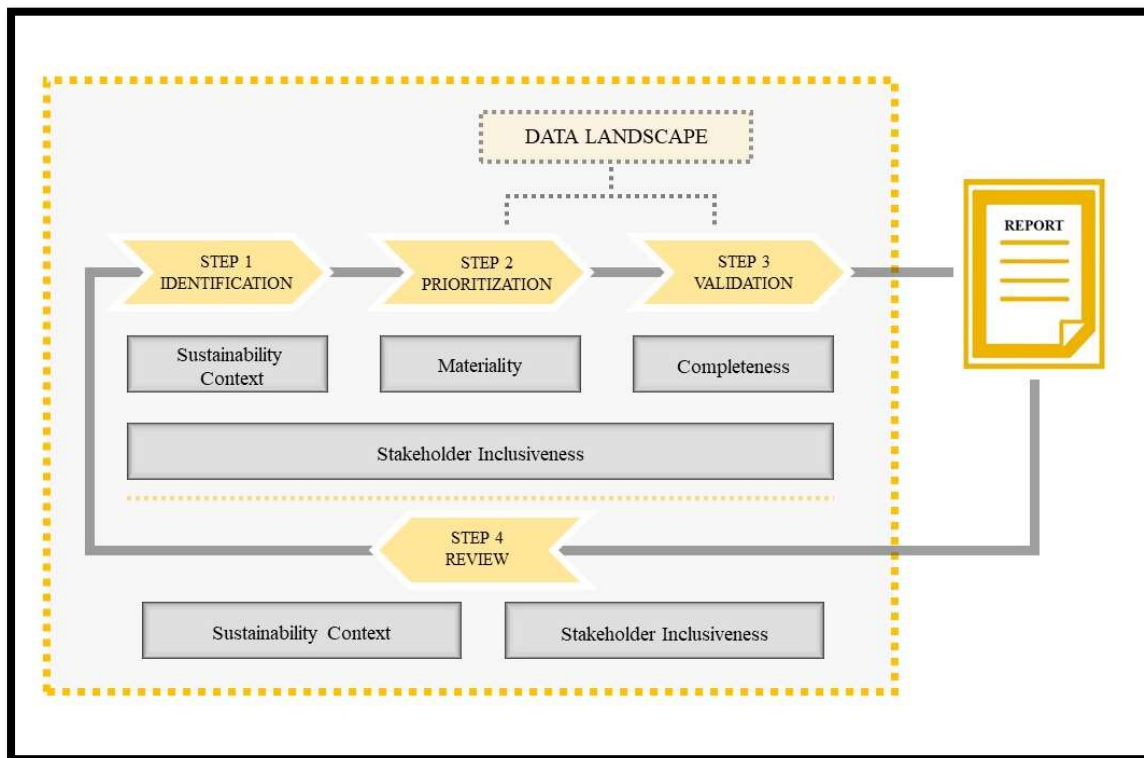


Figure 3-10: Defining material Aspects and Boundaries - process overview (adapted from Global Reporting Initiative, 2014a)

### 3.6.3.1 Step 1: Identification

Identification is the first step in the process to define a list of topics that are relevant to an organisations sustainability report. A topic is considered relevant if it can reasonably contribute to reflect on the organisations economic, environmental and social impacts (Global Reporting Initiative, 2014a).

At this stage, all GRI sector disclosures can be considered as a list of initial topics that might be relevant to the reporting process. Table 3-4 present a list of such disclosures (material aspects). Each category contains material aspects (disclosures) related to that category.

Table 3-4: Categories and Aspects (Global Reporting Initiative, 2014a)

Category	Economic	Environmental			
Aspects <sup>III</sup>	<ul style="list-style-type: none"> <li>• Economic Performance</li> <li>• Market Presence</li> <li>• Indirect Economic Impacts</li> <li>• Procurement Practices</li> </ul>	<ul style="list-style-type: none"> <li>• Materials</li> <li>• Energy</li> <li>• Water</li> <li>• Biodiversity</li> <li>• Emissions</li> <li>• Effluents and Waste</li> <li>• Products and Services</li> <li>• Compliance</li> <li>• Transport</li> <li>• Overall</li> <li>• Supplier Environmental Assessment</li> <li>• Environmental Grievance Mechanisms</li> </ul>			
Category	Social				
Sub-Categories	Labor Practices and Decent Work	Human Rights	Society	Product Responsibility	
Aspects <sup>III</sup>	<ul style="list-style-type: none"> <li>• Employment</li> <li>• Labor/Management Relations</li> <li>• Occupational Health and Safety</li> <li>• Training and Education</li> <li>• Diversity and Equal Opportunity</li> <li>• Equal Remuneration for Women and Men</li> <li>• Supplier Assessment for Labor Practices</li> <li>• Labor Practices Grievance Mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Investment</li> <li>• Non-discrimination</li> <li>• Freedom of Association and Collective Bargaining</li> <li>• Child Labor</li> <li>• Forced or Compulsory Labor</li> <li>• Security Practices</li> <li>• Indigenous Rights</li> <li>• Assessment</li> <li>• Supplier Human Rights Assessment</li> <li>• Human Rights Grievance Mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Local Communities</li> <li>• Anti-corruption</li> <li>• Public Policy</li> <li>• Anti-competitive Behavior</li> <li>• Compliance</li> <li>• Supplier Assessment for Impacts on Society</li> <li>• Grievance Mechanisms for Impacts on Society</li> </ul>	<ul style="list-style-type: none"> <li>• Customer Health and Safety</li> <li>• Product and Service Labeling</li> <li>• Marketing Communications</li> <li>• Customer Privacy</li> <li>• Compliance</li> </ul>	

Not all the topics listed in Table 3-4 above will be relevant to each organisation, thus topics that related to the organisations activities, products, services and relationships can be considered relevant. Once a topic is considered relevant it is necessary to do an assessment of the topics boundaries to see if the impacts occur inside or outside of the organisation (Global Reporting Initiative, 2014a). At the end of this stage the organisation should have a list of relevant topics.

### 3.6.3.2 Step 2: Prioritisation

The previous stage describes the process for acquiring a list of relevant topics (material aspects) (not necessarily consisting only of GRI sector disclosures). In this stage the list of topics should be prioritised based on their significance to the economic, environmental and social impacts of the reporting organisation (Global Reporting Initiative, 2014a). This step is necessary to determine how strongly each material aspect will feature in the sustainability report.

The definition of the materiality principle states: “The report should cover Aspects that: reflect the organisation’s significant economic, environmental and social impacts; or substantively influence the assessments and decisions of stakeholders” (Global Reporting Initiative, 2014a, p. 66). Consequently, it is necessary to determine if a topic is a material aspect or not. To do this a process of qualitative and quantitative assessment is necessary. Ultimately the prioritisation of the material aspects is based on the principles of materiality and stakeholder inclusiveness.

### **3.6.3.3 Step 3: Validation**

The validation step measures all the material aspects identified in the prioritisation step (Section 3.6.3.2) against the principle of completeness (Section 3.6.2.1) to ensure that the sustainability report gives a balanced depiction of the organisations sustainability performance (Global Reporting Initiative, 2014a). The material aspects are assessed against the scope of aspects covered in the report, the aspect boundaries and the time the aspect information covers relevant to the reporting period. When validating the identified material aspects, the organisation should use the test used for the principles of completeness and stakeholder inclusiveness. Once the material aspects list has been approved it requires translation into standard disclosures.

### **3.6.3.4 Step 4: Review**

After the sustainability report has been published, a review takes place where the organisation gather stakeholder feedback in order to improve the report for the next reporting cycle (Global Reporting Initiative, 2014a). The principles of sustainability context and stakeholder inclusiveness form the review guidelines for the report.

## **3.6.4 Standard Disclosures**

Sustainability reporting guidelines direct the process that is followed to create GRI reports. Different principles were defined to ensure the quality and correctness of GRI reports. Among these principles are standard disclosures, consisting of performance indicators and guidelines on specific technical topics. There are two different types of standard disclosures (Global Reporting Initiative, 2014b):

### **General Standard Disclosures**

- Strategy and Analysis;
- Organisation Profile;
- Identified Material Aspects and Boundaries;
- Stakeholder Engagement;
- Report Profile;
- Governance; and
- Ethics and Integrity.

## Specific Standard Disclosures

- Disclosures on Management Approach;
- Indicators:
  - Economic;
  - Environmental;
  - Social:
    - Labour Practices and Decent Work;
    - Human Rights;
    - Society; and
    - Product Responsibility.

The GRI G4 guidelines have 58 General and 91 Specific Standard Disclosures divided between 7 and 46 sub-sections respectively. This excludes any disclosures on management approach reporting organisations decide to add. Lozano (2011) (Section 3.5.4) pointed out that not all of these guidelines are applicable on HEIs, especially with regards to the specific standard disclosures. The Governance and Accountability institute conducted a study to determine the top 10 GRI aspects for the HEI sector (Governance and Accountability Institute, 2014):

- Equal remuneration for women and men;
- Customer privacy;
- Materials;
- Product and service labelling;
- Marketing communications;
- Freedom of association and collective bargaining;
- Market presence;
- Transport;
- Diversity and equal opportunity; and
- Biodiversity.

## 3.7 Self-Assessment of Sustainable Development Indicators

Every sustainability reporting framework includes of predetermined indicators that will be used during the reporting process. The scope and quality of the report will be determined by the selection of Sustainable Development Indicators (SDIs).

The purpose of an indicator is to communicate complex or unmeasurable information in a simplified manner. An indicator can be described as: “a variable which supplies information on other variables which is difficult to access (...) and can be used as bench marker to take a decision” (Gras et al., 1989,

p. 48); “alternative measures (...) enable us to gain an understanding of a complex system (...) so that effective management decisions can be taken that lead towards initial objectives” (Mitchell, May, & Mc Donald, 1995, p. 105). Girardin, Bockstaller and van der Werf (1999) distinguish between simple and composite indicators. Measurement or estimation of indicative variables results in simple indicators, where the aggregation of several simple indicators will result in a composite indicator.

SDIs are frequently used to assess sustainable development from an international to a regional scale. SDIs are effective tools in communicating, monitoring and evaluating complex phenomena to stakeholders (Mascarenhas, Coelho, Subtil, & Ramos, 2010). By using SDIs, the concept of sustainable development becomes operational, increasing accountability, decision making and widespread access to information.

Organisations have taken the initiative by establishing committees to cover all areas of sustainable development research since it has become a priority for practitioners. These different sources can be used for the identification of SDIs even though they might not necessarily address the needs of a specific industry (Poveda, 2017). There are challenging issues pertaining to SDIs’ questioning; what should be measured, how it should be measured and who will participate (Mascarenhas, Nunes, & Ramos, 2014). These issues remain open for debate, however the participation of stakeholders in the process of achieving suitable development is highly recommended (Bradley Guy & Kibert, 1998).

Self-assessment of sustainability can be beneficial if conducted on a regular basis. Commonly the primary concern of indicator practitioners is to acquire and process data to reflect the key trends as objectively as possible (Lyytimäki, Gudmundsson, & Sørensen, 2011). Sustainability indicators are mostly expressed in technical language and target aspects that scientists consider important however, the public interest should also be considered. Therefore, it is important that informed public participants must be included in the process determining what should be measured. However, the complexity of ecological issues often makes it difficult for the public to be involved in the process (Schiller et al., 2001).

It is crucial to select the right set of SDIs to effectively measure sustainability performance. Often the right way to start is by pre-selecting indicators already in use that have proven to work (Poveda, 2017). Figure 3-11 presents different groups of indicators with the subsequent resource location for pre-selecting SDIs. The resources are organised into three distinctive groups. The first group of indicators is selected by consensus from public and governmental representatives. The second group of indicators is selected through practical experience of researchers in the field. The third group of indicators is selected and implemented by organisations from a specific industry but can be influenced by organisations outside of that industry.

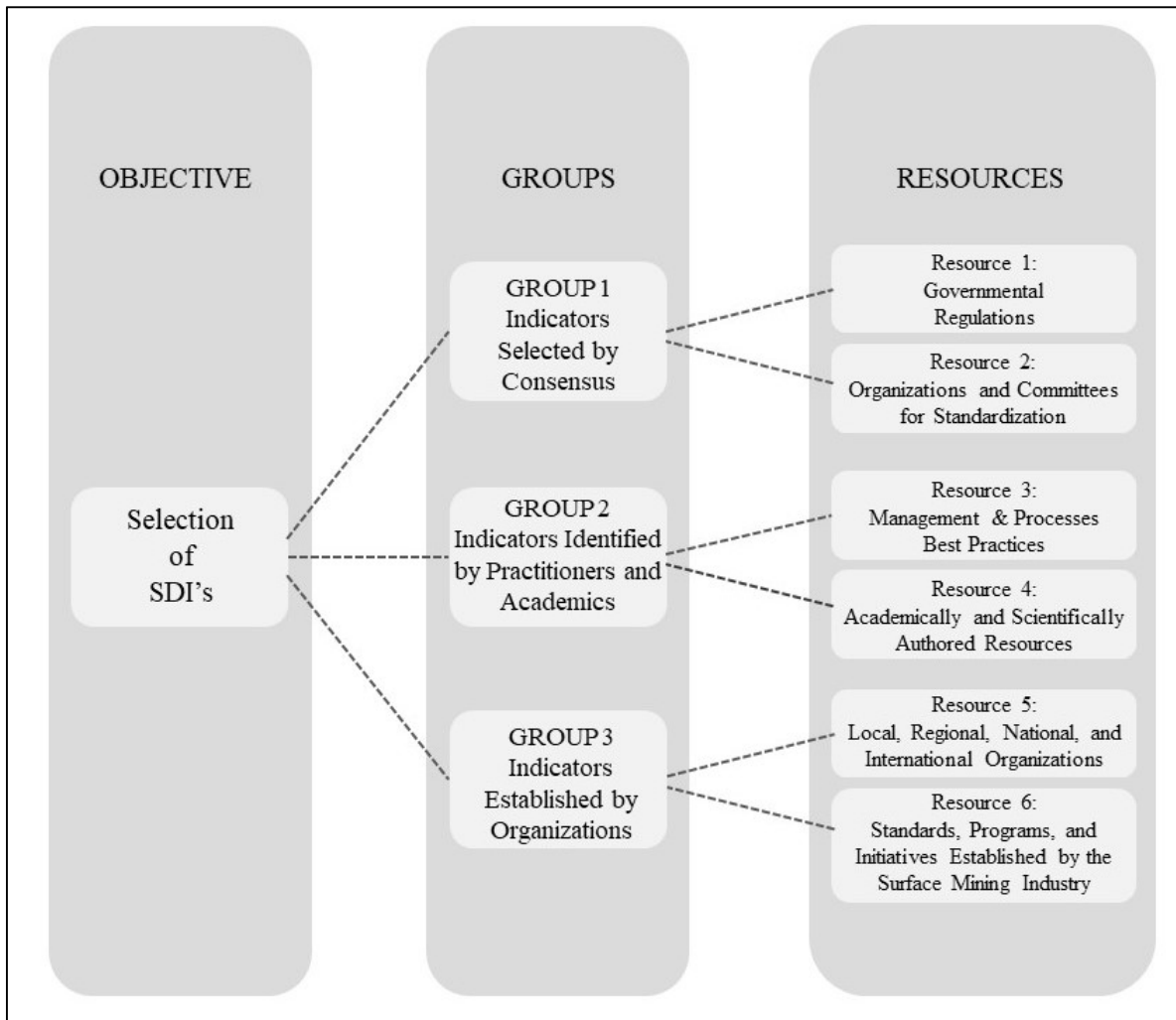


Figure 3-11: Groups and Resources for the Identification of SDIs (Poveda, 2017)

### 3.8 Summary

The concept of sustainability is broad and covers many topics. The term sustainability reporting is used unrestricted in society and has become to mean many things. Researchers are divided on the definition of sustainability, but regardless, it is clear sustainability is a multi-dimensional concept that encompasses all of society and should be treated as such. Therefore, it is expected that progress within the field of sustainability will occur in incremental steps.

Organisations and the corporate sectors have been producing sustainability reports for over a decade. Due to governmental intervention and regulations the South African corporate sector is the leading force in integrated sustainability reporting. With this experience, the benefits and challenges of sustainability reporting are becoming clear. Sustainability reporting benefits all areas of an organisation. Organisations have learned from their peers, competing on a global level, similarly HEIs need to learn from the mistakes and breakthroughs of other institutions to get a head start on sustainability reporting.



The adoption of sustainability reporting in HEIs is rapidly increasing, however poor the quality of the reports may be. Similar to the corporate sector, South African HEIs are required by the government to report on their activities. The guidelines provided are limited and institutions face considerable challenges regarding the implementation of these mandatory reports. Although several reporting frameworks exist, the GRI framework is the most extensive and most researched framework available.

This chapter answered the research question:

RQ<sub>1</sub>. How is sustainability reporting currently being implemented within HEIs?

The resultant deliverables addressed the following research objectives:

RO<sub>1</sub>. Identify existing sustainability reporting practices for HEIs.

RO<sub>2</sub>. Investigate the requirements of sustainability reporting practices for HEIs.

The following chapter investigates how international HEIs are currently implementing the GRI framework. Chapter 4 further discussed at the German Sustainability Code and the role it plays in refining the GRI guidelines for German HEIs.

# Chapter 4. Sustainability Reporting by International Higher Education Institutions

## 4.1 Introduction

Chapter 3 discussed sustainability in Higher Education Institutions (HEIs) and some frameworks the HEIs use to implement sustainability reporting. The concept of sustainability was clarified and the benefits of sustainability was discussed. Chapter 3 identified current sustainability reporting practices (Global Reporting Initiative and King IV) for HEIs as well as the requirements for sustainability reporting.

In this chapter the analyses of the reports of ten international HEIs are presented to gain insight in how the international HEIs community is currently making use of the GRI guidelines and their reporting standards. The content these HEIs institutions report on is examined.

Additionally, the German Sustainability Code for HEIs is introduced, seeking to determine which sections of the GRI G4 guidelines the code favours. The sustainability code is regarded as easy to implement especially for HEIs that are in the early stages of sustainability reporting. This will be beneficial in chapter 6 where GRI G4 guidelines for South African HEIs are considered.

The following research question will be answered:

RQ<sub>2</sub>. What are the sustainability reporting practices applied by international HEIs?

This chapter seeks to address the following research objectives:

RO<sub>3</sub>. Compare global HEI implementations of GRI sustainability reports.

Answering the research question will provide insight into the sustainability reporting practises and techniques of international HEIs. A full outline of Chapter 4 is provided by Figure 4-1.

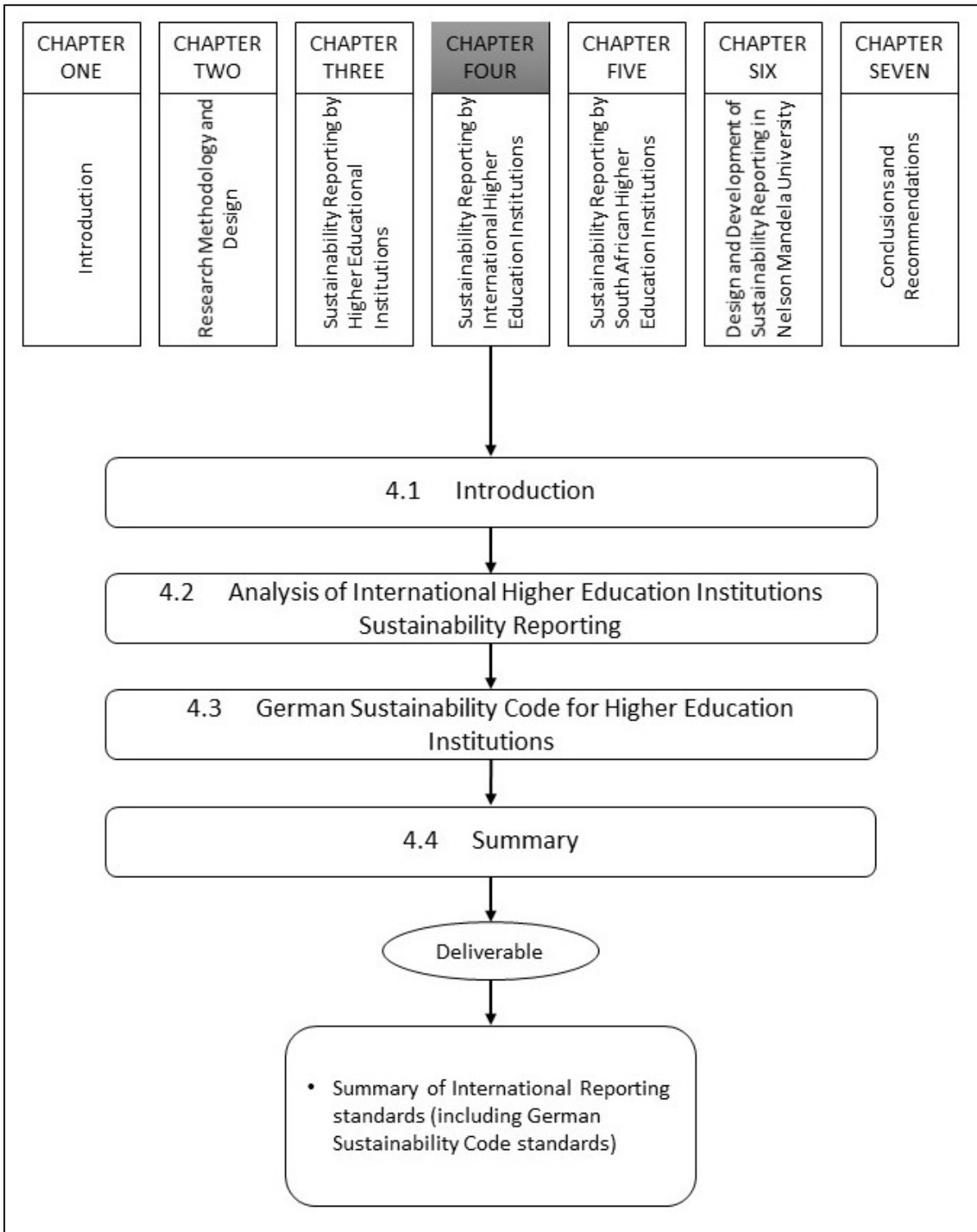


Figure 4-1: Chapter 4 Layout

## **4.2 Analysis of International Higher Education Institutions Sustainability Reporting**

Sustainability reporting is mainly done by large corporations (Section 3.3.1.3), however HEIs have been gaining ground on the topic and is in the early stages of adopting the practice (Section 3.4.1). It has been established that sustainability reporting in HEIs can increase the sustainability ranking position (Lukman, Krajnc, & Glavič, 2010) and provide cross institutional comparability (Kamal & Asmuss, 2013; Lozano, 2006a). However, HEIs are limited by the sector specific guidelines, limited time and common understanding available on generating sustainability reports (Adams, 2013; Lozano, Llobet, & Tideswell, 2013).

Research on sustainability reporting in HEIs mainly focus on assessment tools (Section 3.5.5) (Vaughter, Lidstone, McKenzie, & Wright, 2013; Yarime & Tanaka, 2012). While these assessment tools can help identify a set of core activities, evaluation of these tools have pointed out that they fail to assess material impacts (Yarime & Tanaka, 2012). In this chapter a study was conducted to determine the international trends of HEIs that use the GRI guidelines for sustainability reporting. Ten GRI reports from HEIs in Europe and America have been selected and analysed. Table 4-1 lists the HEIs used in this study, indicating the ‘in accordance’ option, the year of the report and the version of GRI guidelines used.

The selected HEIs (Table 4-1) were identified from the GRI sustainability disclosure database (Global Reporting Initiative, 2017c). Various international HEIs submit their sustainability reports to the GRI database, but only a few of these reports follow GRI guidelines. The selected HEIs represent the most comprehensive list of HEIs based on their geographical location for America and Europe.

The aim was to gain insight into the practices of the international HEI community regarding sustainability reporting using GRI guidelines. In the report of Ball State University, a comparison of overlapping areas is made between the GRI G4 guidelines and the STARS 2.0 guidelines. Except for Plymouth University most HEIs chose the core “in accordance” option, indicating that it is not yet a priority for HEIs to report on their governance structures (Section 3.4). Following are the results of the GRI general- and specific standard disclosures that the ten international HEI (Table 4-1) report on.

Table 4-1: HEIs using the GRI guidelines analysed

<b>Institution</b>	<b>Report Title</b>	<b>Core/comprehensive</b>	<b>Year of report</b>	<b>GRI version</b>
<b>Ball State University<sup>5</sup></b>	2014 Sustainability Report	Core	2014	G4
<b>Dartmouth College<sup>6</sup></b>	UMass Dartmouth Sustainability Report 2011	Core	2011	G3
<b>University of Texas<sup>7</sup></b>	Transformation: Sustainability on campus and beyond – 2012 sustainability report and environmental action plan.	Core	2012	G3.1
<b>Plymouth University<sup>8</sup></b>	Sustainability with Plymouth University	Comprehensive	2016	G4
<b>INSEAD Business School<sup>9</sup></b>	Sustainability Report 2014-2015 “Business for a Better World”	Core	2014-2015	G4
<b>ETH Zürich<sup>10</sup></b>	Sustainability Report 2013-2014: Based on guidelines of the Global Reporting Initiative (GRI) and the ISCN/GULF Sustainable Campus Charter	Core	2013-2014	G4
<b>ESADE Business &amp; Law School<sup>11</sup></b>	Annual Report: ESADE Foundation	Core	2014-2015	G4
<b>Technical University of Madrid<sup>12</sup></b>	De la escuela técnica superior de ingenieros industriales de la upm	Core	2014-2015	G4

<sup>5</sup> <https://cms.bsu.edu/>

<sup>6</sup> <http://home.dartmouth.edu/>

<sup>7</sup> <https://www.utexas.edu/>

<sup>8</sup> <https://www.plymouth.ac.uk/>

<sup>9</sup> <https://www.insead.edu/>

<sup>10</sup> <https://www.ethz.ch/de.html>

<sup>11</sup> <http://www.esade.edu>

<sup>12</sup> <http://www.upm.es/>

Institution	Report Title	Core/comprehensive	Year of report	GRI version
University of Turin <sup>13</sup>	Rapporto di sostenibilità	Core	2015-2016	G4
International University of Andalusia <sup>14</sup>	Memoria de Responsabilidad Social	Core	2014-2015	G3

## 4.2.1 General Standard Disclosures

The general standard disclosures are applicable to all organisations preparing sustainability reports (Global Reporting Initiative, 2015b). These disclosures set the context necessary to gain an understanding of the organisation's profile and governance. Table 4-2 lists the ten selected international HEIs and the topics they have reported on respectively. The complete table are included in Appendix C.

All the analysed reports adhere to the GRI standard. Part of the requirements of the GRI guidelines (Section 3.6) is including a comprehensive index of all disclosures reported on. The tables below are a representation of the disclosures reported on by each HEIs based on each HEI respective report index. All the disclosures are either reported on (yes), somewhat reported on (partial) or not reported on (no). All reported disclosures (including partial) are considered as a disclosure being reported on. The percentage of HEIs that reported on a general disclosure is the number of institutions that reported on that disclosure.

Table 4-2: International HEIs General Standard Disclosures

General Standard Disclosure	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
<b>In Accordance Option</b>	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
<b>Strategy and Analysis</b>											
G4-1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-2	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	60%
<b>Organizational Profile</b>											
G4-3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%

<sup>13</sup> <https://www.unito.it/>

<sup>14</sup> <https://www.unia.es/>

<b>General Standard Disclosure</b>	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
<b>In Accordance Option</b>	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
G4-4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-6	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-10	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-11	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
G4-12	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
G4-13	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-14	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	80%
G4-15	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	70%
G4-16	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	70%
<b>Identified Material Aspects and Boundaries</b>											
G4-17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-18	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-19	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-20	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-21	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-22	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
G4-23	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
<b>Stakeholder Engagement</b>											
G4-24	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
G4-25	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
G4-26	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
G4-27	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
<b>Report Profile</b>											
G4-28	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-29	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-30	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-31	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-32	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-33	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90%
<b>Governance</b>											
G4-34	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%

<b>General Standard Disclosure</b>	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
<b>In Accordance Option</b>	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
G4-35	No	No	No	Yes	No	No	No	No	No	No	10%
G4-36	No	Yes	Yes	Yes	No	No	No	No	No	No	30%
G4-37	No	Yes	Yes	Yes	No	No	No	No	No	No	30%
G4-38	No	Yes	Yes	Yes	No	No	No	No	Yes	No	40%
G4-39	No	Yes	Yes	Yes	No	No	No	No	No	No	30%
G4-40	No	Yes	Yes	Yes	No	No	No	No	No	No	30%
G4-41	No	No	No	Yes	No	No	No	No	No	No	10%
G4-42	No	No	No	Yes	No	No	No	No	Yes	No	20%
G4-43	No	No	No	Yes	No	No	No	No	No	No	10%
G4-44	No	No	No	Yes	No	No	No	No	No	No	10%
G4-45	No	No	No	Yes	No	No	No	No	No	No	10%
G4-46	No	Yes	Yes	Yes	No	No	No	No	No	No	30%
G4-47	No	No	No	Yes	No	No	No	No	No	No	10%
G4-48	No	Yes	Yes	Yes	No	No	No	No	No	No	30%
G4-49	No	Yes	Yes	Yes	No	No	No	No	No	No	30%
G4-50	No	Yes	Yes	No	No	No	No	No	No	No	20%
G4-51	No	No	No	Yes	No	No	No	No	No	No	10%
G4-52	No	Yes	No	Yes	No	No	No	No	No	No	20%
G4-53	No	No	No	Yes	No	No	No	No	No	No	10%
G4-54	No	No	No	No	No	No	No	No	No	No	0%
G4-55	No	No	No	No	No	No	No	No	No	No	0%
<b>Ethics and Integrity</b>											
G4-56	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	90%
G4-57	No	No	No	Yes	No	No	No	No	Yes	No	20%
G4-58	No	No	No	Yes	No	No	No	No	No	No	10%

Figure 4-2 presents the overall performance of each of the 7 sub-sections of the general standard disclosures. The figure reflects the combined percentages of each subsection in Table 4-2. The strategy and analysis, organisational profile, material aspects, stakeholder engagement and report profile are generally being fully reported, while ethics and governance processes are lagging. The reason for the poor performance of ethics and governance can be contributed to the large number of reports being prepared based on the core ‘in accordance’ principle, seeing as only one guideline from each section is a reporting requirement (Table 3-2).



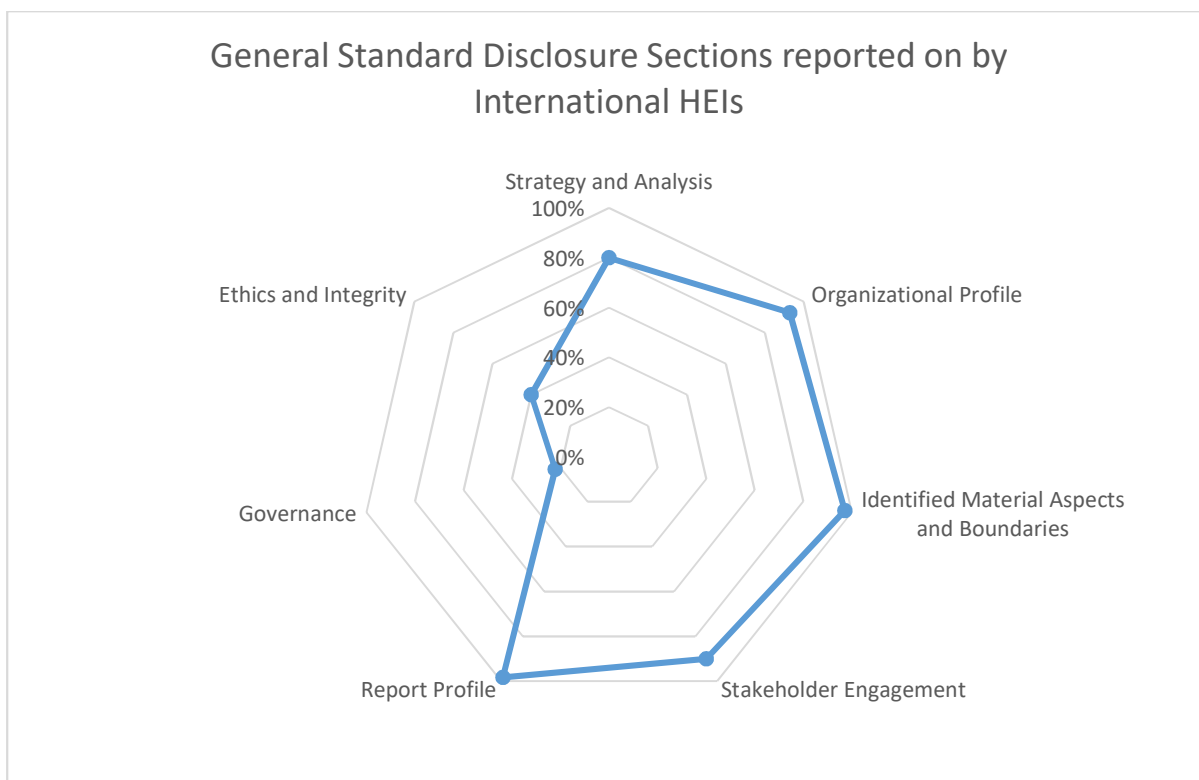


Figure 4-2: Summary of General Standard Disclosure Sections International HEIs report on (Table 4-2)

## 4.2.2 Specific Standard Disclosures

The specific standard disclosure consists of a wide range of reporting aspects. These disclosures consist of information on the economic, environmental and social performance of the organisation that can be used as comparative indicators. A careful selection of disclosures is necessary to reflect the interest of the reporting organisation. Table 4-3 lists the 10-selected international HEIs (Table 4-1) and the topics they have reported on respectively. All the disclosures are either reported on (yes), somewhat reported on (partial) or not reported on (no). All reported disclosures (including partial) are considered as a disclosure being reported on. The percentage of HEIs that reported on a specific disclosure is the number of institutions that reported on that disclosure. The complete table are included in Appendix C.

Table 4-3: International HEIs Specific Standard Disclosures

Specific Standard Disclosure	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
In Accordance Option	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
<b>Category: Economic</b>											

Specific Standard Disclosure	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
<b>In Accordance Option</b>	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
<b>Material Aspect: Economic Performance</b>											
G4-EC1	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	90%
G4-EC2	Partial	Yes	No	No	No	No	No	No	No	Yes	30%
G4-EC3	Yes	Yes	No	Yes	No	No	Yes	No	No	Yes	50%
G4-EC4	Partial	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	80%
<b>Material Aspect: Market Presence</b>											
G4-EC5	Partial	No	No	No	No	No	No	Yes	No	No	20%
G4-EC6	Partial	Yes	No	No	No	No	No	No	No	Yes	30%
<b>Material Aspect: Indirect Economic Impacts</b>											
G4-EC7	Partial	Yes	No	No	No	No	No	No	Yes	Yes	40%
G4-EC8	Partial	Yes	Yes	Yes	No	No	No	No	Yes	Yes	60%
<b>Material Aspect: Procurement Practices</b>											
G4-EC9	Partial	No	Yes	Yes	No	No	No	No	Yes	Yes	50%
<b>Category: Environmental</b>											
<b>Material Aspect: Materials</b>											
G4-EN1	Yes	Yes	No	No	Yes	No	Yes	No	No	Yes	50%
G4-EN2	No	Yes	No	No	Yes	Yes	No	No	No	Yes	40%
<b>Material Aspect: Energy</b>											
G4-EN3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-EN4	Partial	Yes	Yes	Yes	No	No	No	Yes	No	Yes	60%
G4-EN5	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	70%
G4-EN6	Partial	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	70%
G4-EN7	No	Yes	Yes	No	No	No	No	Yes	No	No	30%
<b>Material Aspect: Water</b>											
G4-EN8	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	80%
G4-EN9	No	Yes	Partial	No	No	No	No	No	No	No	20%
G4-EN10	Yes	No	Yes	Yes	No	No	No	No	No	No	30%
<b>Material Aspect: Biodiversity</b>											
G4-EN11	Yes	Yes	No	No	No	No	No	No	No	Yes	30%
G4-EN12	Yes	Yes	No	No	No	No	No	No	No	Yes	30%
G4-EN13	Yes	Yes	Yes	No	No	No	No	No	No	No	30%
G4-EN14	Yes	Yes	No	No	No	No	No	No	No	No	20%
<b>Material Aspect: Emissions</b>											
G4-EN15	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	80%
G4-EN16	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	90%

Specific Standard Disclosure	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
<b>In Accordance Option</b>	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
G4-EN17	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	70%
G4-EN18	No	No	No	Yes	No	No	No	No	Yes	No	20%
G4-EN19	Yes	Yes	Partial	Yes	Yes	No	No	No	No	Yes	60%
G4-EN20	No	Yes	No	Yes	No	No	No	No	No	Yes	30%
G4-EN21	No	Yes	No	No	No	Yes	No	Yes	Yes	Yes	50%
<b>Material Aspect: Effluents and Waste</b>											
G4-EN22	Yes	Yes	No	No	No	No	No	No	Yes	Yes	40%
G4-EN23	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
G4-EN24	No	Yes	No	No	No	No	No	No	No	No	10%
G4-EN25	Yes	Yes	No	Yes	No	No	No	No	Yes	No	40%
G4-EN26	No	Yes	No	No	No	No	No	No	No	Yes	20%
<b>Material Aspect: Products and Services</b>											
G4-EN27	No	Yes	No	No	No	No	No	No	No	Yes	20%
G4-EN28	Partial	Yes	No	No	No	No	No	No	No	Yes	30%
<b>Material Aspect: Compliance</b>											
G4-EN29	Yes	Yes	No	No	No	No	Yes	Yes	No	No	40%
<b>Material Aspect: Transport</b>											
G4-EN30	Yes	Yes	No	Yes	No	No	No	No	No	No	30%
<b>Material Aspect: Overall</b>											
G4-EN31	Yes	No	No	No	No	No	No	Yes	No	No	20%
<b>Material Aspect: Supplier Environmental Assessment</b>											
G4-EN32	Yes	No	No	No	No	No	No	No	No	No	10%
G4-EN33	No	No	No	No	No	No	No	No	Yes	No	10%
<b>Material Aspect: Environmental Grievance Mechanisms</b>											
G4-EN34	No	No	No	No	No	No	No	No	No	No	0%
<b>Category: Social</b>											
<b>SUB-Category: Labour Practises and Decent Work</b>											
<b>Material Aspect: Employment</b>											
G4-LA1	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes	70%
G4-LA2	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	70%
G4-LA3	No	Yes	No	Yes	No	No	Yes	No	No	Yes	40%
<b>Material Aspect: Labour Management Relations</b>											
G4-LA4	Yes	Yes	No	Yes	No	No	No	No	No	Yes	40%
<b>Material Aspect: Occupational Health and Safety</b>											
G4-LA5	Yes	Yes	No	No	No	No	Yes	No	Yes	Yes	50%

Specific Standard Disclosure	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
<b>In Accordance Option</b>	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
G4-LA6	Partial	No	No	Yes	No	No	Yes	No	Yes	No	40%
G4-LA7	No	Yes	No	Yes	No	No	No	No	No	Yes	30%
G4-LA8	No	Yes	No	Yes	No	No	Yes	No	No	Yes	40%
<b>Material Aspect: Training and Education</b>											
G4-LA9	No	Yes	No	Yes	No	No	Yes	Yes	Yes	No	50%
G4-LA10	Partial	Yes	Partial	Yes	No	No	Yes	No	No	Yes	60%
G4-LA11	Yes	Yes	No	Yes	No	No	No	Yes	No	No	40%
<b>Material Aspect: Diversity and Equal Opportunity</b>											
G4-LA12	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	70%
<b>Material Aspect: Equal Remuneration for Women and Men</b>											
G4-LA13	Partial	Yes	No	Yes	No	No	No	Yes	Yes	Yes	60%
<b>Material Aspect: Supplier Assessment for Labour Practices</b>											
G4-LA14	No	Yes	No	No	No	No	No	No	No	Yes	20%
G4-LA15	No	No	No	No	No	No	No	No	No	No	0%
<b>Material Aspect: Labour Practices Grievance Mechanisms</b>											
G4-LA16	Yes	No	No	Yes	No	No	No	No	No	No	20%
<b>SUB-Category: Human Rights</b>											
<b>Material Aspect: Investment</b>											
G4-HR1	Yes	Yes	No	No	No	No	No	No	No	Yes	30%
G4-HR2	Yes	Yes	No	No	No	No	No	No	No	Yes	30%
<b>Material Aspect: Non-discrimination</b>											
G4-HR3	Yes	Yes	No	No	No	No	No	No	Yes	No	30%
<b>Material Aspect: Freedom of Association and Collective Bargaining</b>											
G4-HR4	Yes	Yes	No	No	No	No	No	No	No	Yes	30%
<b>Material Aspect: Child Labour</b>											
G4-HR5	Yes	Yes	No	No	No	No	No	No	No	Yes	30%
<b>Material Aspect: Forced or Compulsory Labour</b>											
G4-HR6	Yes	Yes	No	No	No	No	No	No	No	Yes	30%
<b>Material Aspect: Security Practices</b>											
G4-HR7	Yes	Yes	No	No	No	No	No	No	No	Yes	30%
<b>Material Aspect: Indigenous Rights</b>											
G4-HR8	No	Yes	No	No	No	No	No	No	No	No	10%
<b>Material Aspect: Assessment</b>											
G4-HR9	Partial	Yes	No	No	No	No	No	No	No	No	20%
<b>Material Aspect: Supplier Human Rights Assessment</b>											

Specific Standard Disclosure	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
<b>In Accordance Option</b>	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
G4-HR10	Yes	No	No	No	No	No	No	No	No	No	10%
G4-HR11	No	No	No	No	No	No	No	No	No	No	0%
<b>Material Aspect: Human Rights Grievance Mechanisms</b>											
G4-HR12	Yes	No	No	No	No	No	No	No	No	No	10%
<b>SUB-Category: Society</b>											
<b>Material Aspect: Local Communities</b>											
G4-SO1	Yes	Yes	No	No	No	No	No	No	No	Yes	40%
G4-SO2	Partial	Yes	No	No	No	No	No	No	No	Yes	30%
<b>Material Aspect: Anti-corruption</b>											
G4-SO3	Partial	Yes	No	No	No	No	No	No	No	Yes	30%
G4-SO4	Partial	Yes	No	No	No	No	No	No	Yes	Yes	40%
G4-SO5	Yes	Yes	No	No	No	No	No	Yes	No	Yes	40%
<b>Material Aspect: Public Policy</b>											
G4-SO6	No	Yes	No	No	No	No	No	No	No	No	10%
<b>Material Aspect: Anti-competitive Behaviour</b>											
G4-SO7	No	Yes	No	No	No	No	No	No	No	No	10%
<b>Material Aspect: Compliance</b>											
G4-SO8	No	Yes	No	No	No	No	No	Yes	No	Yes	30%
<b>Material Aspect: Supplier Assessment for Impacts on Society</b>											
G4-SO9	Yes	No	No	No	No	No	No	No	No	No	10%
G4-SO10	Partial	No	No	No	No	No	No	No	No	No	10%
<b>Material Aspect: Grievance Mechanisms for Impacts on Society</b>											
G4-SO11	No	No	No	No	No	No	No	No	No	No	0%
<b>SUB-Category: Product Responsibility</b>											
<b>Material Aspect: Customer Health and Safety</b>											
G4-PR1	No	Yes	No	No	No	No	No	No	No	Yes	20%
G4-PR2	Partial	Yes	No	No	No	No	No	No	No	No	20%
<b>Material Aspect: Product and Service Labelling</b>											
G4-PR3	Partial	Yes	No	No	No	No	No	No	Yes	Yes	40%
G4-PR4	Partial	Yes	No	No	No	No	No	No	No	No	20%
G4-PR5	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes	70%
<b>Material Aspect: Marketing Communications</b>											
G4-PR6	No	Yes	No	No	No	No	No	No	No	Yes	20%
G4-PR7	No	Yes	No	No	No	No	No	No	No	No	10%
<b>Material Aspect: Customer Privacy</b>											

Specific Standard Disclosure	Ball State University	Dartmouth College	University of Texas	Plymouth University	INSEAD Business School	ETH Zurich	ESADE Business & Law School	Technical University of Madrid	University of Turin	International University of Andalusia	Percentage
In Accordance Option	Core	Core	Core	Comprehensive	Core	Core	Core	Core	Core	Core	
G4-PR8	Partial	Yes	No	No	No	No	No	No	No	No	20%
<b>Material Aspect: Compliance</b>											
G4-PR9	No	Yes	No	No	No	No	No	No	No	Yes	20%

Figure 4-3 presents the overall performance of each of the 46 sub-sections of the specific standard disclosures, grouped on economic, environmental and social sections. The figure represents the combines percentages of each section in Table 4-3. All the sections are less than 50% fully reported, with social- product responsibility, society and human rights barely reported on. Again, the chosen ‘in-accordance’ option (Table 3-3) played a role in the reporting performance of each aspect.

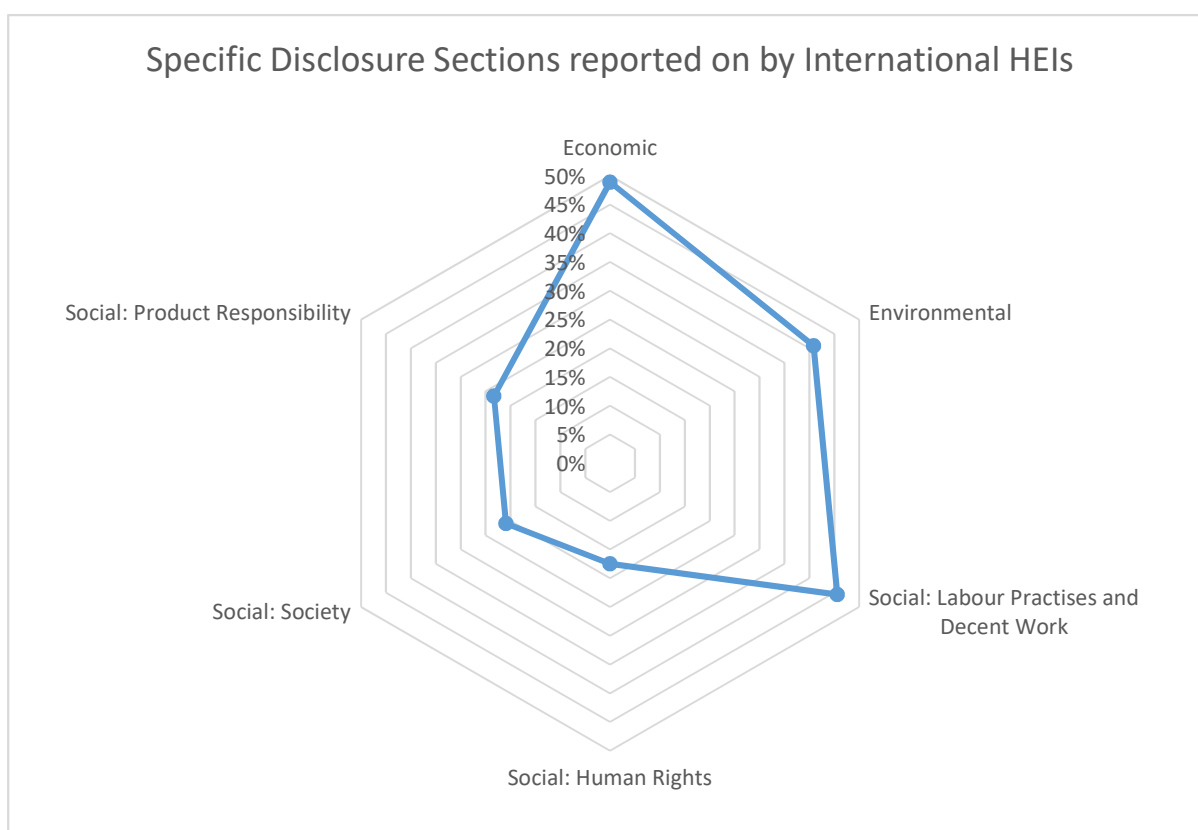


Figure 4-3: Summary of Specific Disclosure Sections International HEIs report on (Table 4-3)

The minimum requirements for a core ‘in accordance’ option (Table 3-3) states that at least one indicator should be reported on, per material aspect. Following is an analysis of instances where at least

half of the HEIs examined (Table 4-1) complied with this requirement. Figure 4-4 presents that 3 of the 4 material aspects have been reported on by HEIs. 90% of HEIs reported their direct economic value generated and distributed (Economic Performance) while 60% have reported significant indirect economic impacts (Indirect Economic Impact).

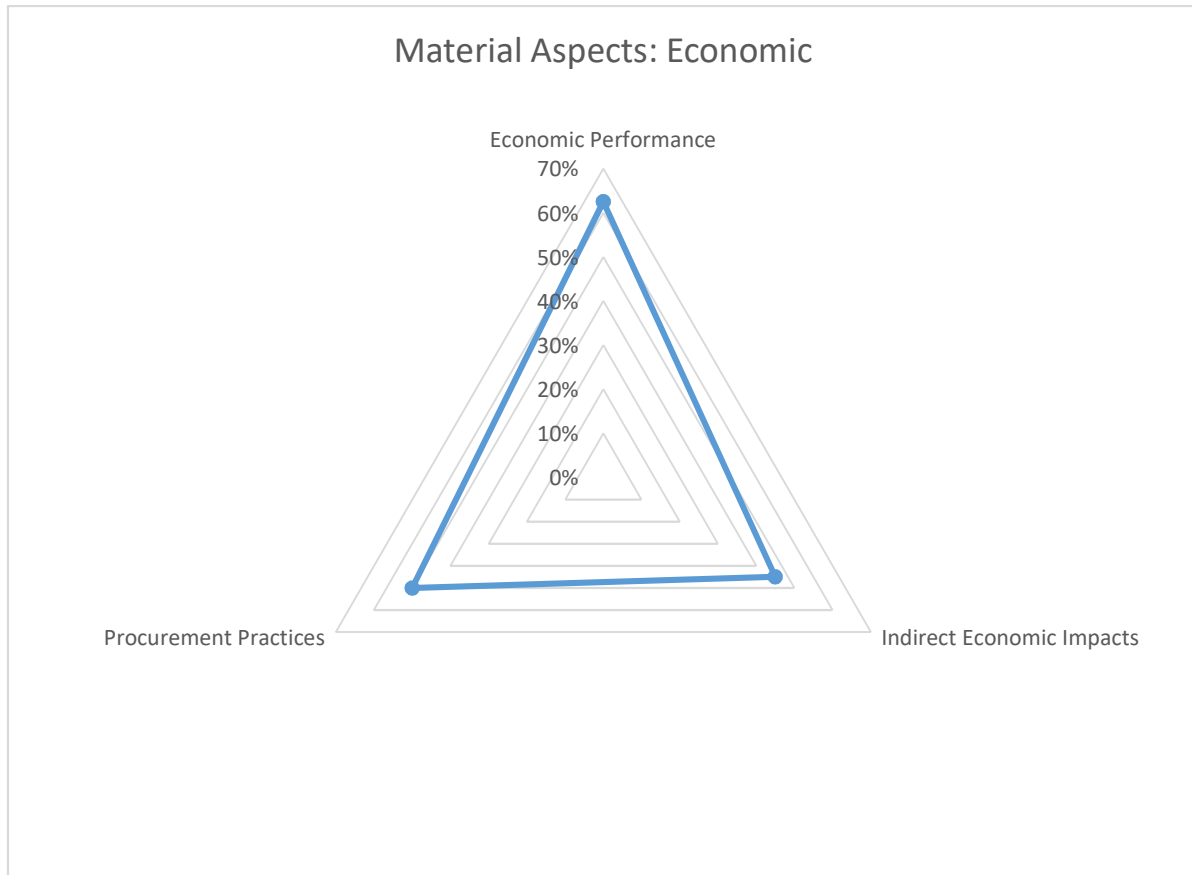


Figure 4-4: Material Aspects: Economic (Table 4-3)

Figure 4-5 shows that 4 of the 12 material aspects have met the criteria mentioned above. All the HEIs reported on the energy consumption within the organisation (Energy) while 80% reported on their total water withdrawal (Water) and greenhouse gas emissions (Emissions). 90% disclosed the weight of their total waste by disposal and type (Effluents and Waste).

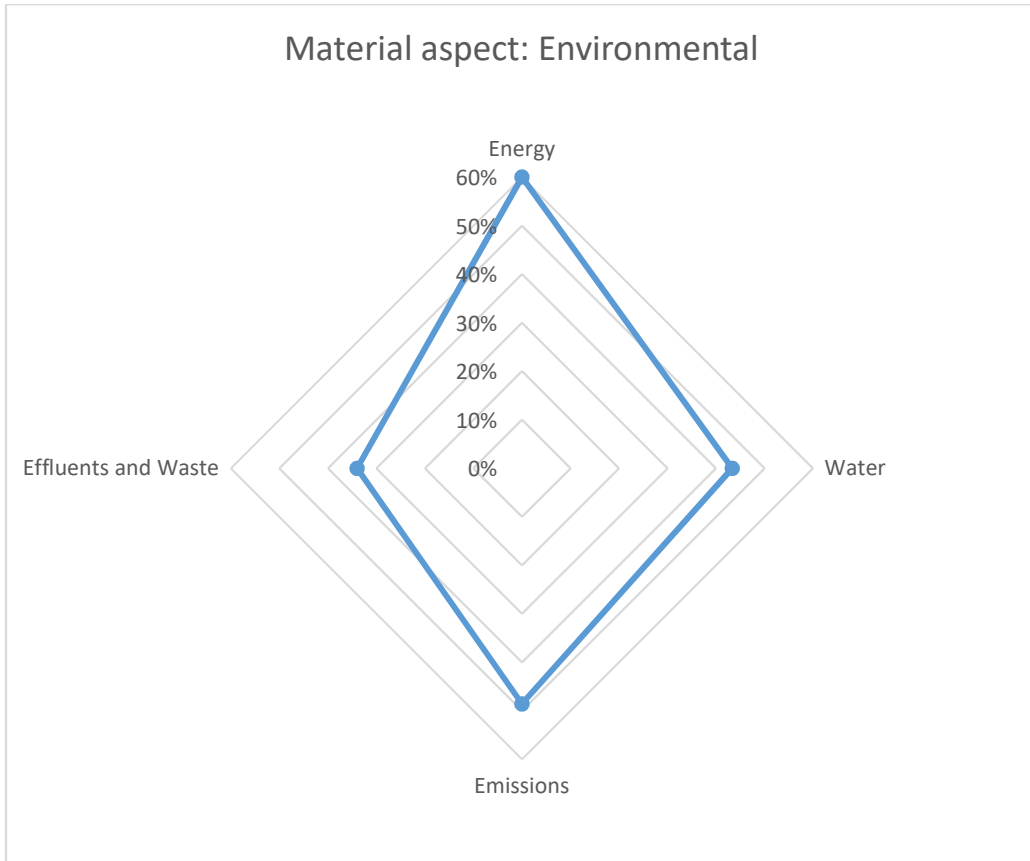


Figure 4-5: Material Aspect: Environment (Table 4-3)

Figure 4-6 presents that only 7 of the 30 material aspects under the social category have been reported on according to the specifications mentioned above. 70% disclosed the benefits provided to full-time employees (Employment) while only 50% disclosed their total workforce statistics (Occupational Health and Safety). Diversity and equal opportunity are best reported on with 70% disclosing the composition of their governing bodies and employee categories. Although anti-corruption met the requirements only 40% of HEIs reported on communication and training policies. 60% of institutions reported on their survey results measuring satisfaction (Product and Service Labelling).



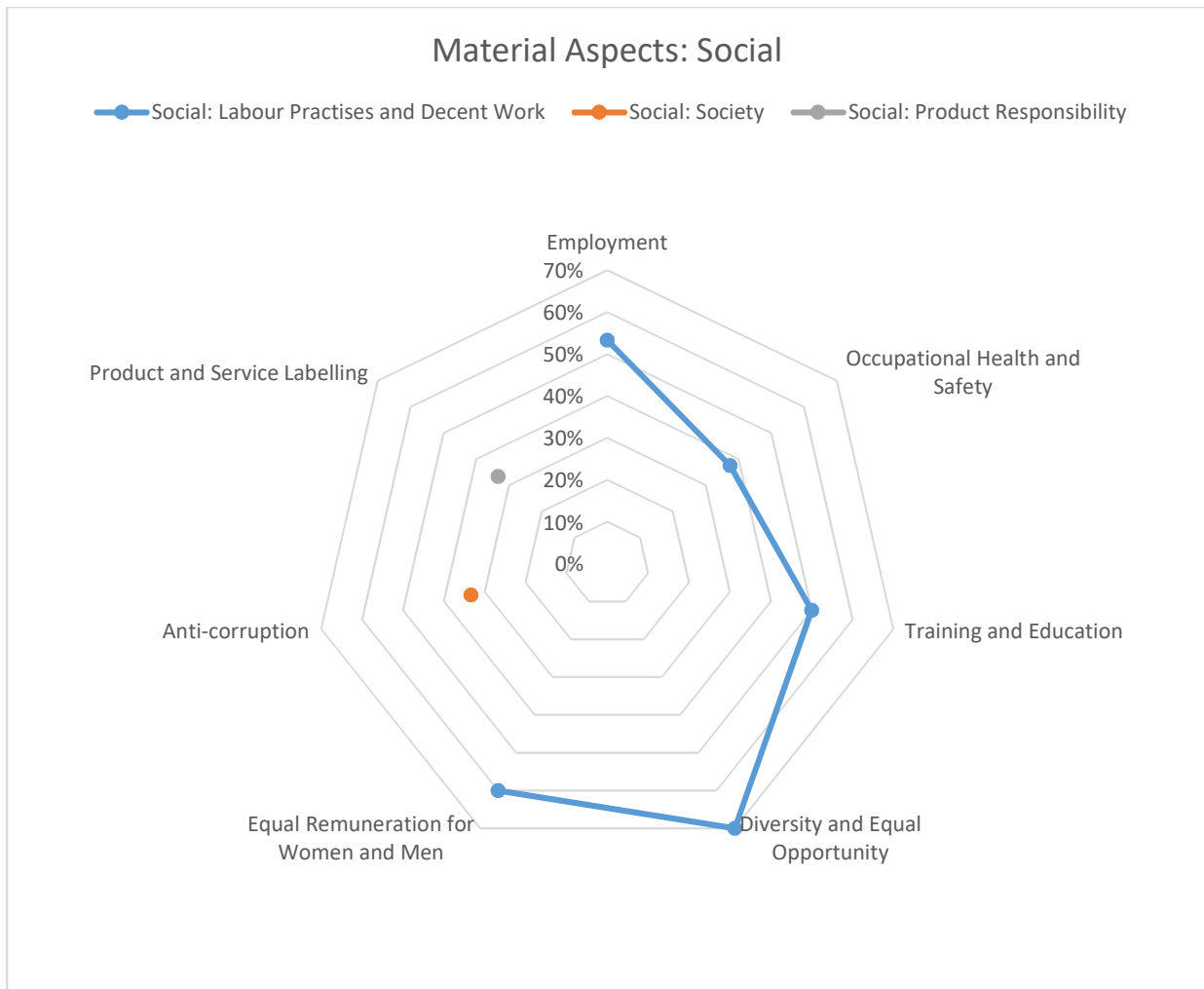


Figure 4-6: Material Aspects: Social (Table 4-3)

All international HEIs reports that were analysed included statements from the respective presidents, indicating that the head of HEIs are mindful of sustainability within the organisation (Wright, 2010). However, by analysing the teams creating the reports, the sustainability offices and students of the various institutions are the real driving force behind the reporting practices.

The ten reports that were analysed did not evenly address the most common of categories of the GRI G4 framework. Organisational governance and social issues related to human rights and society were among the least addressed topics of these reports. Of the top ten aspects (Governance and Accountability Institute, 2014) that HEIs should report on, only diversity and equal opportunity and equal remuneration for women and men have been reported by at least half of the HEIs (Figure 4-7).

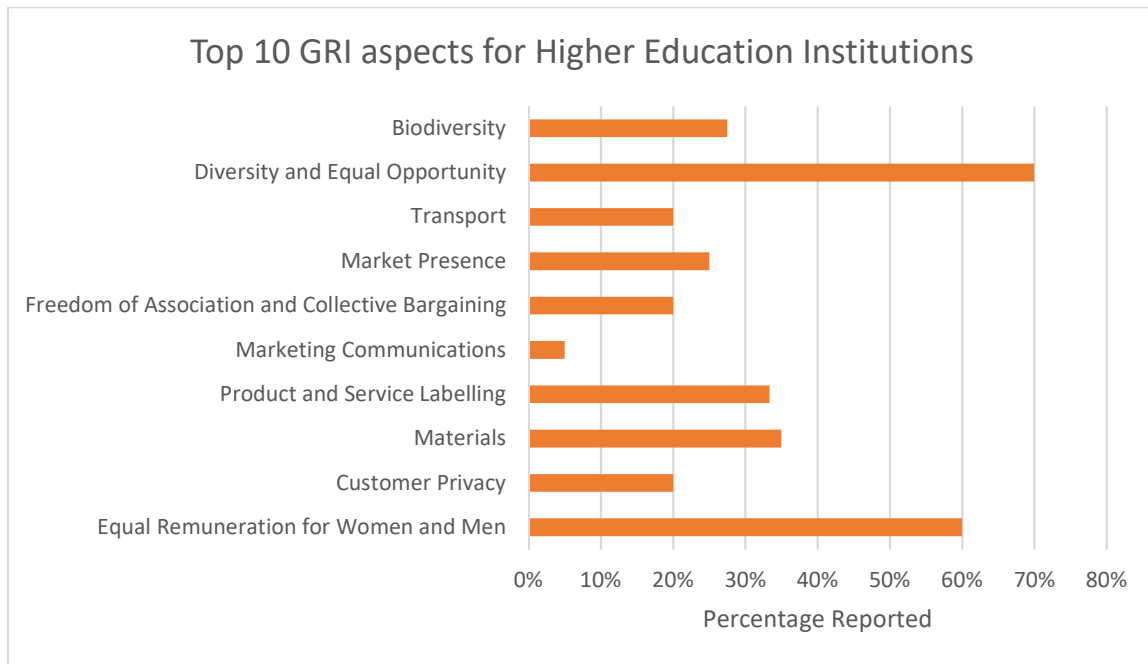


Figure 4-7: Top 10 aspects for HEIs as suggested by Governance and Accountability Institute (2014)

The next section evaluates at the German Sustainability Code. The German Sustainability Code has undergone several revisions to be suitable for German HEIs (Huber & Bassen, 2017). The guidelines for the German Sustainability Code are matched with the GRI G4 guidelines, indicating the aspects of the GRI that the German Sustainability Code deem important.

### 4.3 German Sustainability Code for Higher Education Institutions

The sustainability code is a framework organisations can use to report on the non-financial performance regardless of their size or legal structure (German Council for Sustainable Development, 2017c). The sustainability code is a product of a multi-stakeholder process initiated by the German Council for Sustainable Development and was first published in 2011 (German Council for Sustainable Development, 2017a).

The sustainability code consist of 20 criteria allocated to four areas: Environment, process management, strategy and society (German Council for Sustainable Development, 2017b). The performance indicators for these criteria were obtained from the GRI guidelines as well as from the Key Performance Indicators for Environmental, Social and Governmental Issues created by the European Federation of Financial Analysts Societies. The German Sustainability Code provides organisations with a high degree of flexibility regarding implementation, especially since the code contains only the most essential aspects of sustainability reporting making it useful for beginner reporting organisations (German Council for Sustainable Development, 2017b). This makes the sustainability code suitable for implementation in HEIs in the early stages of sustainability reporting (Lopatta & Jaeschke, 2014).

However, the sustainability code was not initially designed for the requirements of German HEIs. In 2015 the German Council for Sustainable Development initiate a process to modify the sustainability code to satisfy higher education-specific needs (German Council for Sustainable Development, 2015). Huber and Bassen (2017) analysed the seven reporting principles (Section 3.6.2) to evaluate the HEI-specific sustainability code (Appendix D):

- Materiality (Global Reporting Initiative, 2014a);
- Sustainability Context (Global Reporting Initiative, 2014a);
- Clarity (Global Reporting Initiative, 2014a);
- Cost-Effectiveness (Financial Accounting Standards Board, 2011);
- Stakeholder Inclusiveness (Global Reporting Initiative, 2014a);
- Comparability (Global Reporting Initiative, 2014a); and
- Reliability (Global Reporting Initiative, 2014a).

The evaluation shows that the sustainability code for HEIs positively reflect on the principles of sustainability context, stakeholder inclusiveness, reliability and cost-effectiveness, where other principles have room for improvement (Huber & Bassen, 2017). The materiality principle revealed that not all material criteria are applicable to academia in HEIs and material criteria that should be emphasised like research and teaching is underrepresented. Huber and Bassen (2017) also suggested that an implementation manual be created for the German Sustainability Code to provide the necessary orientation for the used terms, as well as quantitative indicators for sustainability performance in HEIs.

Table 4-4 and Table 4-5 presents how the German Sustainability Code for HEIs compares with the GRI G4 general and specific guidelines. The German Sustainability Code references in Table 4-4 and Table 4-5 match up with the four performance indicators sections in the German Sustainability Code for HEIs found in Appendix D. Parts of the German Sustainability Code are not represented by the GRI G4 guidelines and have been included as Disclosures on Management Approach (DMA) (Section 3.6.1) in Table 4-5.

Table 4-4: German Sustainability Code comparison with relevant GRI General Standard Disclosure Indicators

General Standard Disclosure	Standard Disclosure Title	German Sustainability Code
<b>Strategy and Analysis</b>		
G4-2	Provide a description of key impacts, risks, and opportunities. The organization should provide two concise narrative sections on key impacts, risks, and opportunities.	Strategic analysis and action
<b>Identified Material Aspects and Boundaries</b>		

General Standard Disclosure	Standard Disclosure Title	German Sustainability Code
G4-17	a. List all entities included in the organization's consolidated financial statements or equivalent documents. b. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	Strategic analysis and action
G4-18	a. Explain the process for defining the report content and the Aspect Boundaries. b. Explain how the organization has implemented the Reporting Principles for Defining Report Content.	
G4-19	List all the material Aspects identified in the process for defining report content.	
G4-20	For each material Aspect, report the Aspect Boundary within the organization, as follows: Report whether the Aspect is material within the organization; If the Aspect is not material for all entities within the organization (as described in G4-17), select one of the following two approaches and report either: – The list of entities or groups of entities included in G4-17 for which the Aspect is not material or – The list of entities or groups of entities included in G4-17 for which the Aspects is material; Report any specific limitation regarding the Aspect Boundary within the organization	
G4-21	For each material Aspect, report the Aspect Boundary outside the organization, as follows: Report whether the Aspect is material outside of the organization; If the Aspect is material outside of the organization, identify the entities, groups of entities or elements for which the Aspect is material. In addition, describe the geographical location where the Aspect is material for the entities identified; Report any specific limitation regarding the Aspect Boundary outside the organization	
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.	
<b>Stakeholder Engagement</b>		
G4-24	Provide a list of stakeholder groups engaged by the organization.	Stakeholder engagement
G4-25	Report the basis for identification and selection of stakeholders with whom to engage.	
G4-26	Report the organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	
G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.	
<b>Governance</b>		
G4-34	Report the governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	Responsibility
G4-35	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees.	Rules and processes

General Standard Disclosure	Standard Disclosure Title	German Sustainability Code
G4-36	Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body.	Objectives
<b>Ethics and Integrity</b>		
G4-56	Describe the organization's values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics.	Coherence

Figure 4-8 presents the percentage of overlap between the German Sustainability Code and the general standard disclosures of the GRI G4 guidelines. The percentages are the number of GRI G4 disclosures that the German Sustainability Code addresses. Table 4-4 presents what the German Sustainability Code and the GRI general standard disclosures have in common. None of the organisational- and report profile sections are considered by the German Sustainability Code. However, all the identified material aspects and boundaries as well as stakeholder engagements disclosures are considered.

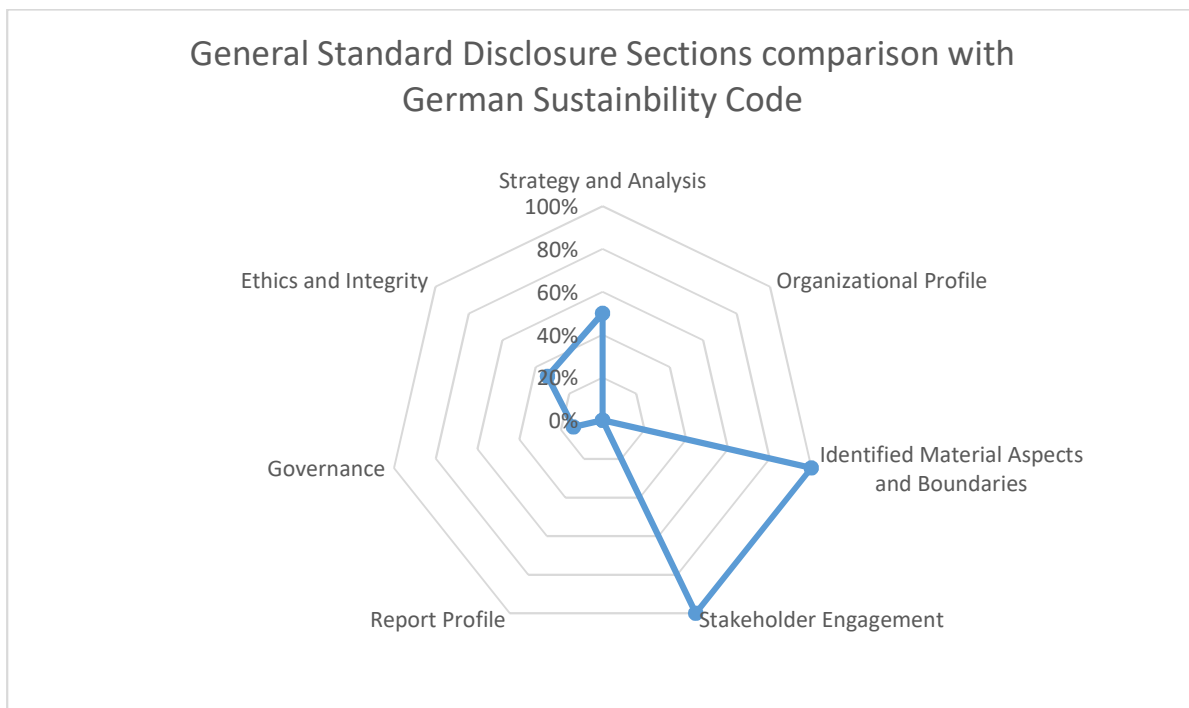


Figure 4-8: General Standard Disclosure Sections comparison with German Sustainability Code based on Table 4-4

Table 4-5: German Sustainability Code comparison with relevant GRI General Specific Disclosure Indicators

Specific Standard Disclosure	Specific Disclosure Title	German Sustainability Code
<b>Category: Environmental</b>		
<b>Material Aspect: Materials</b>		
G4-EN1	Materials used by weight or volume	Usage of natural resources
G4-EN2	Percentage of materials used that are recycled input materials	
<b>Material Aspect: Energy</b>		
G4-EN3	Energy consumption within the organization	Usage of natural resources
G4-EN4	Energy consumption outside of the organization	
G4-EN5	Energy intensity	
G4-EN6	Reduction of energy consumption	Resource management
G4-EN7	Reductions in energy requirements of products and services	
<b>Material Aspect: Water</b>		
G4-EN8	Total water withdrawal by source	Usage of natural resources
G4-EN9	Water sources significantly affected by withdrawal of water	Resource management
G4-EN10	Percentage and total volume of water recycled and reused	Usage of natural resources
<b>Material Aspect: Emissions</b>		
G4-EN15	Direct greenhouse gas (ghg) emissions (scope 1)	Climate-relevant emissions
G4-EN16	Energy indirect greenhouse gas (ghg) emissions (scope 2)	
G4-EN17	Other indirect greenhouse gas (ghg) emissions (scope 3)	
G4-EN18	Greenhouse gas (ghg) emissions intensity	
G4-EN19	Reduction of greenhouse gas (ghg) emissions	
G4-EN20	Emissions of ozone-depleting substances (ods)	
G4-EN21	Nox, sox, and other significant air emissions	
<b>Material Aspect: Effluents and Waste</b>		
G4-EN22	Total water discharge by quality and destination	Usage of natural resources
G4-EN23	Total weight of waste by type and disposal method	
G4-EN24	Total number and volume of significant spills	
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the basel convention <sup>2</sup> annex i, ii, iii, and viii, and percentage of transported waste shipped internationally	Resource management
<b>Material Aspect: Products and Services</b>		
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	Resource management
<b>Category: Social</b>		
<b>SUB-Category: Labour Practises And Decent Work</b>		
<b>Material Aspect: Employment</b>		
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part- time employees, by significant locations of operation	Rights and involvement of members of the higher education institution

Specific Standard Disclosure	Specific Disclosure Title	German Sustainability Code
<b>Material Aspect: Labour Management Relations</b>		
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	Rights and involvement of members of the higher education institution
<b>Material Aspect: Occupational Health and Safety</b>		
G4-LA8	Health and safety topics covered in formal agreements with trade unions	Rights and involvement of members of the higher education institution
<b>Material Aspect: Training and Education</b>		
G4-LA9	Average hours of training per year per employee by gender, and by employee category	Qualification
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	
<b>Material Aspect: Diversity and Equal Opportunity</b>		
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	Equal opportunities
<b>Material Aspect: Equal Remuneration for Women and Men</b>		
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	Equal opportunities
<b>Material Aspect: Labour Practices Grievance Mechanisms</b>		
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	Conduct that complies with the law and policy
<b>Sub-Category: Human Rights</b>		
<b>Material Aspect: Investment</b>		
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Human rights
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	
<b>Material Aspect: Non-discrimination</b>		
G4-HR3	Total number of incidents of discrimination and corrective actions taken	Human rights
<b>Material Aspect: Freedom of Association and Collective Bargaining</b>		
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	Human rights
<b>Material Aspect: Child Labour</b>		

Specific Standard Disclosure	Specific Disclosure Title	German Sustainability Code
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	Human rights
<b>Material Aspect: Forced or Compulsory Labour</b>		
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	Human rights
<b>Material Aspect: Security Practices</b>		
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	Human rights
<b>Material Aspect: Indigenous Rights</b>		
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	Human rights
<b>Material Aspect: Assessment</b>		
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	Human rights
<b>Material Aspect: Supplier Human Rights Assessment</b>		
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	Human rights
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	
<b>Material Aspect: Human Rights Grievance Mechanisms</b>		
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	Human rights
<b>Sub-Category: Society</b>		
<b>Material Aspect: Local Communities</b>		
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	Corporate citizenship and transfer
G4-SO2	Operations with significant actual and potential negative impacts on local communities	Involvement
<b>Material Aspect: Anti-corruption</b>		
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	Conduct that complies with the law and policy
G4-SO4	Communication and training on anti-corruption policies and procedures	
G4-SO5	Confirmed incidents of corruption and actions taken	
<b>Material Aspect: Anti-competitive Behaviour</b>		
G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	Conduct that complies with the law and policy
<b>Material aspect: compliance</b>		



Specific Standard Disclosure	Specific Disclosure Title	German Sustainability Code
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Conduct that complies with the law and policy
<b>Material Aspect: Grievance Mechanisms for Impacts on Society</b>		
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	Conduct that complies with the law and policy
<b>Disclosures on Management Approach</b>		
G4-DMA	The institution of higher education discloses how and what indicators on sustainability are used in periodical internal planning and control. It discloses how the reliability, comparability and consistency of data applied to internal controls and internal and external communications are safeguarded through appropriate processes.	Control
G4-DMA	The institution of higher education discloses how internal and external stakeholder groups are identified and incorporated into the sustainability process. It discloses whether and how continuous dialogue with them is nurtured and the outcomes of the dialogue are incorporated into the sustainability process.	Incentive systems
G4-DMA	The institution of higher education discloses how, through appropriate processes, it helps to make innovations improve sustainability in terms of the internal and external use of resources. Where facts of material importance are concerned. The institution of higher education also discloses whether and how their current and future impact will be evaluated in terms of the institution's own social responsibility.	Innovation and academia management

Figure 4-9 presents the percentage of overlap between the German Sustainability Code and the general standard disclosures of the GRI G4 guidelines. The percentages are the number of disclosures Table 4-5 presents what the German Sustainability Code and the GRI G4 specific standard disclosures have in common. None of the economic and social-product responsibility disclosures are considered by the German Sustainability Code. However, all the social-human rights disclosures are considered. Environmental and social-society follow closely what the international HEIs indicated in section 4.2.2.

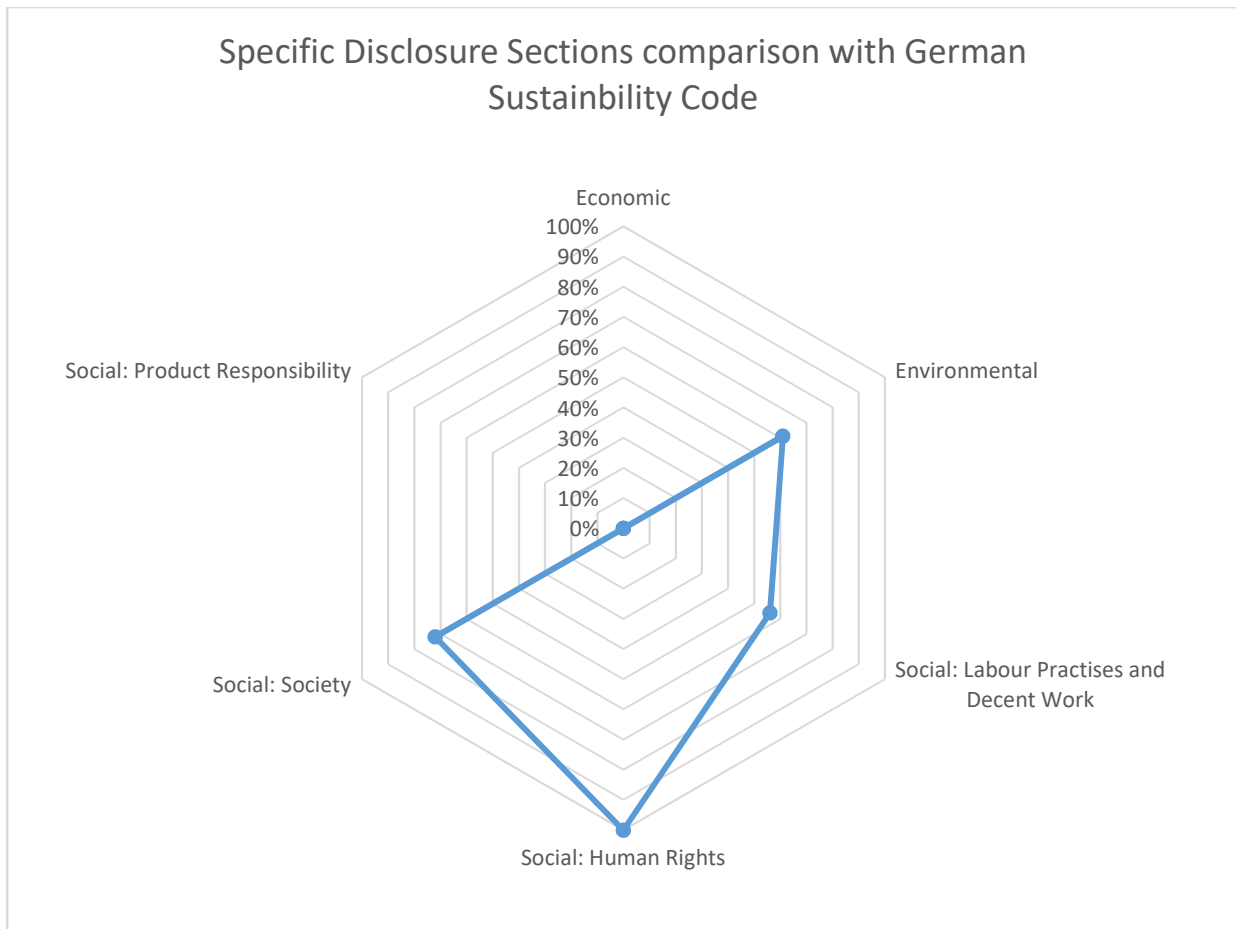


Figure 4-9: Specific Disclosure Sections comparison with German Sustainability Code based on Table 4-5.

## 4.4 Summary

The GRI framework is used globally by organisations from all sectors including HEIs. Although HEIs are not the primary target of the GRI guidelines, the guidelines are used to satisfy the sustainability reporting requirements of HEIs. The ten HEIs that formed part of this study have all produced a GRI report within the last four years. These reports and their area of focus provides insight to how the international community regards sustainability reporting in HEIs.

HEIs favour the core ‘in-accordance’ option of the GRI framework. As a result, the governance structure of the HEI is rarely reported on. Most of the reports are the work of students and lecturers working together to generate a sustainability report for their respective institution. The lack of governance authorities in the process could explain the lack of governance information in the report. In addition, the report heavily favours economic and environmental data, while social data such as human rights and society are mostly overlooked.

The German Sustainability Code is the product of German officials that modified their Sustainability Code, that was originally derived from the GRI guidelines, to specifically address the needs of HEIs.

The German Sustainability Code assigns more importance to reporting on the governance of the HEI. A significant portion of the German Sustainability Code requires HEIs to report on social data and bring in reporting on educational data (An aspect that is not part of the GRI guidelines).

This chapter answered the research question:

RQ<sub>2</sub>. What are the sustainability reporting practices applied by international HEIs?

The resultant deliverables addressed the following research objectives:

RO<sub>3</sub>. Compare global HEI implementations of GRI sustainability reports.

By answering the question insight was gained into international higher education sustainability reporting techniques. The areas of reporting that stood out were identified and will assist with the process of determining the guidelines to be used in a South African HEI.

The next chapter investigates the reporting practices in South African HEIs. The Department of Higher Education and Training requires all public South African HEIs to report on their activities (Department of Higher Education and Training, 2018a). These reports will be analysed from a GRI perspective in the following chapter.

# Chapter 5. Sustainability Reporting by South African Higher Education Institutions

## 5.1 Introduction

Chapter 4 investigated sustainability reporting disclosures in international Higher Education Institutions (HEIs) that implements the Global Reporting Initiative (GRI) Framework. The desktop study highlighted the trends of GRI disclosures that are currently being disclosed in the international HEIs community. The German Sustainability Code for HEIs was introduced (Section 4.3) and Chapter 4 explored how the German Sustainability Code links in with the GRI principles.

This chapter expands on that research by investigating the topics that HEIs in South Africa disclose in their integrated annual report. In South Africa, the Department of Higher Education and Training requires all public HEIs to produce an annual integrated report. A desktop study analysing 5 national HEIs reports, compares the contents to the GRI framework (Section 5.3). The aim of the exercise is to gain insight into the areas of the GRI disclosures that is currently being reported on.

The following research question will be answered:

RQ<sub>3</sub>. What are the GRI G4 disclosures required by South African HEIs?

This chapter seeks to address the following research objectives:

RO<sub>4</sub>. Identify gaps in current sustainability reporting practices in South Africa.

Section 5.2 investigates the specific requirements the Department of Higher Education and Training have for the annual report content. Section 5.3 indicate which sections of the GRI disclosures the South African HEI report content favours and Section 5.4 reports the results of that analysis. A full outline of chapter 5 is provided by Figure 5-1.

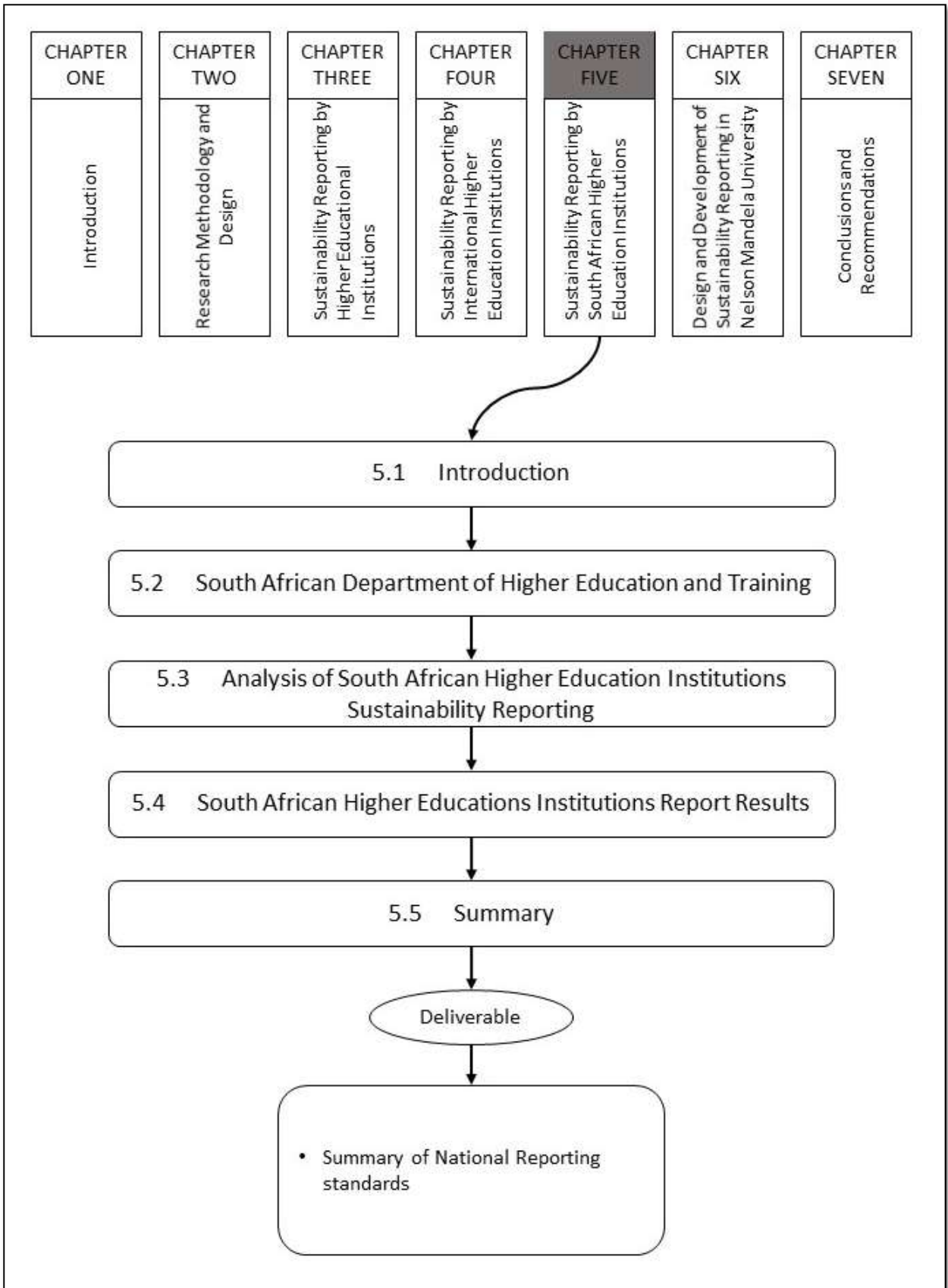


Figure 5-1: Chapter 5 Layout

## **5.2 South African Department of Higher Education and Training**

In South Africa the Department of Higher Education and Training (DHET) is responsible for providing strategic direction to develop and regulate HEIs. The DHET is responsible for the formulation of several HEI branch directorates for both public and private HEIs in South Africa.

The DHET was established in 2009 after the previous Department of Education was split into two sections (Department of Higher Education and Training, 2018a). The DHET derives its mandate from Section 29 of the Constitution of the Republic of South Africa, specifically focusing on post-school education and training for an inclusive economy and society (Department of Higher Education and Training, 2018a). The mission of DHET is to develop skilled citizens, competent in sustainable diversified knowledge that meets the countries development goals (Department of Higher Education and Training, 2018a).

In June 2014 the DHET repealed Regulations for Annual Reporting by Public HEIs instituted in August 2007 and published revised Reporting Regulations for all Public HEIs that will take effect in 2015 (Department of Higher Education and Training, 2014). Increasing competition with private HEIs and the demand for better management was some of the reasons that led to the change in reporting regulations for South Africa's public HEIs (Department of Higher Education and Training, 2014). To adopt best practices with regards to governance, finance, sustainability, corporate citizenship and management, the DHET requires information relevant to these practices. The DHET set the following regulations to apply to all public HEIs (Department of Higher Education and Training, 2014):

- Submit and update a Strategic Plan every five years;
- Submit and Annual Performance Plan that is aligned with the Strategic Plan;
- Identify core indicators to monitor institutional performance;
- Submit a Mid-Year Performance Report; and
- Ensure there is an alignment between the Strategic Plan, Annual Performance Plan, Mid-Year Performance Report and Annual Report.

South African public HEIs have various governance positions. Individuals in charge of these managerial positions are required to give regular account of their actions. Public HEIs have the following delegated powers (Department of Higher Education and Training, 2014):

- A duly constituted Council that govern the HEI;
- A duly constituted Senate that report to the Council on academic research;
- A duly appointed Vice-Chancellor responsible for the management of the HEI; and
- A duly appoint Institutional Forum responsible for advising the Council on issues affecting the institution.

The Annual report is partially constructed from the KING III reporting guidelines and requires public HEIs to provide the DHET with an integrated report on the governance and operation of the institution (Department of Higher Education and Training, 2014). Each HEI can then determine their own indicators and content that they want to put in the report that comply with the regulations. The Annual Report must comprise of the following (Department of Higher Education and Training, 2014):

- Performance assessment report;
- Report by the Chairperson of the Council;
- Council’s statement on governance;
- Council’s statement on sustainability;
- Senate’s report to the Council;
- Institutional Forum’s report to the Council;
- Vice-Chancellor’s report on management/administration;
- Report on internal administrative/operational structures and controls;
- Report on risk exposure assessment and the management thereof; and
- Annual financial review.

Each HEI can then determine their own indicators and content that they want to put in the report that comply with the regulations. The following section will analyse how South African HEIs implemented the new reporting regulations from a GRI perspective.

### **5.3 Analysis of South African Higher Education Institutions Sustainability Reporting**

As of 2015, all public national HEIs is subject to new reporting regulations (Department of Higher Education and Training, 2014). These reporting regulations was discussed in Section 5.2 above. A study was conducted to determine how much of the GRI G4 disclosures (Section 3.6.4) are reported on by the information that is required by the new reporting regulations. Five of South Africa’s public HEIs (Table 5-1) were chosen for the study. The annual integrated report from these institutions were analysed over a two-year period.

There are 25 public HEIs in South Africa (Department of Higher Education and Training, 2018b). Table 5-1 presented the five South African HEIs analysed in this study. These five HEIs were chosen based on the recommendation of Dr Charles Sheppard at the Nelson Mandela University (Appendix E). The aim was to gain insight into the national HEI community regarding sustainability reporting practices and footprint of GRI disclosures covered by the report content.

Table 5-1: Public South African HEIs

Institution	Year of report
Nelson Mandela University <sup>15</sup>	2015 + 2016
Witwatersrand University <sup>16</sup>	2015 + 2016
Free State University <sup>17</sup>	2015 + 2016
Stellenbosch University <sup>18</sup>	2015 + 2016
Pretoria University <sup>19</sup>	2015 + 2016

The reporting requirements from the DHET required that institutions disclose most of the GRI general standard disclosures. Figure 5-2 presents the percentage of general disclosures that the five HEIs reported on. The GRI reporting framework requires reporting elements specific to the GRI report, which is why ‘Identified Material Aspects and Boundaries’ have a poor reporting performance. Governance has six general disclosures that does not get reported on.

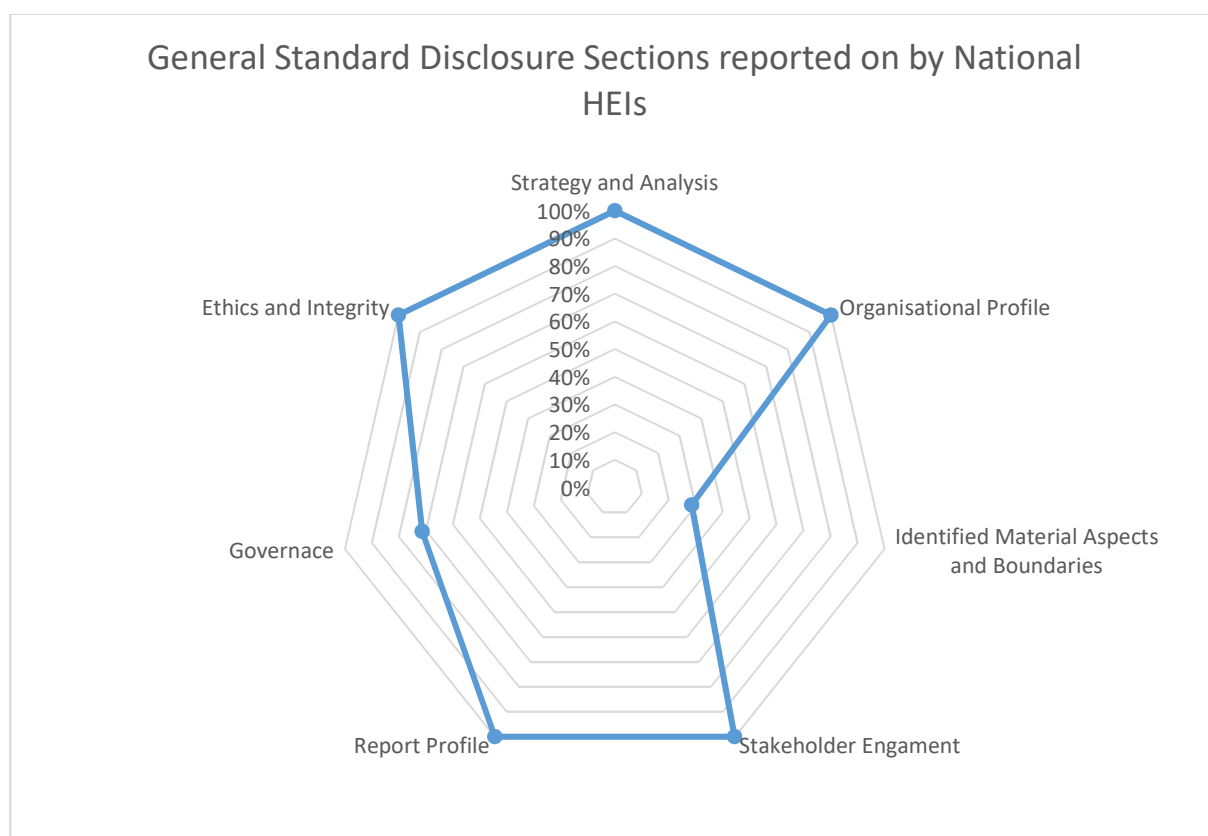


Figure 5-2: Summary of General Standard Disclosure Sections National HEIs report on (Table 5-1)

<sup>15</sup> [www.mandela.ac.za/](http://www.mandela.ac.za/)

<sup>16</sup> <https://www.wits.ac.za/>

<sup>17</sup> <https://www.ufs.ac.za/>

<sup>18</sup> <https://www.sun.ac.za/>

<sup>19</sup> <https://www.up.ac.za/>



Table 5-2 lists the five selected national HEIs and the topics they have reported on respectively. The complete table can be found in Appendix C. Table 5-2 follow the structure of the GRI G4 reporting guidelines (Section 3.6.2). All the disclosures are either reported on (yes), somewhat reported on (partial) or not reported on (no).

Table 5-2: National HEIs Specific Standard Disclosure

Specific Standard Disclosure	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University
	2015					2016				
<b>Category: Economic</b>										
<b>Material Aspect: Economic Performance</b>										
G4-EC1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-EC2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-EC3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-EC4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Material Aspect: Market Presence</b>										
G4-EC5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-EC6	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Indirect Economic Impacts</b>										
G4-EC7	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No
G4-EC8	Yes	Yes	No	Yes	Yes	Yes	Yes	Partial	Yes	No
<b>Material Aspect: Procurement Practices</b>										
G4-EC9	Yes	Partial	No	No	No	Yes	Partial	Partial	No	No
<b>Category: Environmental</b>										
<b>Material Aspect: Materials</b>										
G4-EN1	No	No	No	No	No	Yes	No	No	No	No
G4-EN2	No	No	No	No	No	Yes	No	No	Yes	No
<b>Material Aspect: Energy</b>										
G4-EN3	No	No	No	No	No	Yes	No	No	Yes	No
G4-EN4	No	No	No	No	No	No	No	No	No	No
G4-EN5	No	No	No	No	No	No	No	No	No	No
G4-EN6	No	No	No	No	No	No	No	Partial	Yes	No
G4-EN7	No	No	No	No	No	Partial	No	Partial	Yes	No
<b>Material Aspect: Water</b>										
G4-EN8	No	No	No	No	No	Yes	No	Partial	Partial	No
G4-EN9	No	No	No	No	No	Yes	No	Partial	No	No
G4-EN10	No	No	No	No	No	No	No	Partial	Yes	No
<b>Material Aspect: Biodiversity</b>										
G4-EN11	No	No	No	No	No	Yes	No	No	Yes	No

Specific Standard Disclosure	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University
	2015					2016				
G4-EN12	No	No	No	No	No	Yes	No	No	No	No
G4-EN13	No	No	No	No	No	No	No	No	No	No
G4-EN14	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Emissions</b>										
G4-EN15	No	No	No	No	No	No	No	No	No	No
G4-EN16	No	No	No	No	No	No	No	No	No	No
G4-EN17	No	No	No	No	No	No	No	No	No	No
G4-EN18	No	No	No	No	No	No	No	No	No	No
G4-EN19	No	No	No	No	No	No	No	No	No	No
G4-EN20	No	No	No	No	No	No	No	No	No	No
G4-EN21	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Effluents and Waste</b>										
G4-EN22	No	No	No	No	No	No	No	No	No	No
G4-EN23	No	No	No	Partial	No	No	No	No	Yes	No
G4-EN24	No	No	No	No	No	No	No	No	No	No
G4-EN25	No	No	No	No	No	No	No	No	No	No
G4-EN26	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Products and Services</b>										
G4-EN27	Yes	No	No	Partial	No	Yes	No	Yes	No	No
G4-EN28	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Compliance</b>										
G4-EN29	Yes	No	No	No	No	Yes	No	No	No	No
<b>Material Aspect: Transport</b>										
G4-EN30	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Overall</b>										
G4-EN31	Yes	No	No	Partial	No	Yes	No	No	Partial	No
<b>Material Aspect: Supplier Environmental Assessment</b>										
G4-EN32	No	No	No	No	No	No	No	No	No	No
G4-EN33	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Environmental Grievance Mechanisms</b>										
G4-EN34	Yes	No	No	No	No	Yes	No	No	No	No
<b>Category: Social</b>										
<b>SUB-Category: Labour Practises and Decent Work</b>										
<b>Material Aspect: Employment</b>										
G4-LA1	No	No	Partial	Partial	Partial	No	Partial	Partial	Partial	No
G4-LA2	Yes	Partial, pg 181	Partial	Partial	Partial	Yes	Partial	Yes	Yes	Partial

Specific Standard Disclosure	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University
	2015					2016				
G4-LA3	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Labour Management Relations</b>										
G4-LA4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Material Aspect: Occupational Health and Safety</b>										
G4-LA5	No	No	No	No	No	No	No	No	No	No
G4-LA6	No	No	No	No	No	No	Yes	No	Yes	No
G4-LA7	No	No	No	No	No	No	No	No	No	No
G4-LA8	Yes	Yes	Yes	Yes	Partial	Yes	Yes	Yes	Yes	Partial
<b>Material Aspect: Training and Education</b>										
G4-LA9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-LA10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-LA11	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Material Aspect: Diversity and Equal Opportunity</b>										
G4-LA12	Yes	Yes	Partial	Yes	Partial	Yes	Yes	Yes	Yes	Yes
<b>Material Aspect: Equal Remuneration for Women and Men</b>										
G4-LA13	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Material Aspect: Supplier Assessment for Labour Practices</b>										
G4-LA14	No	No	No	No	No	No	No	No	No	No
G4-LA15	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Labour Practices Grievance Mechanisms</b>										
G4-LA16	Yes	No	Partial	No	No	Yes	No	Partial	No	No
<b>SUB-Category: Human Rights</b>										
<b>Material Aspect: Investment</b>										
G4-HR1	No	No	No	No	No	No	No	No	No	No
G4-HR2	No	No	Partial	No	No	No	No	Partial	No	No
<b>Material Aspect: Non-discrimination</b>										
G4-HR3	Partial	Partial	Partial	Partial	No	Partial	Partial	Partial	Partial	No
<b>Material Aspect: Freedom of Association and Collective Bargaining</b>										
G4-HR4	Yes	Partial	Partial	Partial	Partial	Yes	Partial	Partial	Partial	Partial
<b>Material Aspect: Child Labour</b>										
G4-HR5	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Forced or Compulsory Labour</b>										
G4-HR6	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Security Practices</b>										
G4-HR7	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Indigenous Rights</b>										

Specific Standard Disclosure	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University
	2015					2016				
G4-HR8	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Assessment</b>										
G4-HR9	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Supplier Human Rights Assessment</b>										
G4-HR10	No	No	No	No	No	No	No	No	No	No
G4-HR11	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Human Rights Grievance Mechanisms</b>										
G4-HR12	Yes	No	Partial	No	No	Yes	No	Partial	No	No
<b>SUB-Category: Society</b>										
<b>Material Aspect: Local Communities</b>										
G4-SO1	Yes	Partial	Yes	Partial	Partial	Yes	Yes	Yes	Yes	Partial
G4-SO2	No	No	Yes	No	No	No	No	No	No	No
<b>Material Aspect: Anti-corruption</b>										
G4-SO3	No	No	No	No	No	No	No	No	No	No
G4-SO4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-SO5	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Public Policy</b>										
G4-SO6	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Anti-competitive Behaviour</b>										
G4-SO7	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Compliance</b>										
G4-SO8	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial
<b>Material Aspect: Supplier Assessment for Impacts on Society</b>										
G4-SO9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-SO10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Material Aspect: Grievance Mechanisms for Impacts on Society</b>										
G4-SO11	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial
<b>SUB-Category: Product Responsibility</b>										
<b>Material Aspect: Customer Health and Safety</b>										
G4-PR1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G4-PR2	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Product and Service Labelling</b>										
G4-PR3	No	No	No	No	No	No	No	No	No	No
G4-PR4	No	No	No	No	No	No	No	No	No	No
G4-PR5	No	No	Partial	No	Partial	No	No	No	Partial	No
<b>Material Aspect: Marketing Communications</b>										

Specific Standard Disclosure	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University	Nelson Mandela University	Witwatersrand University	Free State University	Stellenbosch University	Pretoria University
	2015					2016				
G4-PR6	No	No	No	No	No	No	No	No	No	No
G4-PR7	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Customer Privacy</b>										
G4-PR8	No	No	No	No	No	No	No	No	No	No
<b>Material Aspect: Compliance</b>										
G4-PR9	No	No	No	No	No	No	No	No	No	No

Figure 5-3 presents the overall performance of each of the 46 sub-sections of the specific standard disclosures, grouped on economic, environmental and social sections. Economic reporting is the highest at 77%, with environmental, social- human rights and product responsibility barely reported on.

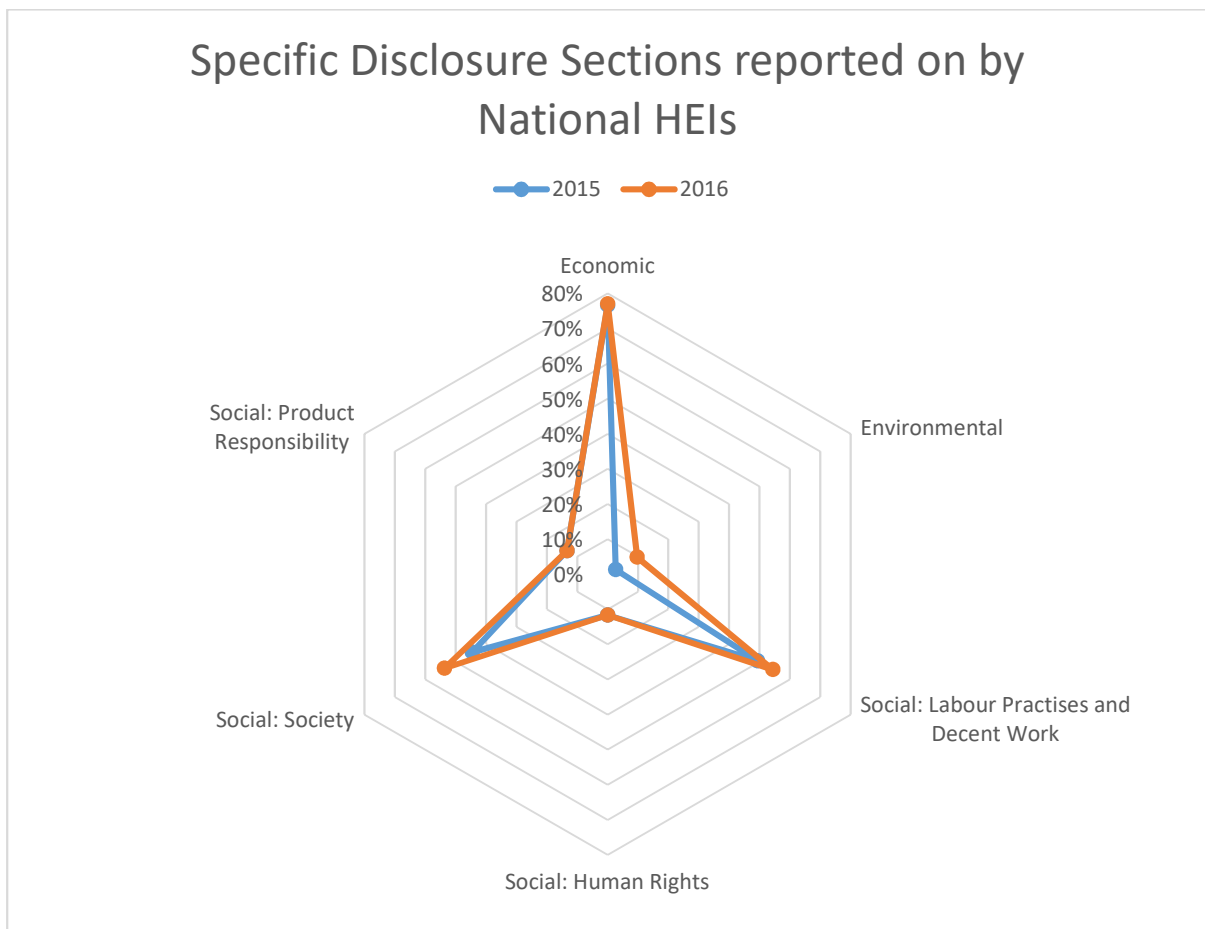


Figure 5-3: Summary of Specific Disclosure Sections National HEIs report on (Table 5-2)

The minimum requirements for a core ‘in accordance’ option (Table 3-3) states that at least one indicator should be reported on per material aspect. Following is a depiction of instances where at least half of the HEIs examined (Table 5-1) complied with this requirement. Figure 5-4 indicates that reporting for market presence and procurement practices is below 50%. For 2015 and 2016, 100% of HEIs reported their direct economic value generated and distributed (Economic Performance) while on average 80% have reported significant indirect economic impacts (Indirect Economic Impact). Environmental disclosures require an organisation to specifically report on their consumption and recycling of environmental elements (Section 3.6.4). For 2015 and 2016 very few of the HEIs focused on including environmental data in their sustainability reports. This lack of including of environmental data explain the low reporting indicated in Figure 5-3.

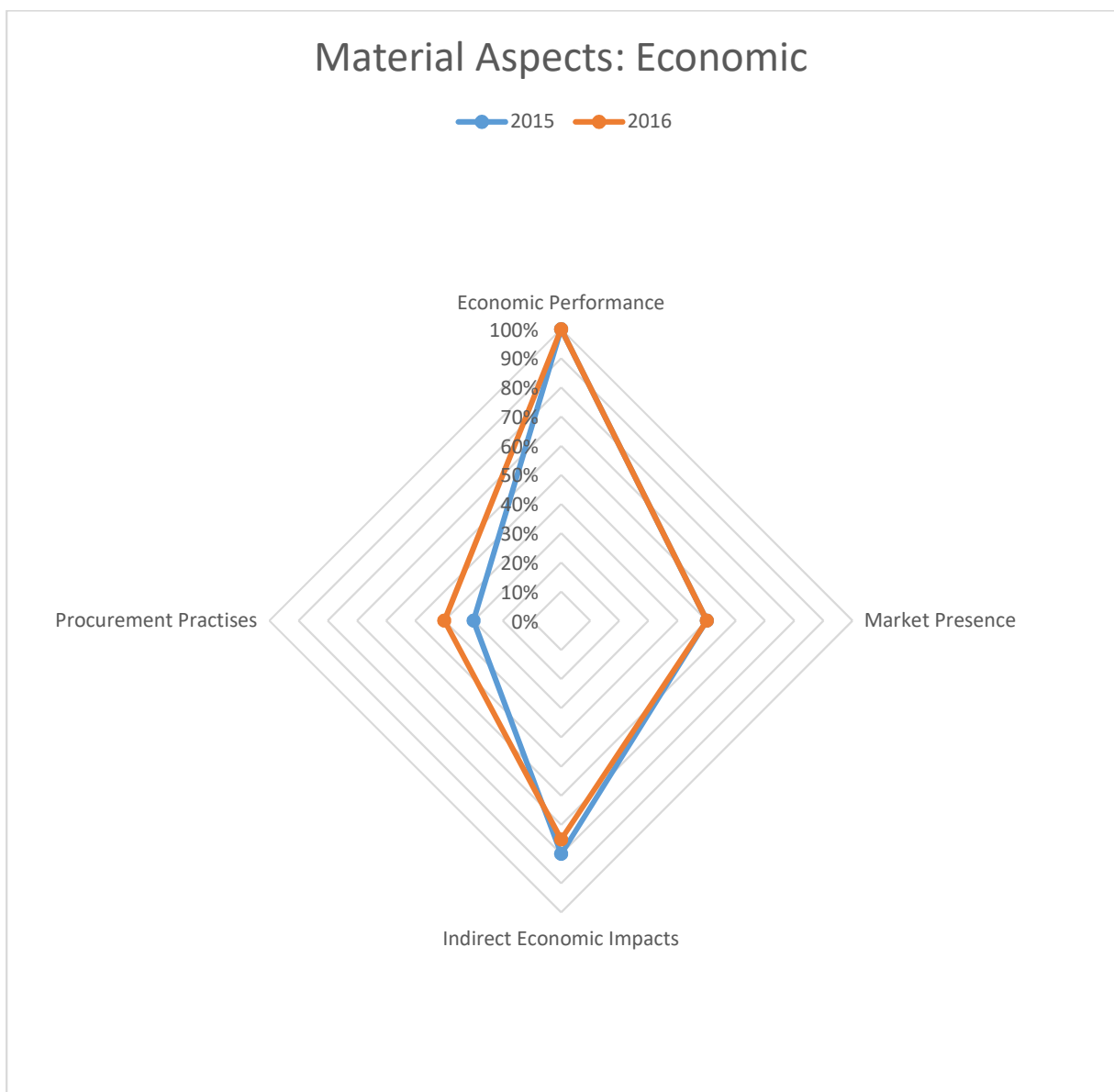


Figure 5-4: Material Aspects: Economic (Table 5-2)

Figure 5-5 indicates that 5 of the 12 material aspects have met criteria mentioned above. In 2015 only, products and services were reported. That number has increased in 2016 with materials and water being disclosed with 30% and 20% respectively. There was a significant increase in the number of disclosure on waste disposal (Materials) as well as energy and water consumption.

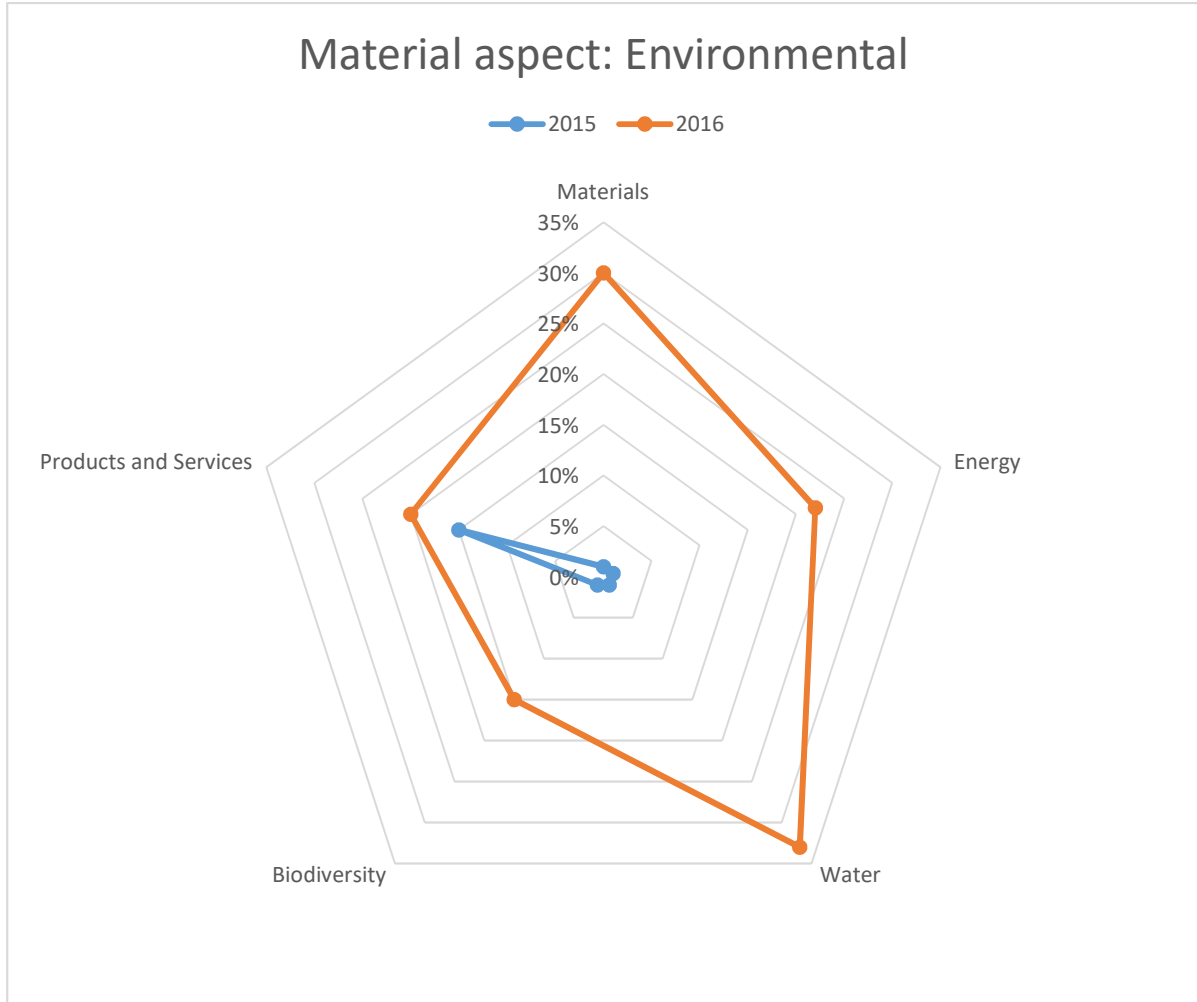


Figure 5-5: Material Aspect: Environmental (Table 5-2)

Figure 5-6 and Figure 5-7 indicates that 14 of the 30 material aspects under the social category have been reported on for 2015 and 2016 respectively. In 2015 labour management relations and equal remuneration for woman and men were at 100% disclosure. 80% of HEIs disclosed on diversity and equal opportunity. The remaining disclosures were all below 50%. In 2016 there was an uptake in disclosure on diversity and equal opportunity to 100% disclosure.

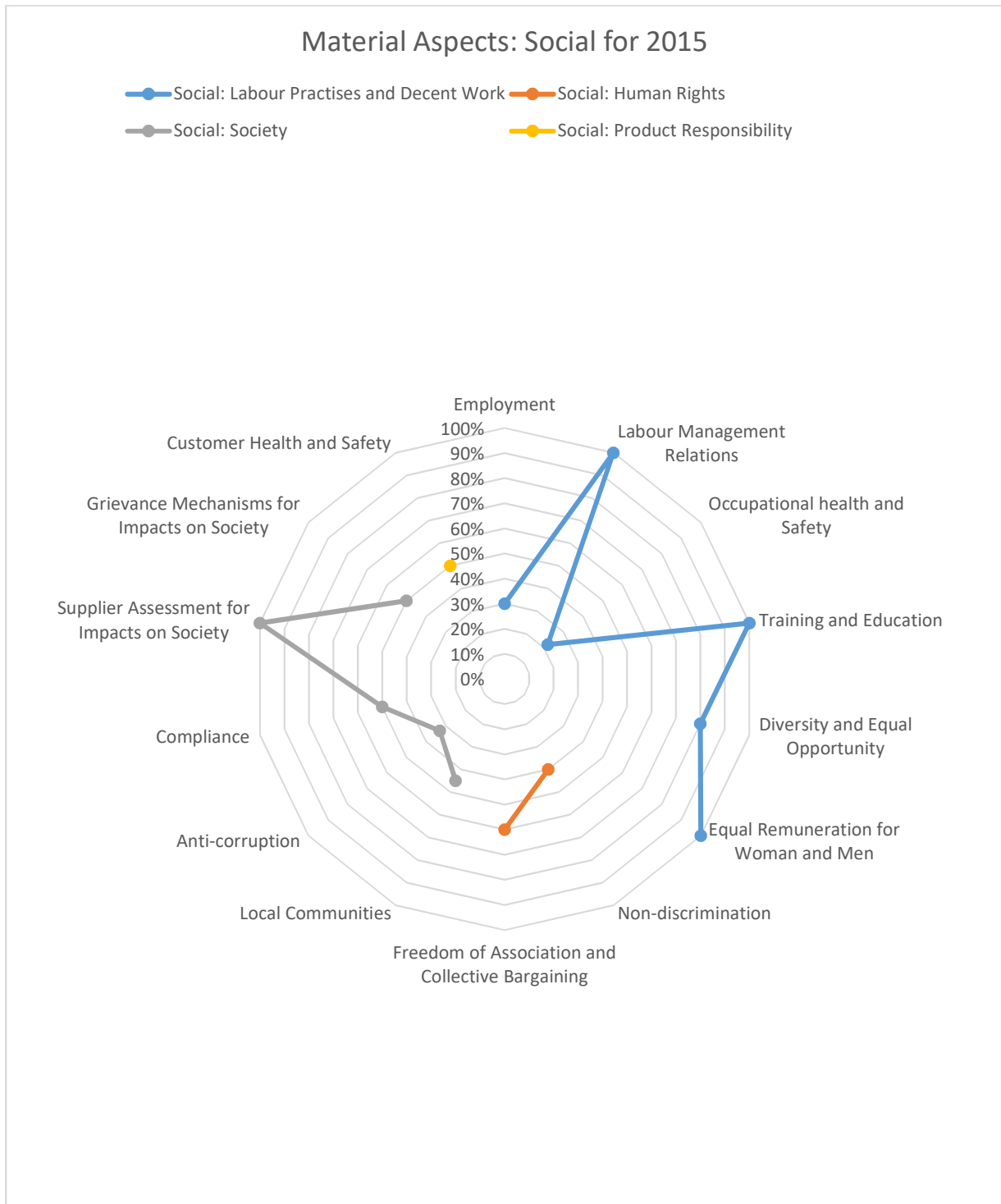


Figure 5-6: Material Aspects: Social for 2015 (Table 5-2)



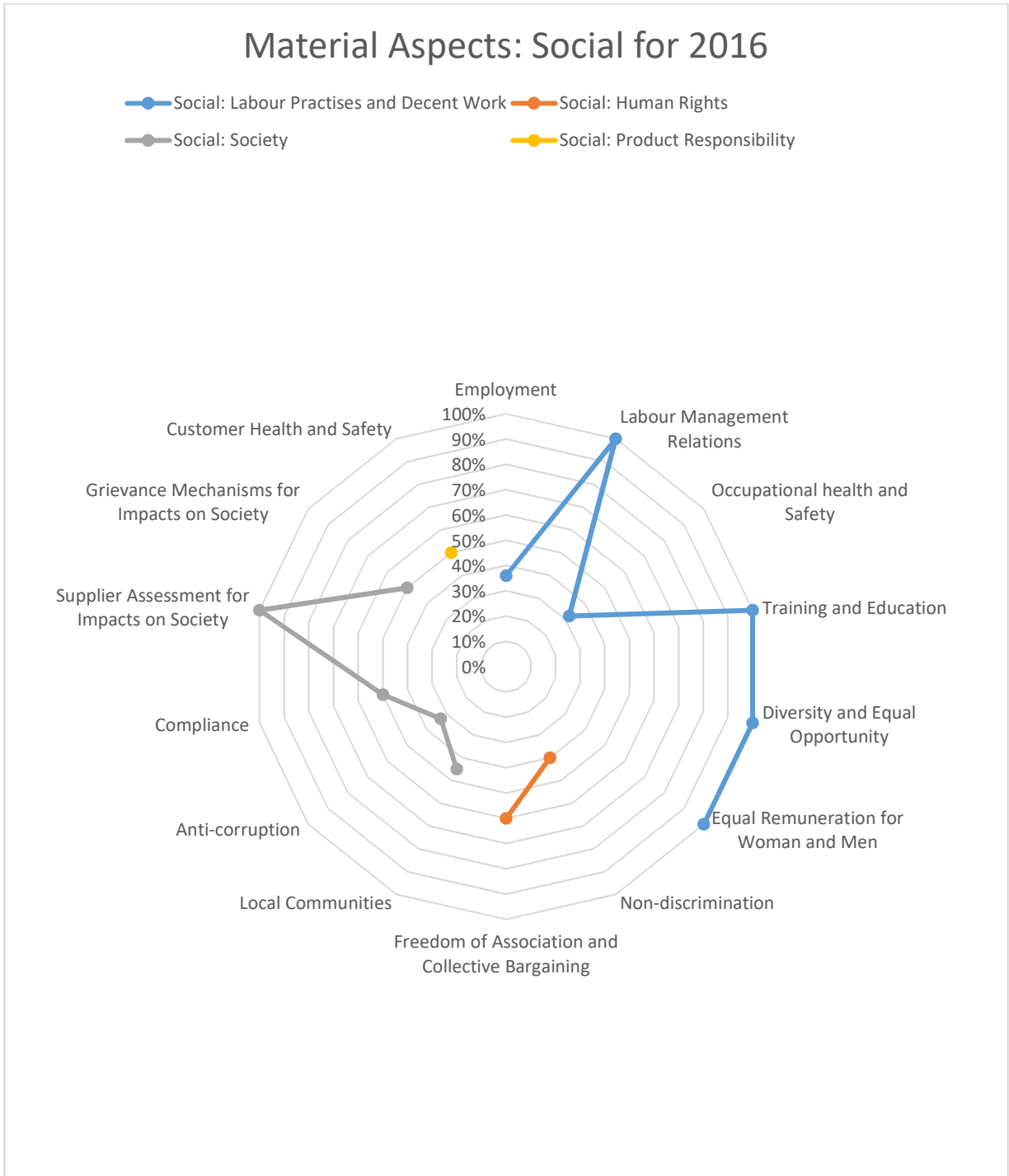


Figure 5-7: Material Aspects: Social for 2016 (Table 5-2)

All the reports analysed were independently audited as per the requirement of the DHET guidelines (Section 5.2). Indications that some areas are only partially reported on indicate that the specified disclosure area is not satisfactory, however it cannot be neglected. In the results above all areas where only partial reporting took place the effect of the disclosure on the result was halved. The next section presents the results of the National HEIs in South Africa study.

## 5.4 South African Higher Education Institution Reports Results

The study in the section above indicated the GRI footprint reporting trends of South African HEIs. The study was conducted to understand which GRI disclosures are required to adhere to the DHET reporting guidelines (Section 5.2). The following results will aim to clarify the disclosures.

The GRI general standard disclosures are consistently reported on by all the South African HEIs in this study. Provided the requirements from the DHET (Section 5.2) generally most of the general standard disclosures are addressed. However, some governance disclosures are not considered important. Table 5-3 presents the GRI general standard disclosures the study revealed South African HEIs do not report on.

Table 5-3: Unreported GRI G4 General Standard Disclosures

General Standard Disclosure	Standard Disclosure Title
G4-43	Report the measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics.
G4-47	Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities.
G4-48	Report the highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered.
G4-53	Report how stakeholders' views are sought and considered regarding remuneration, including the results of votes on remuneration policies and proposals, if applicable.
G4-54	Report the ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country.
G4-55	Report the ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country.

The DHET requires South African HEIs to report on issues that the GRI G4 guidelines do not cater for. In Section 3.6.3, this type of disclosure was introduced as Disclosures on Management Approach (DMA) allowing organisations to extend the GRI reporting framework based on its specific needs. The study found a need for DMA disclosures based on common occurring disclosures within the reports analysed in Section 5.3. Table 5-4 presented the DMA disclosures, where the first disclosure was taken directly out of the German Suitability Code (Section 4.3).

Table 5-4: GRI DMA for South African HEIs

DMA Disclosure	Disclosure Title
<b>G4-DMA - German Suitability Code</b>	The institution of higher education makes use of various processes to help it reveal how it improves sustainability, regarding the internal and external use of resources. Material importance concerns are handled by disclosing how the institution’s present and future impact is and will be evaluated in terms of its own social responsibility
<b>G4-DMA</b>	Governance and implementation of information communication and technology policies and processes within the university including enterprise content management
<b>G4-DMA</b>	Advancing diversity and equality within the university through equal access to opportunities
<b>G4-DMA</b>	Report on the relationship between the university and the public/private sector regarding relevance of programs and needs in those sectors.
<b>G4-DMA</b>	Report on the different mechanisms on which staff and students are rewarded and recognised within the university.
<b>G4-DMA</b>	Report on how the university ensures that the campus environment for staff and students are inclusive and promotes social cohesion.
<b>G4-DMA</b>	Mechanisms via which students can share their student impression in relation to academic and co-curricular experiences.
<b>G4-DMA</b>	Reasons for refusals for requests for information lodged to Promotion of Access to Information Act, 2000
<b>G4-DMA</b>	Report on key development within the core spheres of teaching and learning and research and engagement.

Based on the findings of the study in Section 5.3 above the GRI G4 specific standard disclosure reporting is sparsely reported in the Environmental, Social – Human Rights and Product Responsibility sections. Table 5-5 indicates the sections and disclosures that was reported on by at least 50% of the HEIs analysed. The Economic sector is most reported, followed by labour practices and society.

Table 5-5: GRI G4 Specific Standard Disclosures for South African HEIs

Specific Standard Disclosure	Specific Disclosure Title
<b>Category: Economic</b>	
<b>Material Aspect: Economic Performance</b>	
G4-EC1	Direct economic value generated and distributed
G4-EC2	Financial implications and other risks and opportunities for the organization’s activities due to climate change
G4-EC3	Coverage of the organization’s defined benefit plan obligations
G4-EC4	Financial assistance received from government
<b>Material Aspect: Market Presence</b>	

Specific Standard Disclosure	Specific Disclosure Title
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation
<b>Material Aspect: Indirect Economic Impacts</b>	
G4-EC7	Development and impact of infrastructure investments and services supported
G4-EC8	Significant indirect economic impacts, including the extent of impacts
<b>Material Aspect: Procurement Practices</b>	
G4-EC9	Proportion of spending on local suppliers at significant locations of operation
<b>Category: Social</b>	
<b>SUB-Category: Labour Practises And Decent Work</b>	
<b>Material Aspect: Employment</b>	
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation
<b>Material Aspect: Labour Management Relations</b>	
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements
<b>Material Aspect: Occupational Health and Safety</b>	
G4-LA8	Health and safety topics covered in formal agreements with trade unions
<b>Material Aspect: Training and Education</b>	
G4-LA9	Average hours of training per year per employee by gender, and by employee category
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category
<b>Material Aspect: Diversity and Equal Opportunity</b>	
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity
<b>Material Aspect: Equal Remuneration For Women And Men</b>	
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation

Specific Standard Disclosure	Specific Disclosure Title
<b>Sub-Category: Human Rights</b>	
<b>Material Aspect: Non-Discrimination</b>	
G4-HR3	Total number of incidents of discrimination and corrective actions taken
<b>Material Aspect: Freedom Of Association And Collective Bargaining</b>	
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights
<b>Material Aspect: Human Rights Grievance Mechanisms</b>	
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms
<b>Sub-Category: Society</b>	
<b>Material Aspect: Local Communities</b>	
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs
<b>Material Aspect: Anti-corruption</b>	
G4-SO4	Communication and training on anti-corruption policies and procedures
<b>Material Aspect: Compliance</b>	
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations
<b>Material Aspect: Supplier Assessment for Impacts on Society</b>	
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken
<b>Material Aspect: Grievance Mechanisms for Impacts on Society</b>	
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms
<b>Sub-Category: Product Responsibility</b>	
<b>Material Aspect: Customer Health And Safety</b>	
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement

The “in accordance” reporting method (Section 3.6.1) requires at least one disclosure to be reported on in any given section. Evaluating the results, the following gaps can be identified where South African HEIs do not comply with that criteria.

The Environmental, Social- Human Rights and Social- Product Responsibility (Figure 5-3) sections are underreported. Figure 5-5 presents an improvement in the reporting of Environmental disclosures in 2016 but not enough to adhere to the “in accordance” criteria. Apart from an improvement in disclosure on diversity and equal opportunity in 2016 (Figure 5-7) the social category is least disclosed on. Table 5-6 presents the GRI categories (Section 3.6) that are underreported on by South African HEIs.

Table 5-6: Underreported GRI G4 categories in South African HEIs

GRI Category	Material Aspect
Environmental	<ul style="list-style-type: none"> <li>• <b>Materials</b></li> <li>• Biodiversity</li> <li>• Emissions</li> <li>• <b>Effluents and Waste</b></li> <li>• Products and Services</li> <li>• Compliance</li> <li>• Transport</li> <li>• Supplier Environmental Assessment</li> <li>• Environmental Grievance Mechanisms</li> </ul>
Social: Human Rights	<ul style="list-style-type: none"> <li>• Investment</li> <li>• Child Labour</li> <li>• Forced or Compulsory Labour</li> <li>• <b>Security Practises</b></li> <li>• Indigenous Rights</li> <li>• Assessment</li> <li>• Supplier Human Rights Assessment</li> </ul>
Social: Society	<ul style="list-style-type: none"> <li>• Public Policy</li> <li>• Anti-competitive behaviour</li> </ul>
Social: Product Responsibility	<ul style="list-style-type: none"> <li>• Product and Services Labelling</li> <li>• Marketing Communications</li> <li>• <b>Customer Privacy</b></li> <li>• <b>Compliance</b></li> </ul>

## 5.5 Summary

In South Africa the DHET require all public HEIs to produce annual reports. The content of these reports originates from the KING III guidelines, however there is an overlap with the GRI G4 guidelines. This chapter analysed that overlap to determine if the GRI G4 guidelines could adhere to the DHET report content requirements.

Based on the reports analysed, the South African HEIs sector cover a large number of GRI indicators, enough to adhere to a “comprehensive” in accordance criteria for most of the GRI sections (Section 3.6.1). However, the results indicated that the environmental, social-human rights, social-society and social-product responsibility sections does not meet the “comprehensive” standards. The DHET criteria does require South African HEIs to report on these sections (Section 5.2), but only from the council’s perspective, which leads to the lack of specific information that is required to adhere to the GRI G4 reporting standards.

This chapter answered the research question:

RQ<sub>3</sub>. What are the GRI G4 disclosures required by South African HEIs?

The resultant deliverables addressed the following research objectives:

RO<sub>4</sub>. Identify gaps in current sustainability reporting practices in South Africa.

By answering these questions insight was gained into national higher education sustainability reporting techniques. The areas of reporting that stood out were identified and will assists with the process of determining the guidelines to be used in a South African HEI.

The next chapter investigates at the reporting practices at Nelson Mandela University, and how the GRI guidelines can be applied to Nelson Mandela University and HEIs in South Africa in general. A full list of GRI disclosures necessary to satisfy the DHET guidelines as well as best practices from the international HEI community is presented.

# Chapter 6. Design and Development of Sustainability Reporting for Nelson Mandela University

## 6.1 Introduction

Chapter 5 discussed sustainability reporting disclosures in national Higher Education Institutions (HEIs). The study revealed the trends of GRI disclosures that is currently being reported on in the national HEIs community. The chapter concluded with the results of the study, including the GRI DMA disclosures for South African HEIs.

At Nelson Mandela University sustainability reporting is the responsibility of the Sustainable Development Institutional Planning office. This office is responsible for producing all sustainability reports for the institution, including integrating changes in reporting requirements. The office also handle communication between different departments within Nelson Mandela University to gather the necessary data required for the reports.

In this chapter, the analysis of the previous two chapters are combined to create a proposed list of GRI G4 guidelines for South African HEIs. The requirements for Nelson Mandela University current reporting is analysed to evaluate how well the proposed guidelines cater to the university's requirements.

The following research question will be answered in this chapter:

RQ4. How suitable is the proposed guidelines for Nelson Mandela University in South Africa?

This chapter seeks to address the following research objectives:

RO5. Identify the sustainability reporting requirements and indicators at Nelson Mandela University.

RO6. Identify the appropriate disclosures for sustainability reports for HEIs in South Africa.

RO7. Analyse the proposed guidelines ability to produce sustainability reports for Nelson Mandela University in South Africa.

Answering the research question will provide insight into the suitability of the proposed guidelines. A full outline of Chapter 6 is provided by Figure 6-1.



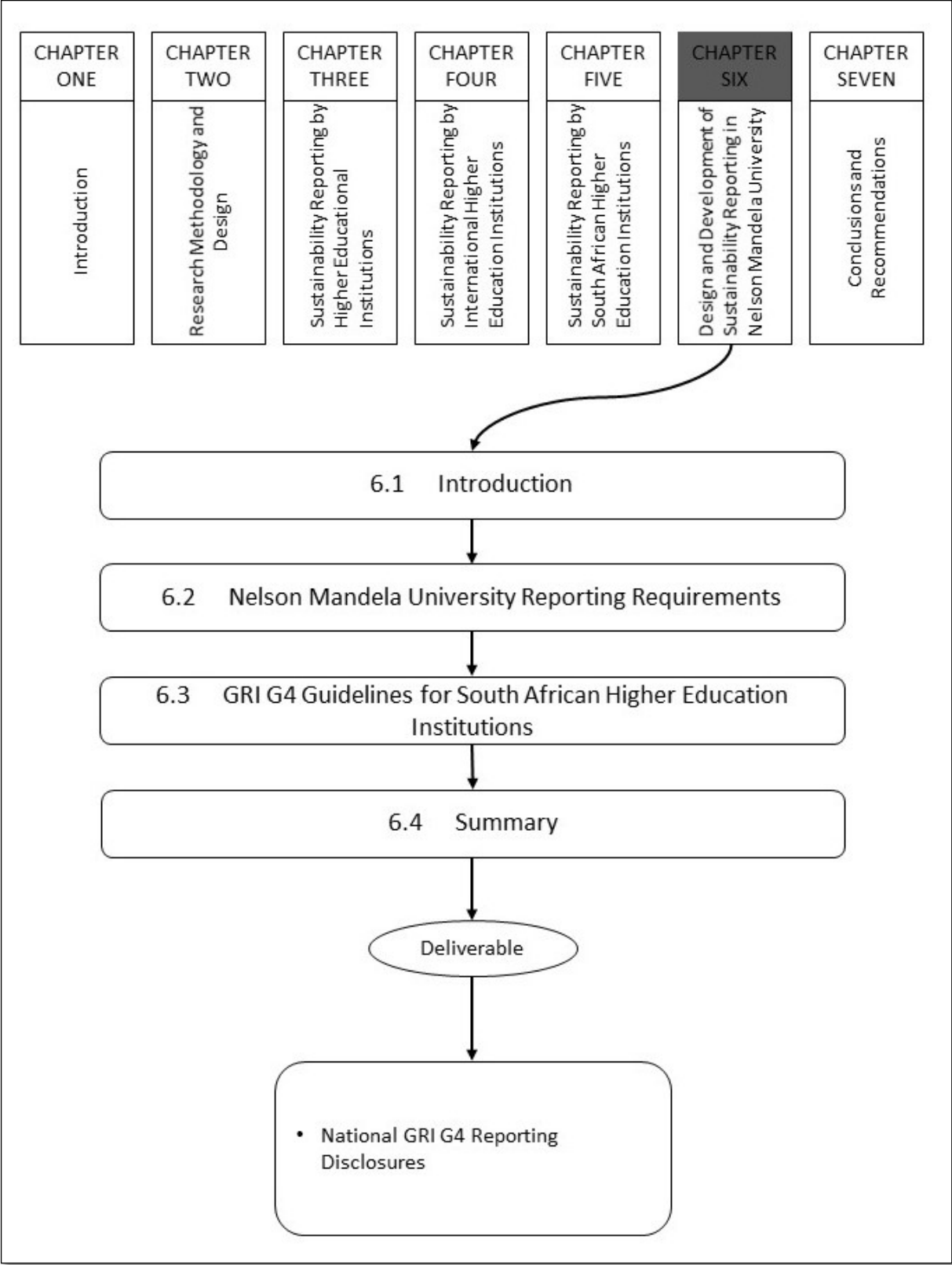


Figure 6-1: Chapter 6 Layout

## 6.2 Nelson Mandela University Reporting Requirements

In this section the reporting requirements of Nelson Mandela University are analysed to determine if the list of guidelines proposed in Section 6.3 can successfully report on all the requirements.

In 2010 the Nelson Mandela University created a Vision 2020 strategic plan (NMU, 2010). This plan was initiated by the Vice-Chancellor, Professor Derrick Swartz, in April 2008. The strategic priorities for the Vision 2020 plan are (NMU, 2010):

- Implement an integrated academic plan;
- Create a responsive learning environment;
- Create an environment that rewards innovation;
- Contribute to a sustainable future through scholarship;
- Develop a culture to utilise the transformative potential of staff and students;
- Enhance long term financial growth;
- Improve institutional systems and infrastructure; and
- Maximise human potential.

Several of the priorities mentioned above relate directly to the core academic functions of the institution. However, it is equally important to address the priorities that enables conditions wherein high-quality learning can thrive. Figure 6-2 presents the core and enabling conditions.

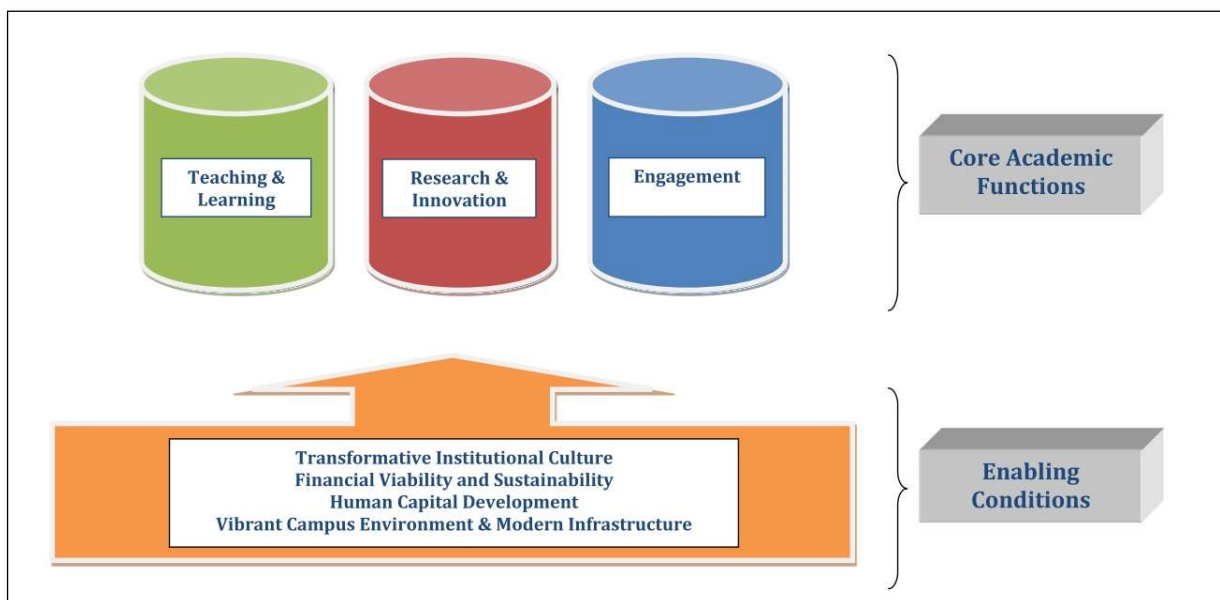


Figure 6-2: Nelson Mandela University Vision 2020 Strategic Plan (NMU, 2010)

## 6.2.1 GRI G4 Disclosures for Nelson Mandela University Reporting Requirements

The Nelson Mandela University Institutional Planning Office is responsible for creating the reports required by the DHET. For the first report released in 2015 based on the new DHET requirements, the Institutional Planning Office created a list of report contents (Appendix G). During an interview (1 August 2017, 3 August 2017 Appendix E) with Dr Levendal, the Nelson Mandela University content was mapped to the list of GRI G4 disclosures. In most cases multiple GRI guidelines are combined to address a single element of the report. Table 6-1 presents the general standard disclosures that aligns with the reporting requirements of Nelson Mandela University.

Table 6-1: General Standard Disclosure comparison with Nelson Mandela University reporting requirements

General Standard Disclosure	Annual 2015 Nelson Mandela University DHET Report Contents
<b>Strategy and Analysis</b>	
G4-1	-Report by Vice-Chancellor on Management/Administration
G4-2	-Report of the Chairperson of Council -Audit and Risk Committee Report -Senate's Report to Council -Report on Internal Administrative/Operational Structures and Controls -Report on Risk Exposure Assessment and the Management thereof
<b>Organizational Profile</b>	
G4-3	-Disclosure of NMU as going concern
G4-4	-Disclosure of NMU as going concern -Senate's Report to Council -Sustainability Report -Report on Transformation
G4-5	-Disclosure of NMU as going concern
G4-6	-Disclosure of NMU as going concern
G4-7	-Disclosure of NMU as going concern
G4-8	-Disclosure of NMU as going concern -Report on Internal Administrative/Operational Structures and Controls
G4-9	-Disclosure of NMU as going concern -Finance and Faculties Committee -Senate's Report to Council -Report on Internal Administrative/Operational Structures and Controls -Report on Transformation
G4-10	-Disclosure of NMU as going concern
G4-11	-Disclosure of NMU as going concern
G4-12	-Disclosure of NMU as going concern -Finance and Faculties Committee
G4-13	-Report of the Chairperson of Council -Council's Statement on Governance -Disclosure of NMU as going concern -Matters of Significance Considered by Council -Finance and Faculties Committee -Senate's Report to Council
G4-14	-Report of the Chairperson of Council -Disclosure of NMU as going concern

<b>General Standard Disclosure</b>	<b>Annual 2015 Nelson Mandela University DHET Report Contents</b>
	-Council's Report on Risk Management -Finance and Faculties Committee -Senate's Report to Council
G4-15	-Report of the Chairperson of Council -Disclosure of NMU as going concern -Finance and Faculties Committee
G4-16	-Disclosure of NMU as going concern
<b>Identified Material Aspects and Boundaries</b>	
G4-17	-Finance and Faculties Committee
G4-23	-Council's Report on Risk Management
<b>Stakeholder Engagement</b>	
G4-24	-Report of the Chairperson of Council -Council's Statement on Governance -Matters of Significance Considered by Council -Sustainability Report
G4-25	-Report of the Chairperson of Council -Council's Statement on Governance -Matters of Significance Considered by Council -Sustainability Report
G4-26	-Report of the Chairperson of Council -Council's Statement on Governance -Matters of Significance Considered by Council -Sustainability Report
G4-27	-Report of the Chairperson of Council -Council's Statement on Governance -Matters of Significance Considered by Council -Sustainability Report
<b>Report Profile</b>	
G4-31	-Council's Statement on Governance
G4-32	-Audit and Risk Committee Report
G4-33	-Audit and Risk Committee Report -Sustainability Report
<b>Governance</b>	
G4-34	-Governance Committee Report
G4-35	-Council to give Due Consideration -Governance Committee Report
G4-36	-Matters of Significance Considered by Council -Governance Committee Report
G4-37	-Report of the Chairperson of Council -Council's Statement on Governance -Matters of Significance Considered by Council -Governance Committee Report -Report of IF to Council -Sustainability Report
G4-38	-Audit and Risk Committee Report -Governance Committee Report -Report on Internal Administrative/Operational Structures and Controls
G4-39	-Governance Committee Report -Report on Internal Administrative/Operational Structures and Controls
G4-40	-Report of the Chairperson of Council -Council's Statement on Governance -Governance Committee Report -Report of IF to Council

General Standard Disclosure	Annual 2015 Nelson Mandela University DHET Report Contents
G4-41	-Report of the Chairperson of Council -Council's Statement on Governance
G4-42	-Council's Statement of Internal Financial Controls -Audit and Risk Committee Report
G4-44	-Council's Statement on Governance -Council's Statement of Internal Financial Controls -Council to give Due Consideration -Audit and Risk Committee Report -Governance Committee Report -Council's Statement of Self-Assessment
G4-45	-Report of the Chairperson of Council -Council's Statement on Governance -Council's Statement of Internal Financial Controls -Council's Report on Risk Management -Matters of Significance Considered by Council -Council to give Due Consideration -Finance and Faculties Committee -Audit and Risk committee report -Senate's Report to Council -Report on Internal Administrative/Operational Structures and Controls -Report on Risk Exposure Assessment and the Management thereof -Report of ARC -Sustainability Report
G4-46	-Report of the Chairperson of Council -Council's Statement of Internal Financial Controls -Council's Report on Risk Management -Finance and Faculties Committee -Audit and Risk Committee Report -Senate's Report to Council -Report on Internal Administrative/Operational Structures and Controls -Report on Risk Exposure Assessment and the Management thereof -Report of ARC -Sustainability Report
G4-49	-Council's Report on Risk Management
G4-50	-Report of ARC
G4-51	-Report of the Chairperson of Council -Remuneration Committee Report
G4-52	-Remuneration Committee Report
<b>Ethics and Integrity</b>	
G4-56	-Report of the Chairperson of Council -Council's Statement on Governance -Audit and Risk Committee Report -Council's Statement on Code of Ethics -Report on Internal Administrative/Operational Structures and Controls -Sustainability Report
G4-57	-Report of the Chairperson of Council -Sustainability Report
G4-58	-Report of the Chairperson of Council -Sustainability Report

Table 6-2 presents the specific standard disclosures that aligns with the reporting requirements of Nelson Mandela University (1 August 2017, 3 August 2017 Appendix E).

Table 6-2: Specific Standard Disclosure comparison with Nelson Mandela University reporting requirements

Specific Standard Disclosure	Annual 2015 Nelson Mandela University DHET Report Contents
<b>Category: Economic</b>	
<b>Material Aspect: Economic Performance</b>	
G4-EC1	-Council's Statement of Internal Financial Controls -Matters of Significance Considered by Council -Council to give Due Consideration -Finance and Faculties Committee -Senate's Report to Council -Annual Financial Review -Sustainability Report
G4-EC2	-Council's Statement of Internal Financial Controls -Annual Financial Review -Report of ARC
G4-EC3	-Council's Statement of Internal Financial Controls -Finance and Faculties Committee -Annual Financial Review
G4-EC4	-Council's Statement of Internal Financial Controls -Finance and Faculties Committee -Senate's Report to Council -Annual Financial Review
<b>Material Aspect: Market Presence</b>	
G4-EC5	-Council's Statement of Internal Financial Controls
<b>Material Aspect: Indirect Economic Impacts</b>	
G4-EC7	-Matters of Significance Considered by Council -Council to give Due Consideration -Finance and Faculties Committee -Senate's Report to Council -Annual Financial Review -Sustainability Report -Report on Transformation
G4-EC8	-Matters of Significance Considered by Council -Finance and Faculties Committee -Annual Financial Review -Sustainability Report
<b>Material Aspect: Procurement Practices</b>	
G4-EC9	-Matters of Significance Considered by Council -Council to give Due Consideration -Senate's Report to Council -Annual Financial Review
<b>Category: Environmental</b>	
<b>Material Aspect: Products and Services</b>	
G4-EN27	-Sustainability Report
<b>Material Aspect: Compliance</b>	
G4-EN29	-Report of the Chairperson of Council
<b>Material Aspect: Overall</b>	
G4-EN31	-Sustainability Report
<b>Material Aspect: Environmental Grievance Mechanisms</b>	
G4-EN34	-Report on Transformation
<b>Category: Social</b>	
<b>SUB-Category: Labour Practises and Decent Work</b>	

Specific Standard Disclosure	Annual 2015 Nelson Mandela University DHET Report Contents
<b>Material Aspect: Employment</b>	
G4-LA2	-Senate's Report to Council
<b>Material Aspect: Labour Management Relations</b>	
G4-LA4	-Council's Statement on Conflict Management -Report on Transformation
<b>Material Aspect: Training and Education</b>	
G4-LA9	-Report on Internal Administrative/Operational Structures and Controls -Report on Transformation
G4-LA10	-Report on Internal Administrative/Operational Structures and Controls -Report on Transformation
G4-LA11	-Report on Transformation
<b>Material Aspect: Diversity and Equal Opportunity</b>	
G4-LA12	-Report of the Chairperson of Council -Report on Transformation
<b>Material Aspect: Equal Remuneration for Women and Men</b>	
G4-LA13	-Report of the Chairperson of Council -Report on Transformation
<b>Material Aspect: Labour Practices Grievance Mechanisms</b>	
G4-LA16	-Council's Statement on Conflict Management -Report on Transformation
<b>SUB-Category: Human Rights</b>	
<b>Material Aspect: Non-discrimination</b>	
G4-HR3	-Council's Statement on Conflict Management -Report on Transformation
<b>Material Aspect: Freedom of Association and Collective Bargaining</b>	
G4-HR4	-Council's Statement on Conflict Management -Report on Transformation
<b>Material Aspect: Human Rights Grievance Mechanisms</b>	
G4-HR12	-Report on Transformation
<b>SUB-Category: Society</b>	
<b>Material Aspect: Local Communities</b>	
G4-SO1	-Matters of Significance Considered by Council -Sustainability Report
<b>Material Aspect: Anti-corruption</b>	
G4-SO3	-Council to give Due Consideration -Council's statement on Conflict Management
G4-SO4	-Council to give Due Consideration -Report on Internal Administrative/Operational Structures and Controls
G4-SO5	-Council to give Due Consideration -Council's statement on Conflict Management
<b>Material Aspect: Compliance</b>	
G4-SO8	-Report of the Chairperson of Council -Finance and Faculties Committee
<b>Material Aspect: Supplier Assessment for Impacts on Society</b>	
G4-SO9	-Council to give Due Consideration -Sustainability Report -Report on Transformation
G4-SO10	-Sustainability Report -Report on Transformation
<b>Material Aspect: Grievance Mechanisms for Impacts on Society</b>	

Specific Standard Disclosure	Annual 2015 Nelson Mandela University DHET Report Contents
G4-SO11	-Sustainability Report -Report on Transformation
<b>SUB-Category: Product Responsibility</b>	
<b>Material Aspect: Customer Health and Safety</b>	
G4-PR1	-Council's Statement on Governance
G4-PR2	-Report of the Chairperson of Council -Council's Statement on Governance -Council to give Due Consideration
<b>Material Aspect: Customer Privacy</b>	
G4-PR8	-Council's Statement on Governance -Council's Report on Risk Management -Council to give Due Consideration -Report on Internal Administrative/Operational Structures and Controls -Report of ARC

Table 6-3 presents the disclosures on management approach that aligns with the reporting requirements of Nelson Mandela University (1 August 2017, 3 August 2017, Appendix E). These disclosures were created because the standard GRI disclosures did not satisfy the requirements. The DMA-disclosure column reference refer to the list of DMA-disclosures identified for South African HEIs in Table 6-7.

Table 6-3: Disclosure on Management Approach comparison with Nelson Mandela University reporting requirements

DMA-Disclosure	Disclosure Title
G4-DMA1	-Council's Statement on Governance -Sustainability Report
G4-DMA2	-Audit and Risk Committee Report -Report on Internal Administrative/Operational Structures and Controls
G4-DMA9	-Senate's Report to Council

## 6.2.2 Data Landscape at Nelson Mandela University

In March 2015 the Sustainable Development Institutional Planning office proposed qualitative indicators to the Management Committee of Nelson Mandela University for an institutional dashboard that form part of the Vision 2020 plan (Appendix F). During an interview (23 May 2017 Appendix E) with members of the Nelson Mandela Institutional Planning Office, it was mentioned that the institutional dashboard is used to gather most of the data required by the university to create the annual DHET reports. However, based on the DHET requirements (Section 5.2), there are still departments that independently create their own required section of the annual report, that when combined into the full report, results in the duplication of data.



The Nelson Mandela University gathers the required data for generating sustainability reports from different departments within the institution. Most of the sub-report data is compiled by heads of departments. During interviews with the Nelson Mandela University Institutional Planning Office officials (Appendix E), the internal sources for the required data have been identified in Table 6-4. Table 6-4 presents the information source for some of the Nelson Mandela University DHET report content used in Table 6-1, Table 6-2 and Table 6-3 above.

Table 6-4: Data Landscape at Nelson Mandela University

Annual 2015 Nelson Mandela University DHET Report Contents	Information Source – Nelson Mandela University
-Report by Vice-Chancellor on Management/Administration	Chair of Council + Vice Chancellor
-Disclosure of NMU as going concern -Finance and Faculties Committee -Senate's Report to Council -Report on Internal Administrative/Operational Structures and Controls -Report on Transformation	Finance + Information and Communication Technology
-Disclosure of NMU as going concern	HR + Higher Education Information Management System
-Disclosure of NMU as going concern	Human Resources
-Report of the Chairperson of Council -Disclosure of NMU as going concern -Finance and Faculties Committee	Prof Heather Nel
-Disclosure of NMU as going concern	International Office
-Finance and Faculties Committee	Finance
-Report of the Chairperson of Council -Council's Statement on Governance -Matters of Significance Considered by Council -Sustainability Report	Student representative Council, Municipality
-Report of the Chairperson of Council -Council's Statement on Governance -Matters of Significance Considered by Council -Sustainability Report	Local Municipality
-Governance Committee Report -Council to give Due Consideration -Matters of Significance Considered by Council -Report of the Chairperson of Council -Council's Statement on Governance	Registrar

Annual 2015 Nelson Mandela University DHET Report Contents	Information Source – Nelson Mandela University
<ul style="list-style-type: none"> <li>-Matters of Significance Considered by Council</li> <li>-Report of IF to Council</li> <li>-Sustainability Report</li> <li>-Audit and Risk Committee Report</li> <li>-Report on Internal Administrative/Operational Structures and Controls</li> <li>-Council's Statement of Internal Financial Controls</li> <li>-Council's Statement of Self-Assessment</li> <li>-Council's Report on Risk Management</li> <li>-Finance and Faculties Committee</li> <li>-Senate's Report to Council</li> <li>-Report on Risk Exposure Assessment and the Management thereof</li> <li>-Finance and Faculties Committee</li> <li>-Report of ARC</li> <li>-Remuneration Committee Report</li> </ul>	

Calitz and Zietsman (2018) (Appendix H) created a framework for using a mobile app for environmental data collection at Nelson Mandela University. Figure 6-3 presents the proposed framework for collecting environmental data using mobile technologies at Nelson Mandela University. The proposed framework suggests the use of mobile technologies to capture environmental data into Nelson Mandela University data stores. The data would be extracted from the reporting layer of the toolbox to generate pre-configured datasets for the environmental section of a GRI G4 report. The same toolbox can be used to generate the economic and social section of the GRI G4 sustainability report calling on the respective data sources.

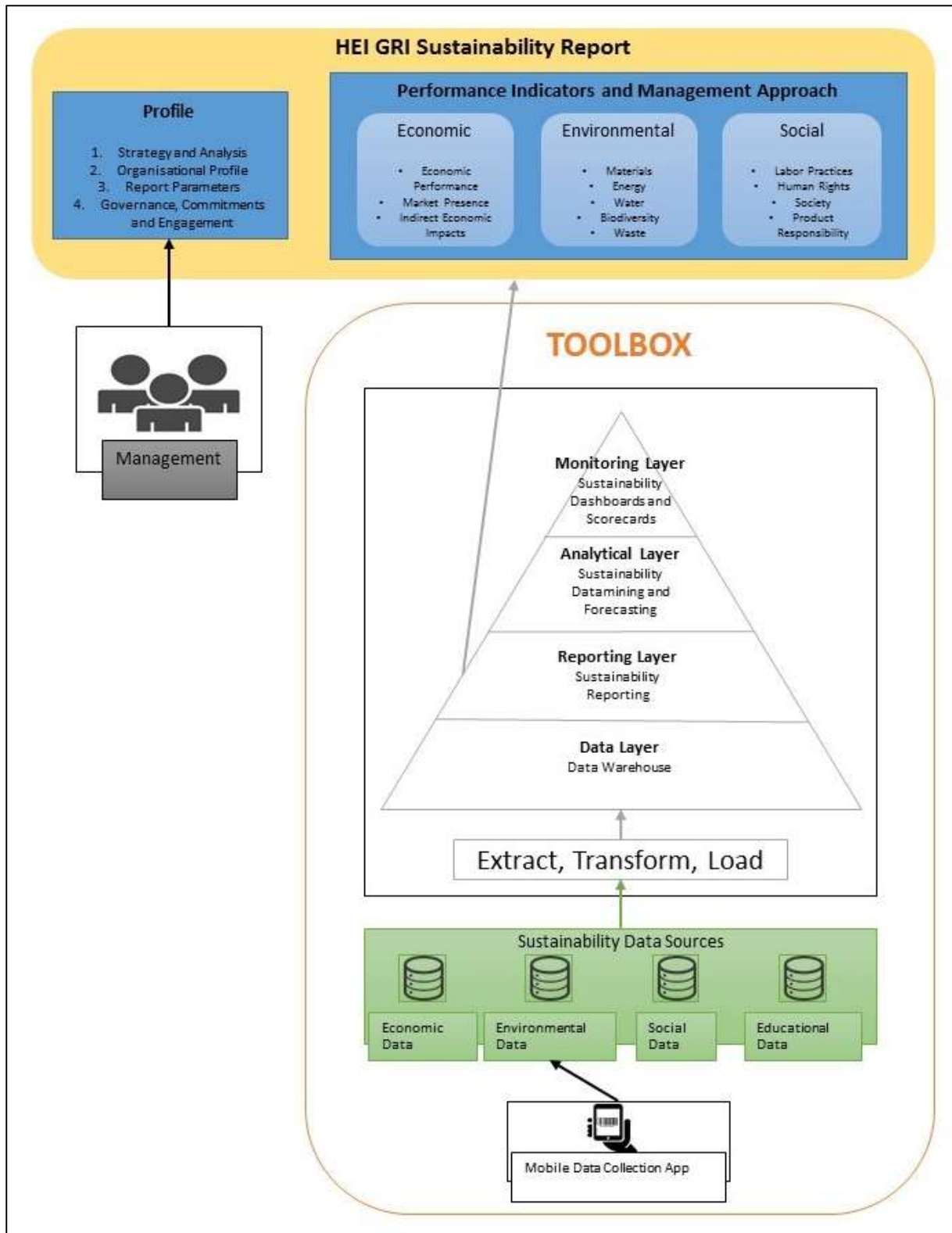


Figure 6-3: Proposed Framework for Mobile Data collection at Nelson Mandela University (Calitz & Zietsman, 2018) (Appendix H)

## **6.3 GRI G4 Disclosures for South African Higher Education Institutions**

In Chapter 4, a study was conducted to determine how the international HEI community utilises the GRI guidelines for their reporting needs. The study also investigated the German Sustainability Code and its GRI origins. The study conducted in Chapter 5 investigated the DHET requirements for HEIs in South Africa, and how current report contents reflect over the GRI G4 disclosures.

This section outlines a set of GRI G4 disclosures for HEIs in South Africa. The GRI disclosures are based on the research conducted in the previous chapters and considering what data is available and may be disclosed. These disclosures consist of both disclosures selected from the standard set of GRI G4 disclosures (Section 3.6) and disclosures specific to HEIs. During several meetings and interviews (Appendix E) with members of the Nelson Mandela University Institutional Planning Office, Department of Computing Sciences, Information and Communication Technology department, Transformation Monitoring and Evaluation, Information Analyst and the Nelson Mandela University sustainability engineer, a complete set of GRI disclosures has been identified for South African HEIs. Figure 6-4 presents the process followed to create the list of GRI disclosures.

The process began with an analysis of the International HEIs, comparing the report contents to the GRI G4 list of disclosures (Section 4.2). The analysis of the German Sustainability Code compared the requirements of the report to the GRI G4 list of disclosures (Section 4.3). During interviews with Nelson Mandela University Officials (Appendix E), the international HEIs reporting analysis data was used to identify GRI G4 disclosures based on popularity of reporting trends. An analysis on five South African HEIs sustainability reports was done to indicate which GRI G4 disclosures South African HEIs report on (Section 5.3). Further interviews with Nelson Mandela University officials (27 July 2017, Appendix E) identified the viability of each GRI G4 disclosure within the South African context, including the reporting requirements imposed on South African HEIs by the DHET (Section 5.2). At the conclusion of the interview process the selected disclosures for HEIs in South Africa was complete.

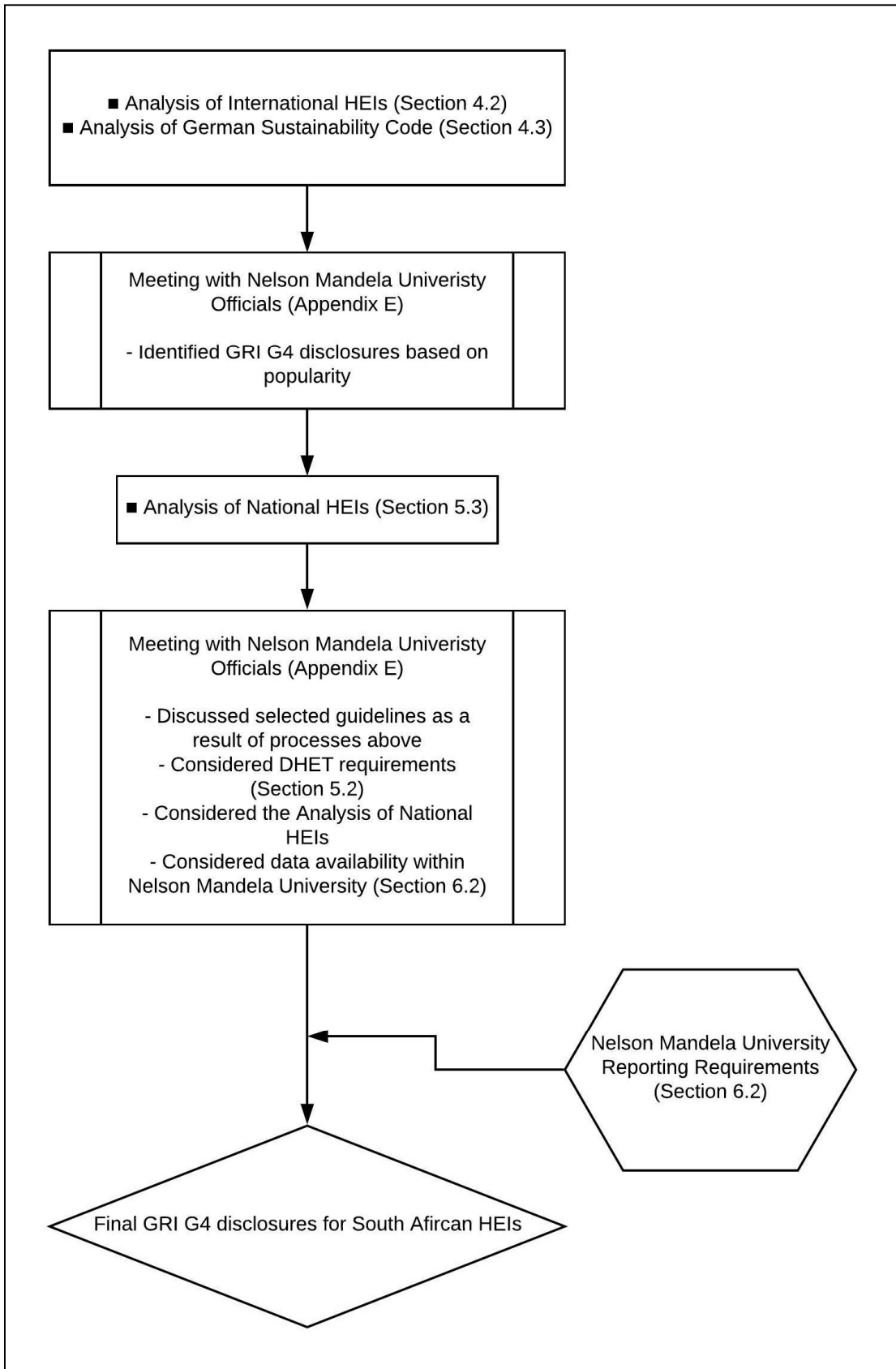


Figure 6-4: Process flowchart

Table 6-5, Table 6-6 and Table 6-7 represent the general disclosures, specific disclosures and DMA-disclosures respectively, for the proposed list of GRI disclosures for South African HEIs. The first column contains the disclosure number that links directly to the GRI G4 disclosures (Section 3.6). The second column contains the title of the disclosure. During interviews with Dr Levendal some of the titles has been modified (Appendix C) to more accurately represent a HEIs environment (03 August 2017, 04 August 2017, Appendix E).

Table 6-5: General Standard Disclosures for a South African HEI

General Standard Disclosure	Standard Disclosure Title for HEI
<b>Strategy and Analysis</b>	
G4-1	Provide a statement from the most senior decision-maker of the University (such as VC, Rector) about the relevance of sustainability to the University and the University's strategy for addressing sustainability.
G4-2	Provide a description of key impacts, risks, and opportunities. The University should provide two concise narrative sections on key impacts, risks, and opportunities.
<b>Organizational Profile</b>	
G4-3	Report the name of the University.
G4-4	Report on core functions (teaching and learning + research and engagement) staff and student profiles of the University.
G4-5	Report the location of the university campuses.
G4-6	Report on the university's footprint (international, provincial, metro, quintile).
G4-7	Report the nature of ownership and legal form.
G4-8	Report the markets served (including geographic breakdown, sectors served, and types of students and suppliers)
G4-9	Report the scale of the university, including: Total number of employees; Program Qualification Mix; Net revenues; Consolidated Financials (Cash flow, Total Income, Total Expenditure, Other comprehensive income); Enrolment Profile
G4-10	Report the total number of employees by employment contract and gender. Report the total number of permanent employees by employment type and gender. Report the total workforce by occupational category (core/ support services), gender (permanent/ temporary), nationality and disability.
G4-11	Report the percentage of total employees covered by collective bargaining agreements. (Union Figures)
G4-12	Describe the University's supply chain including BBBEE perspective.

General Standard Disclosure	Standard Disclosure Title for HEI
G4-13	Report any significant changes during the reporting period regarding the University's size (students, staff, regions, campuses, infrastructure, different faculties, # units + centres), structure, or its supply chain, including: Changes in the location of, or changes in the number of campuses, infrastructure (buildings/ IT/ Equipment/ Business Systems); Changes in scheduled and deferred maintenance; Changes in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination
G4-14	Report on factors identified in the environmental scan in HEI, eg Fees, Contextual and contemporary Issues impacting on quality, institutional climate and sustainability
G4-15	List external legislative and regulatory frameworks that inform and impact university operations eg. (higher education act, employment equity act etc)
G4-16	List national and international accreditation bodies relevant to the university as well as strategic partnerships entered into by the university.
<b>Identified Material Aspects and Boundaries</b>	
G4-17	List all entities included in the university's consolidated financial statements or equivalent documents. Report whether any entity included in the university's consolidated financial statements or equivalent documents is not covered by the report
G4-18	Explain the process for defining the report content in terms of Higher Education Act. Explain how the University has implemented the Reporting Principles for Defining Report Content.
G4-19	List all the material Aspects identified in the process for defining report content.
G4-20	For each material Aspect, report the Aspect Boundary within the university, as follows: Report whether the Aspect is material within the university; If the Aspect is not material for all entities within the university (as described in G4-17), select one of the following two approaches and report either: – The list of entities or groups of entities included in G4-17 for which the Aspect is not material or – The list of entities or groups of entities included in G4-17 for which the Aspects is material; Report any specific limitation regarding the Aspect Boundary within the university.
G4-21	For each material Aspect, report the Aspect Boundary outside the university, as follows: Report whether the Aspect is material outside of the university; If the Aspect is material outside of the university, identify the entities, groups of entities or elements for which the Aspect is material. In addition, describe the geographical location where the Aspect is material for the entities identified; Report any specific limitation regarding the Aspect Boundary outside the university.

<b>General Standard Disclosure</b>	<b>Standard Disclosure Title for HEI</b>
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements.
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.
<b>Stakeholder Engagement</b>	
G4-24	Provide a list of the stakeholders with whom the university engages (staff, students, civil society, local and national business, government, international partners)
G4-25	Describe the basis for identification and selection of stakeholders with whom to engage.
G4-26	Report the university's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.
G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the university has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.
<b>Report Profile</b>	
G4-28	Reporting period (such as fiscal or calendar year) for information provided.
G4-29	Date of most recent previous report (if any).
G4-30	Reporting cycle (such as annual, biennial).
G4-31	Provide the contact point for questions regarding the report or its contents.
G4-32	Report the 'in accordance' option the University has chosen. Report the GRI Content Index for the chosen option. Report the reference to the External Assurance Report, if the report has been externally assured. GRI recommends the use of external assurance but it is not a requirement to be 'in accordance' with the Guidelines.
G4-33	Report the university's policy and current practice with regard to auditing of the content of the report (independent external auditors, BBBEE verification process etc). Report the relationship between the university and the external auditors. Report whether Council or senior executives are involved in seeking assurance for the university's sustainability report.
<b>Governance</b>	
G4-34	Report the governance structure of the university, including committees of Council. Identify any committees responsible for decision-making on economic, environmental and social impacts.
G4-35	Report the process for delegating authority for economic, environmental and social topics from Council to senior executives and other employees.



General Standard Disclosure	Standard Disclosure Title for HEI
G4-36	Report whether the university has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to Council.
G4-37	Report processes for consultation between stakeholders and Council on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to Council.
G4-38	Report the composition of Council and its committees by: Executive or non-executive; Independence; Tenure on the governance body; Number of each individual's other significant positions and commitments, and the nature of the commitments; Gender; Membership of under-represented social groups; Competences relating to economic, environmental and social impacts; Stakeholder representation
G4-39	Report whether the Chair of Council is also an executive officer (and, if so, his or her function within the University's management and the reasons for this arrangement).
G4-40	Report the nomination and selection processes for Council and its committees, and the criteria used for nominating and selecting its members, including: Whether and how diversity is considered; Whether and how independence is considered; Whether and how expertise and experience relating to economic, environmental and social topics are considered; Whether and how stakeholders (including shareholders) are involved
G4-41	Report processes for Council to ensure conflicts of interest are avoided and managed. Report whether conflicts of interest are disclosed to stakeholders, including, as a minimum: Multiple membership on boards; Any interest in businesses related to suppliers and other stakeholders; Related disclosures
G4-42	Report Council's and senior executives' roles in the development, approval, and updating of the university's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts.
G4-44	Report the processes for evaluation of Council's performance with respect to governance of economic, environmental and social topics. Report whether such evaluation is independent or not, and its frequency. Report whether such evaluation is a self-assessment. Report actions taken in response to evaluation of Council's performance with respect to governance of economic, environmental and social topics, including, as a minimum, changes in membership and practice within the university.
G4-45	Report Council's role in the identification and management of economic, environmental and social impacts, risks, and opportunities. Include Council's role in the oversight of the implementation of due diligence processes. Report whether stakeholder consultation is used to support Council's identification and management of economic, environmental and social impacts, risks, and opportunities.

General Standard Disclosure	Standard Disclosure Title for HEI
G4-46	Report Council's role in reviewing the effectiveness of the University's risk management processes for economic, environmental and social topics.
G4-49	Report the process for communicating critical concerns and decisions to Council.
G4-50	Report the nature and total number of critical concerns that were communicated to Council and the mechanism(s) used to address and resolve them.
G4-51	<p>Report the remuneration policies for Council and senior executives for the below types of remuneration:</p> <ul style="list-style-type: none"> <li>–Basic Salary</li> <li>–Bonuses</li> <li>–Scarce skills/ Equity allowances</li> </ul> <p>Retirement benefits, including the difference between benefit schemes and contribution rates for the highest governance body, senior executives, and all other employees</p> <p>Report how performance criteria in the remuneration policy relate to Council's and senior executives' economic, environmental and social objectives.</p>
G4-52	Report the process for determining remuneration. Report whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Report any other relationships which the remuneration consultants have with the university.
<b>Ethics and Integrity</b>	
G4-56	Describe the University's values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics.
G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behaviour, and matters related to University integrity, such as helplines or advice lines.
G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behaviour, and matters related to University integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.

Table 6-6: Specific Standard Disclosures for a South African HEI

Specific Standard Disclosure	Specific Disclosure Title for HEI
<b>Category: Economic</b>	
<b>Material Aspect: Economic Performance</b>	
G4-EC1	Direct economic value generated and distributed
G4-EC2	Financial implications and other risks and opportunities for the university's activities due to climate change
G4-EC3	Coverage of the university's defined benefit plan obligations
G4-EC4	Financial assistance received from government
<b>Material Aspect: Market Presence</b>	
G4-EC5	Ratios of standard entry level salary by gender compared to local minimum salary across the university
<b>Material Aspect: Indirect Economic Impacts</b>	
G4-EC7	Development and impact of infrastructure investments and services supported
G4-EC8	Significant indirect economic impacts, including the extent of impacts
<b>Material Aspect: Procurement Practices</b>	
G4-EC9	Proportion of spending on local suppliers within the university
<b>Category: Environmental</b>	
<b>Material Aspect: Materials</b>	
G4-EN2	Percentage of materials used that are recycled input materials
<b>Material Aspect: Energy</b>	
G4-EN3	Energy consumption within the university
G4-EN5	Energy intensity
G4-EN6	Reduction of energy consumption
G4-EN7	Reductions in energy requirements of products and services
<b>Material Aspect: Water</b>	
G4-EN8	Total water withdrawal by source
G4-EN9	Water sources significantly affected by withdrawal of water
G4-EN10	Percentage and total volume of water recycled and reused
<b>Material Aspect: Biodiversity</b>	
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
G4-EN12	Description of significant impacts of activities and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas
G4-EN13	Habitats protected or restored
G4-EN14	Total number of iucn red list species and national conservation list species with habitats in areas affected by operations, by level of extinction risk
<b>Material Aspect: Emissions</b>	

Specific Standard Disclosure	Specific Disclosure Title for HEI
G4-EN15	Direct greenhouse gas (ghg) emissions (scope 1)
G4-EN16	Energy indirect greenhouse gas (ghg) emissions (scope 2)
<b>Material Aspect: Effluents And Waste</b>	
G4-EN22	Total water discharge by quality and destination
G4-EN23	Total weight of waste by type and disposal method
G4-EN24	Total number and volume of significant spills
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the basel convention <sup>2</sup> annex i, ii, iii, and viii, and percentage of transported waste shipped internationally
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the university's discharges of water and runoff
<b>Material Aspect: Products And Services</b>	
G4-EN27	Extent of impact mitigation of environmental impacts of services
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category
<b>Material Aspect: Compliance</b>	
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations
<b>Material Aspect: Transport</b>	
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the university's operations, and transporting members of the workforce
<b>Material Aspect: Overall</b>	
G4-EN31	Total environmental protection expenditures and investments by type
<b>Material Aspect: Supplier Environmental Assessment</b>	
G4-EN32	Percentage of new suppliers that were screened using environmental criteria
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken
<b>Material Aspect: Environmental Grievance Mechanisms</b>	
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms
<b>Category: Social</b>	
<b>SUB-Category: Labour Practises And Decent Work</b>	
<b>Material Aspect: Employment</b>	
G4-LA1	Total number and rates of new employee appointments and employee turnover by age group, gender, population group and disability

Specific Standard Disclosure	Specific Disclosure Title for HEI
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees
<b>Material Aspect: Labour Management Relations</b>	
G4-LA4	Minimum notice periods, including whether these are specified in collective agreements
<b>Material Aspect: Occupational Health And Safety</b>	
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by population group and by gender
G4-LA8	Health and safety topics covered in formal agreements with trade unions
<b>Material Aspect: Training And Education</b>	
G4-LA9	Average hours of training per year per employee by gender, and by occupational categories
G4-LA10	Programs for skills management and lifelong learning (talent management strategies) that support the continued employability of employees and assist them in managing career endings
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by occupational category
<b>Material Aspect: Diversity And Equal Opportunity</b>	
G4-LA12	Composition of governance bodies (committees) and breakdown of employees per occupational category according to gender, age group, minority group membership, and other indicators of diversity
<b>Material Aspect: Equal Remuneration For Women And Men</b>	
G4-LA13	Ratio of basic salary and remuneration of women to men by occupational category
<b>Material Aspect: Supplier Assessment For Labour Practices</b>	
<b>Material Aspect: Labour Practices Grievance Mechanisms</b>	
G4-LA16	Number of grievances filed, addressed, and resolved through formal grievance mechanisms (staff and students)
<b>Sub-Category: Human Rights</b>	
<b>Material Aspect: Investment</b>	
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to the university, including the percentage of employees trained
<b>Material Aspect: Non-Discrimination</b>	
G4-HR3	Total number of incidents of discrimination and corrective actions taken
<b>Material Aspect: Freedom Of Association And Collective Bargaining</b>	

Specific Standard Disclosure	Specific Disclosure Title for HEI
G4-HR4	Suppliers and service providers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights
<b>Material Aspect: Security Practices</b>	
G4-HR7	Percentage of security personnel trained in the university's human rights policies or procedures
<b>Material Aspect: Assessment</b>	
G4-HR9	Total number and percentage of programs that have been subject to human rights reviews or impact assessments
<b>Material Aspect: Human Rights Grievance Mechanisms</b>	
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms
<b>Sub-Category: Society</b>	
<b>Material Aspect: Local Communities</b>	
G4-SO1	Percentage of programs with implemented local community engagement, impact assessments, and development components
<b>Material Aspect: Anti-Corruption</b>	
G4-SO3	Total number and percentage of institutional operations (academic and support) assessed for risks related to corruption and the significant risks identified
G4-SO4	Communication and training on anti-corruption policies and procedures
G4-SO5	Confirmed incidents of corruption and actions taken
<b>Material Aspect: Compliance</b>	
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations
<b>Material Aspect: Supplier Assessment For Impacts On Society</b>	
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society
G4-SO10	Significant actual and potential negative impacts on society in the supply chain management (procurement) and actions taken
<b>Material Aspect: Grievance Mechanisms For Impacts On Society</b>	
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms (staff and students)
<b>Sub-Category: Product Responsibility</b>	
<b>Material Aspect: Customer Health And Safety</b>	
G4-PR1	Percentage of infrastructure and service categories for which health and safety impacts are assessed for improvement
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of infrastructure and services during their life cycle

Specific Standard Disclosure	Specific Disclosure Title for HEI
<b>Material Aspect: Product And Service Labelling</b>	
G4-PR5	Results of surveys measuring staff and student satisfaction
<b>Material Aspect: Customer Privacy</b>	
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of staff and student data

Table 6-7: DMA Disclosure for South African HEI

DMA-Disclosure	Disclosure Title
G4-DMA1	The institution of higher education discloses how, through appropriate processes, it helps to make innovations improve sustainability in terms of the internal and external use of resources. Where facts of material importance are concerned, the institution of higher education also discloses whether and how their current and future impact will be evaluated in terms of the institution's own social responsibility.
G4-DMA2	Governance and implementation of information communication and technology policies and processes within the university including enterprise content management
G4-DMA3	Advancing diversity and equality within the university through equal access to opportunities
G4-DMA4	Report on the relationship between the university and the public/private sector regarding relevance of programs and needs in those sectors.
G4-DMA5	Report on the different mechanisms on which staff and students are rewarded and recognised within the university.
G4-DMA6	Report on how the university ensures that the campus environment for staff and students are inclusive and promotes social cohesion.
G4-DMA7	Mechanisms via which students can share their student impression in relation to academic and co-curricular experiences.
G4-DMA8	Reasons for refusals for requests for information lodged to Promotion of Access to Information Act, 2000.
G4-DMA9	Report on key development within the core spheres of teaching and learning and research and engagement.

The final set of disclosures are widely dispersed across the entire GRI G4 disclosure spectrum. Analysing the result of Chapter 5, the general standard disclosures are widely reported on. Because the DHET requires that the top layers of management in South African HEIs to participate in the reporting process, most of the governance disclosures are reported on. This is backed up by the data in Section 6.2 above, where most of the GRI governance guidelines is reported on by Nelson Mandela Universities internal reporting contents. Therefore, apart from six GRI governance disclosures (Table 5-3), all the general standard disclosure guidelines have been included in Table 6-5.

Figure 6-5 presents an overview of the Specific Standard Disclosures covered by Table 6-6. Only one of the economic disclosures is considered unimportant. This is because of the high level of economic

disclosure among South African HEIs noted in chapter 5, are driven by the DHET requirement. A substantial number of environmental indicators was included in the list. Chapter 5 indicated a rather poor reporting performance for the environmental section in South African HEI reporting. However, the international HEI community is significantly reporting on their environmental data. During an interview (18 August 2017) (Appendix E) with the Nelson Mandela University Information Management employee, the researcher discovered that most of the data required to report on environmental factors exist but is simply not used. Working off existing data, the current environmental disclosures was identified to be reported on.

Most of the Social disclosures selected is the result of mandatory reporting requirements from the DHET. Social human rights and product responsibility has an increased reporting coverage compared to the international and national coverage that was noted in chapter 4 and 5 respectively. This is based on interviews (Appendix E) indicating the data to be reported on is available, but not used.

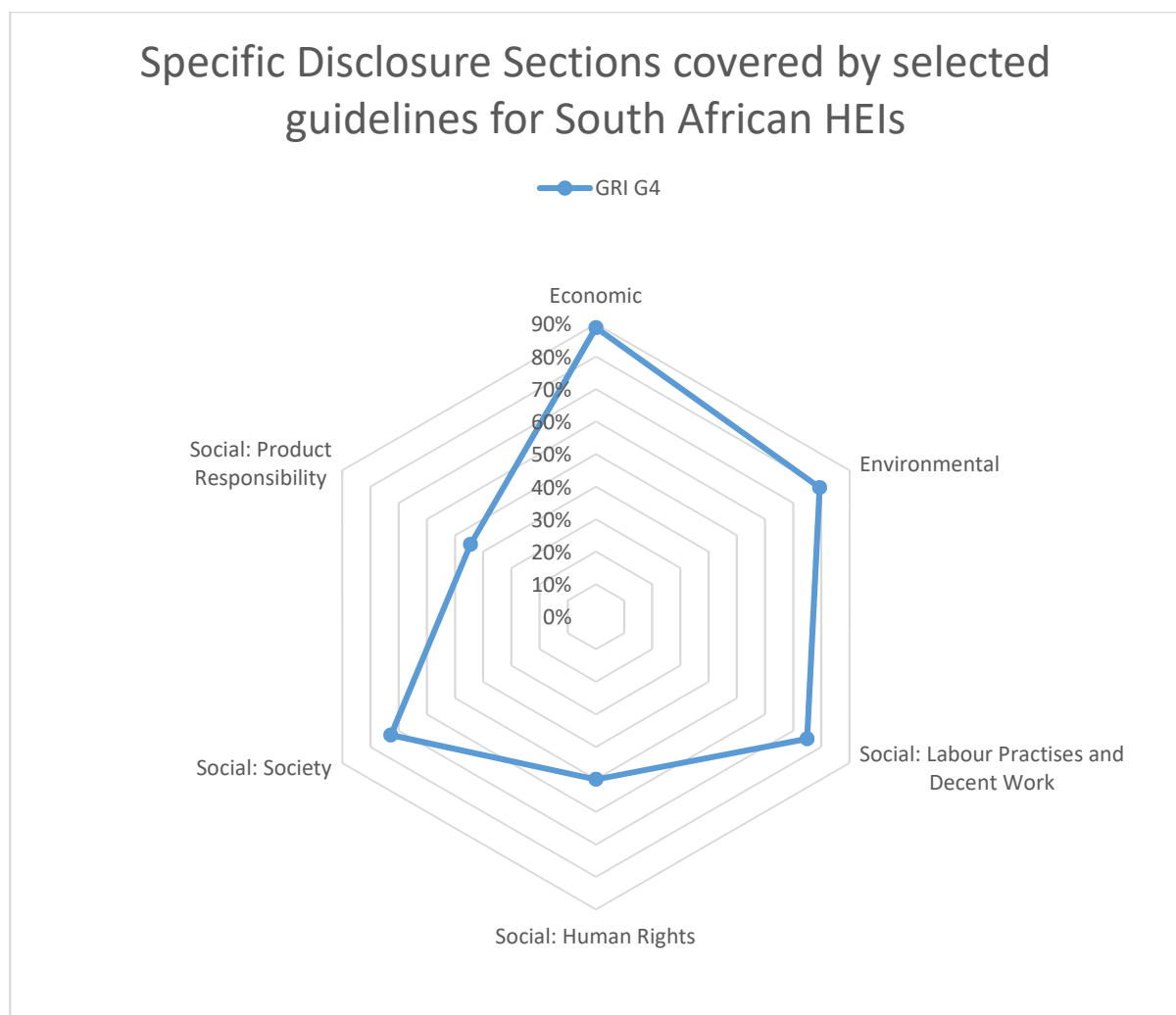


Figure 6-5: Specific Disclosure Sections covered by the selected disclosures for South African HEIs



## 6.4 Summary

In chapter 4 and 5 a desktop study analysed the reporting trends of international and national HEIs respectively. During several meetings with officials from the Nelson Mandela University officials (Appendix E), the results of the study was used to develop a list of GRI G4 disclosures that is suitable to South African HEIs. The aim of developing the list of disclosures was that any South African HEIs can use a predefined set of GRI G4 disclosures that will competitively report issues on an international scale while also adhering to requirements imposed by the South African Department of Higher Education and Training.

The list of disclosures (Section 6.3) was evaluated against the Nelson Mandela University reporting requirements created in 2015 for the new DHET regulations (Appendix G). The comprehensive list includes both current and future reporting requirements for the university, as was determined by the university's Institutional Planning Office. The guidelines were able to report on all current and future needs of the university (Section 6.2).

This chapter answered the research question:

RQ4. How suitable is the proposed guidelines for Nelson Mandela University in South Africa?

The resultant deliverables addressed the following research objectives:

RO5. Identify the appropriate disclosures for sustainability reports for HEIs in South Africa.

RO6. Identify the sustainability reporting requirements and indicators at Nelson Mandela University.

RO7. Analyse the proposed guidelines ability to produce sustainability reports for Nelson Mandela University in South Africa.

The following chapter concludes the research and provides suggestions for future research. The limitations and contributions of the study is also discussed.

## Chapter 7. **Conclusions and Recommendations**

### **7.1 Introduction**

Chapter 6 investigated the reporting requirements of Nelson Mandela University. The data landscape at Nelson Mandela University indicated where the information for different parts of the report is located within the institution. Chapter 6 also discussed the selected list of Global Reporting Initiative (GRI) disclosures for HEIs in South Africa.

HEIs are increasing their publications of sustainability reports however, sustainability reporting within HEIs is still in its early stages (Kim Ceulemans et al., 2015). HEIs that are reporting on their sustainability practices adopt a variety of frameworks however. Alonso-Almeida et al. (2015) indicated that European HEIs, adopting the Global Reporting Framework (GRI) framework have improved their visibility and ability to raise funds from stakeholders.

A detailed evaluation of existing GRI reports generated by international HEIs revealed how the current GRI G4 guidelines are used in the international community. Chapter 4 discusses the processes and findings of the evaluation of GRI reports from the international HEI community. To bring a South African perspective to the research a closer analysis of South African HEIs was done. The Department of Higher Education and Training (DHET) requires all South African HEIs to produce sustainability reports annually (Department of Higher Education and Training, 2014). Chapter 5 revealed the requirements of the DHET reports, how the HEIs have implemented their reporting strategies and how these requirements can be incorporated into a GRI compliant report.

During each step of data analysis, South African HEIs officials were consulted. The meeting minutes (Appendix E) of each consultation played a role in the next phase of research. Consultation was in the form of meetings and structured interviews. All officials of HEIs consulted were from various departments (Institutional Planning, Computing Sciences, Sustainability Engineer, Information and Communication Technologies and Transformation Monitoring and Evaluation) of the Nelson Mandela University.

In order to determine if the study was successful, the research objectives need to be reviewed (Section 7.2). Several theoretical and practical contributions of the study are identified (Section 7.3). Guidelines for South African HEIs wanting to implement the selected disclosures (Section 6.3) are provided (Section 7.4). Whilst the study can be considered successful several limitations were experienced, which leads to possibilities for future research (Section 7.5). Figure 7-1 presents an overview of Chapter 7.

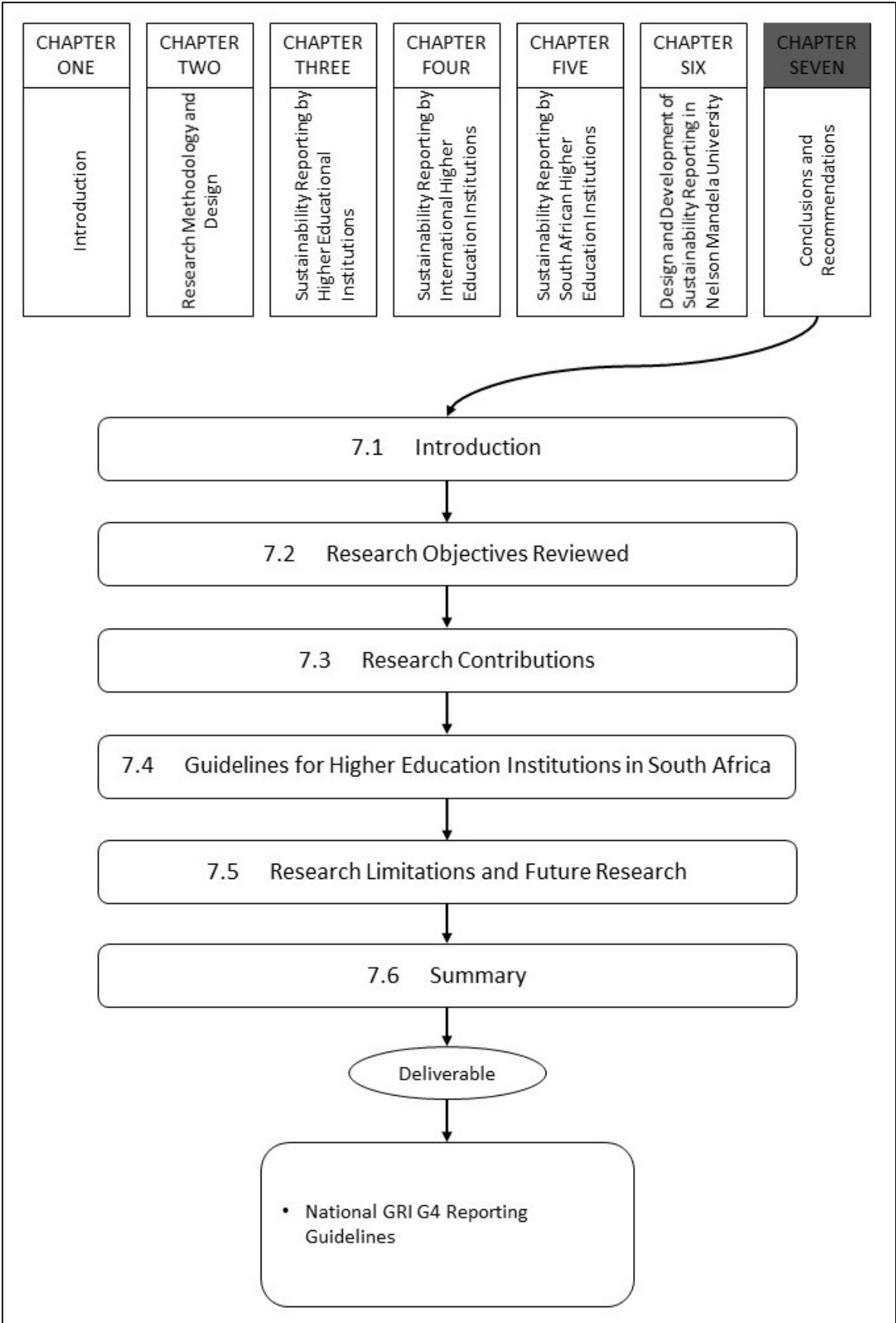


Figure 7-1: Chapter 7 Layout

## 7.2 Research Objectives Reviewed

The research problem identified in this study is that there is currently no set of guidelines available to assist in the creation of GRI sustainability reports for HEIs in South Africa. The main research objective in this study was to propose an integrated set of disclosures for creating GRI compliant sustainability reports for Higher Educational Institutions in South Africa. The following secondary research objectives were used to address the main research objective:

The first research objective (RO<sub>1</sub>) in the study was to identify existing sustainability reporting practices for HEIs (Section 3.4). International HEIs is expanding sustainability reporting into social learning within academia and establishing international sustainability centres to get access to the collective knowledge of the international community. The quality of South African HEI reports have gotten a boost since the new reporting requirements was introduced in 2014 by the Department of Higher Education and Training (DHET).

The second research objective (RO<sub>2</sub>) in the study was to investigate the requirements of sustainability reporting practices for HEIs (Section 3.5). The current trend suggests that HEIs are expanding the traditional sustainability reporting structures, incorporating social and educational components from academia.

The third research objective (RO<sub>3</sub>) in the study was to compare global HEI implementations of GRI sustainability reports (Section 4.2). Ten HEIs, from America and Europe, that have published GRI sustainability reports were selected and their respective reports were analysed. Most of the international HEI community produce core 'in accordance' (Section 3.6.1) GRI reports. The study indicated that the governance structure of international HEIs is generally neglected in their sustainability reports (Figure 4-2). The reports also favour environmental and economic data while human rights and society are being overlooked (Figure 4-3). The German Sustainability Code on the other hand focus on social and educational data (Figure 4-9).

The fourth research objective (RO<sub>4</sub>) in the study was to identify gaps in current sustainability reporting practices in South Africa (Section 5.4). Five HEIs from South Africa was selected for the study and their respective reports produced for 2015 and 2016 were analysed (Table 5-1). The study indicates that the Environmental, Social- Human Rights and Social- Product Responsibility sections are underreported (Figure 5-3). In 2016 there was an improvement reporting of environmental disclosures but not enough to adhere to the "in accordance" criteria. Apart from an improvement in disclosure on diversity and equal opportunity in 2016 the social category (Figure 5-7) is least disclosed on.

The fifth research objective (RO<sub>5</sub>) in the study was to identify the sustainability reporting requirements and indicators at Nelson Mandela University (Section 6.2). Several of Nelson Mandela University sustainability reporting requirement priorities relate directly to the core academic functions of the

institution. During interviews with officials from Nelson Mandela University, the reporting requirements of the institution was compared to the GRI G4 disclosures. Table 6-1 and Table 6-2 presents the general standard disclosures and specific standard disclosures that aligns with the reporting requirements of Nelson Mandela University respectively. Table 6-3 presents the disclosures on management approach that aligns with the reporting requirements of Nelson Mandela University.

The sixth research objective (RO<sub>6</sub>) in the study was to identify the appropriate disclosures for sustainability reports for HEIs in South Africa (Section 6.3). This research objective forms part of the main research deliverable of the study. Table 6-5, Table 6-6 and Table 6-7 represent the general disclosures, specific disclosures and DMA-disclosures respectively, for the proposed list of GRI disclosures for South African HEIs.

The seventh research objective (RO<sub>7</sub>) in the study was to analyse the proposed guidelines ability to produce sustainability reports for Nelson Mandela University in South Africa. (Section 6.2). According to the analysis of GRI G4 disclosures requirements for Nelson Mandela University in section 6.2 the proposed list of disclosures for South African HEIs (Section 6.3) would be able to satisfy the institutions reporting requirements.

## **7.3 Research Contributions**

The contributions of the research were both theoretical (Section 7.3.1) and practical (Section 7.3.2).

### **7.3.1 Theoretical Contributions**

The key theoretical contribution of this research, identified through a literature review are:

- Contextualising sustainability (Section 3.2);
- The benefits of sustainability reporting (Figure 3-5);
- Sustainability Reporting practices in HEIs (Section 3.4);
- Frameworks used for sustainability reporting in HEIs (Section 3.5);
- Process for initiating a GRI G4 report (Section 3.6); and
- The self-assessment of sustainable development indicators (Section 3.7).

The research conducted two studies: Analysing the GRI reporting trends of international and national HEIs. The results gathered from the analysis of ten international HEIs and the German Sustainability Code were used during interviews (Appendix E) with officials from the Nelson Mandela University in conjunction with the results gathered from analysing five South African HEI reporting trends to determine which GRI G4 disclosures would be relevant for South African HEI to produce GRI G4 sustainability reports. The DHET requirements for South African HEIs was also discussed and

considered. Further interviews with Nelson Mandela University officials compared the reporting requirements of Nelson Mandela University to the GRI G4 disclosures.

Utilising the expertise of the Nelson Mandela University officials, the researcher produced a list of GRI G4 disclosures (Section 6.3) that South African HEIs can use to produce a GRI G4 sustainability report, that would be competitive on an international scale, and adhere to local governmental reporting requirements.

### **7.3.2 Practical Contributions**

The Nelson Mandela University reporting requirements was compared to the GRI G4 disclosures through structured interviews with Nelson Mandela University officials (Section 6.2.1). During these interviews the research learned where the data, for generating a sustainability report (Section 6.2.2), is located within Nelson Mandela University. The practical contribution of this study is the linked data sources to the Nelson Mandela University reporting requirements and by extension to the selected list of GRI G4 disclosures for South African HEIs. Nelson Mandela University can now practically implement the selected list of disclosures to produce a GRI G4 sustainability report. Figure 3-10 presents a holistic view of how the data landscape interface with the GRI G4 reporting process.

## **7.4 Guidelines for Higher Education Institutions in South Africa**

The GRI G4 disclosures are intended to be used by any organisation (Section 3.6). The guidelines outline the process (Section 3.6.3) needed to identify, prioritise and validate the reporting requirements for the organisation.

The list of selected disclosures (Section 6.3) cover the identification (Section 3.6.3.1) of disclosures relevant to South African HEIs. The list of disclosures considered international HEI reporting trends. Therefore, GRI G4 reports generated using all the recommended disclosures (Section 6.3) will be competitive with the international community. Furthermore, the disclosures (Section 6.3) incorporated reporting trends from five South African HEIs, including requirements from the Department of Higher Education and Training (DHET). To accommodate all the DHET requirements a few Disclosures on Management Approach was introduced (Section 6.3). These guidelines are compliant with all governmental reporting requirements imposed on South African HEIs (Section 5.2).

The second and third steps of the GRI G4 report content defining process is prioritisation (Section 3.6.3.2) and validation (Section 3.6.3.3) respectively. All the selected disclosures (Section 6.3) contribute to one or more of the reasons mentioned in the above paragraph. The Nelson Mandela University data landscape (Section 6.2.2) was used to locate information sources for the selected disclosures. Linking the data landscape with the selected GRI G4 disclosures (Section 6.3), the prioritisation and validation step were completed.

South African HEIs using the reporting disclosures need to:<sup>20</sup>

- Setup a data landscape for the HEI;
- Link the data landscape to the selected disclosures (Section 6.3); and
- Complete the review (Section 3.6.3.4) step after each GRI G4 report published.

## 7.5 Research Limitations and Future Research

The study experienced several limitations including the number and type of HEIs analysed. Since commencing the study, more international HEIs have produced GRI sustainability reports. For future research a more up to date list of GRI reporting international HEIs are required to increase the accuracy of the analysis on international HEIs in section 4.2. The study focused entirely on five South African HEIs, excluding some of the smaller universities and universities of technology. Excluding the smaller South African universities limited the accuracy of the study conducted in section 5.3. Future research should include more South African HEIs in the study.

The identified data landscape (Section 6.2.2) does not link all the selected GRI disclosures data to information sources within Nelson Mandela University. The selected GRI disclosures was not implemented and evaluated. For future research, in order to evaluate the selected disclosures all of the disclosures would require an information source. To evaluate the selected disclosures Nelson Mandela University should implement these disclosures to produce a GRI G4 sustainability report.

No other HEIs in South African implemented and evaluated the selected disclosures. For future research South African HEIs should create a GRI report with the selected GRI disclosures.

## 7.6 Summary

The research study set out to determine a list of GRI G4 disclosures that South African HEIs can use to produce GRI sustainability reports. These disclosures should make the reports competitive on an international level while also adhering to governmental requirements for South African HEI reporting.

By conducting desktop studies on ten international HEIs that produced GRI reports and investigating the German Sustainability Code the research gained insight into international HEI reporting practises. Another desktop study was done to investigate the South African HEI reporting requirements from the Department of Higher Education and Training as well as what the South African HEIs is currently reporting on. Using the data from the desktop studies the researcher consulted with officials from the Nelson Mandela University to determine a list of GRI G4 disclosures that would adhere to the above-mentioned requirements.

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<sup>20</sup> <https://sustainability.mandela.ac.za/>

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# Appendix A International Sustainable Campus Network

Source: (Global University Leaders Forum, 2016)

## Introduction

ISCN Topic groups	ISCN Topics	Related GRI G4, ISO26000, and STARS Indicators (for detailed definitions see website links above)
<b>The organization</b>	Name	
	Location and regions/markets served	GRI Strategy and Analysis GRI Identified Material Aspects and Boundaries
	Key activities/services	GRI Stakeholder Engagement
	Size (e.g. number of students and degrees, members of faculty and staff, and annual budget)	ISO 7.4.2, 6.3.1, 6.4.1-6.4.5, 5.2, 7.3.2-7.3.4, 5.3 STARS PA1, PA2 Sustainability Coordination and Planning
	Operational and governance structure	GRI Governance ISO 6.2, 7.4.3, 7.7.5 STARS PA3: Governance
	Ownership/funding basis	
<b>The report</b>	First of subsequent Charter Report?	GRI Report Profile
	Reporting period and boundary	GRI General Disclosures on Management Approach ISO 6, 7.3.1, 7.4.3, 7.5.3, 7.6.2, 7.7.3, 7.7.5
	Freestanding Charter Report or integrated ,e.g. in more detailed Sustainability Report?	STARS PA2: Sustainability Reporting
	Contact	

## Reporting on Principle 1

Topic groups: ISCN Principle 1	ISCN Options for target topics	Related GRI G4, ISO26000, and STARS Indicators (for detailed definitions see website links above)
<b>Resource use</b>	Energy use (per floor area or total), possibly per type of building	G4-EN3: Direct energy consumption inside organization  G4-EN4: Direct energy consumption outside organization  G4-EN5: Energy intensity  G4-EN6: Reduction of energy consumption  ISO 6.5.4  STARS OP 8-9: Energy
	Embedded (grey) building energy	
	Water use	G4-EN8: Total water withdrawal  G4-EN10: Percentage and total volume of water recycled and reused  ISO 6.5.4  STARS OP 26-28: Water
	Energy and water costs, and savings achieved	
	Overall purchased products/materials/supplier policy (e.g. paper)	G4-EN6: Reduction of energy requirements of products and services  G4-EN31: Total environmental protection expenditures by investment type  G4-EC9: Spending on local suppliers  ISO 6.5.1-6.5.2, 6.4.3, 6.6.6, 6.8.1-6.8.2  STARS OP12-17: Purchasing
	Other ...	
	Waste and recycling	G4-EN1: Materials used by weight or volume

<b>Waste, recycling, local emissions, and non-compliance</b>		G4-EN2: Percentage of materials used that are recycled input materials  G4-EN22-26: Water discharge, waste weight, transported  ISO 6.5.3 - 6.5.4, 6.5.6  STARS OP 22-25: Waste
	Waste costs, and savings achieved	
	Emissions contributing to local air pollution	G4-EN15-21: Direct, indirect, intensity, reduction, ozone depleting emissions, other emissions  ISO 6.5.5  STARS OP 1: Greenhouse Gas emissions  STARS OP 2: Outdoor Air Quality
	Incidents of non-compliance with environmental regulations	G4-EN24: Total number and volume of significant spills  ISO 6.5.3, 4.6  G4-EN29: Monetary value of fines, noncompliance
	Other ...	
<b>Research/IT facilities and sustainability</b>	Energy use in laboratories/IT facilities	
	Chemicals consumed	
	Hazardous waste from research/IT facilities	G4-EN25: Weight and transport of hazardous waste  ISO 6.5.3
	Other ...	
<b>Users</b>	Handicap access	
	Indoor air quality	STARS OP5: Indoor air quality
	Stakeholder participation in planning (integrated design)	ISO 5.3
	Other ...	

<b>Building aspects</b>	<b>design</b>	Sustainable building standards applied and explored	STARS OP4: Building design and construction
		Long-term use flexibility	
		Life-cycle costing	STARS OP16: Life cycle cost analysis
		Landscape integration of building design	
		Other ...	

## Reporting on Principle 2

Topic groups: ISCN Principle 2	ISCN Options for target topics	Related GRI G4, ISO26000, and STARS Indicators (for detailed definitions see website links above)
<b>Institution-wide carbon target</b>	Carbon emissions (organization-wide)	G4-EN15-16: Direct and indirect (Scope 1 & 2) G4-EN17: Other indirect greenhouse gas (GHG) emissions (Scope 3) ISO 6.5.5 STARS OP 1: Greenhouse Gas emissions
	Coverage of campus area (in %) by master planning initiatives	STARS PA2: Sustainability planning
<b>Transportation</b>	Other ...	
	Frequency of traffic surveys	
	Bicycle and pedestrian access	
	Estimated commute distance or commute energy use per person	G4-EN30: Significant environmental impacts ISO 6.5.4, 6.6.6 STARS OP 18-21: Transportation
	Urban mobility integration planning	
	Other ...	
<b>Food</b>	Food supply chain and environmental impacts (e.g. carbon intensity)	G4-EN32-33: New suppliers using environmental criteria, negative environmental criteria in supply chain. ISO 6.3.5, 6.6.6, 7.3.1
	Fair trade food sourcing	STARS OP6: Food and Beverage Purchasing
<b>Social inclusion and protection</b>	Diversity (faculty, staff, and students)	G4-LA12-13: Equal opportunity, age groups, gender ISO 6.2.3, 6.3.10, 6.4.3 STARS PA4-8 Diversity and Affordability
	Incidents of discrimination	G4-LA12: Composition of groups ISO 6.3.7



	Access to education (in case of substantial fees)	STARS PA8: Affordability and Access
	Open access spaces for interaction	
	Access to services and commerce	
	Participative campus planning integrating users and neighbors	GRI Standard Disclosure: Stakeholder Engagement ISO 5.3
	Working conditions, including minimum wages, collective bargaining, and health and safety	GRI Standard Disclosure: Organizational Profile G4-LA1-LA3: Employment G4-LA4: Labor/Management Relations G4-LA5-LA8: Occupational Health and Safety ISO 6.4.4 STARS PA12: Workplace health and safety
	Student recruitment and geographical representation	
	Other ...	
<b>Land use and biodiversity</b>	Land and building reuse (brownfield development, adaptive renovations)	
	Landscaping impacts and biodiversity	G4-EN11: Land managed in or around protected areas G4-EN13: Habitats protected or restored ISO 6.5.6 STARS OP10-11: Grounds
	Other ...	

### Reporting on Principle 3

Topic groups: ISCN Principle 3	ISCN Options for target topics	Related GRI G4, ISO26000, and STARS Indicators (for detailed definitions see website links above)
<b>Topical integration</b>	Programs and projects that connect facilities, research, and education	G4-LA10: Programs for employee training, employability  ISO 6.4.7, 6.4.5  STARS AC1-8: Curriculum  STARS AC 9-11: Research
	Labeling and number of courses that have an integrated perspective on sustainability as a key component	STARS AC1: Academic Courses
	Courses and/or research that transcends disciplines	STARS AC1-8: Curriculum  STARS AC 9-11: Research
	Other ...	
<b>Social integration</b>	Programs and projects that connect campus users with industry, government, and/or civil society	STARS: AC5: Immersive Experience
	Programs to further student interaction and social cohesion on campus	STARS EN1-5: Campus Engagement
	Courses that use participatory and project based teaching	STARS AC8: Campus as a living laboratory
	Behavioral programs aiming at more sustainable actions by students, staff, or external community members	G4-SO1-SO2: Local Communities  ISO 6.3.9, 6.5.1-3.5.2, 6.5.3, 6.8, 6.3.9, 6.5.3  STARS EN1-8: Campus Engagement  STARS EN9-14: Public Engagement
	Other ...	
<b>Research and education projects on</b>	Research and education on mitigating energy use in laboratories/IT facilities	

<b>laboratory/IT facilities and sustainability</b>	Research and education on mitigating hazardous waste from research/IT facilities	
	Other ...	
<b>Commitments and resources for campus sustainability</b>	Existence of an organization-wide sustainability policy that integrates academic with operational issues?	G4-Standard Disclosure: Strategy and Analysis ISO 7.4.2 STARS PA2: Sustainability Planning
	Commitment to external sustainability principles and initiatives (this Charter and other)	
	Dedicated resources (processes, human and financial resources) for campus sustainability	G4-EC1-4: Economic Performance G4-HR1: Investments, contracts related to human rights ISO 6.8.1-6.8.3, 6.8.7, 6.8.9, 6.5.5 STARS PA 13-15: Investment
	Economic value of education vs. Cost	
	Economic opportunities for students post-graduation	
	Other ...	

# Appendix B Sustainability Tracking, Assessment and Rating System Credit List

Category	Subcategory	Credit Number and Title		Points available
	Institutional Characteristics	IC 1	Institutional Boundary	Required
		IC 2	Operational Characteristics	Required
		IC 3	Academics and Demographics	Required
Academics (AC)	Curriculum	AC 1	Academic Courses	14
		AC 2	Learning Outcomes*	8
		AC 3	Undergraduate Program*	3
		AC 4	Graduate Program*	3
		AC 5	Immersive Experience*	2
		AC 6	Sustainability Literacy Assessment	4
		AC 7	Incentives for Developing Courses	2
		AC 8	Campus as a Living Laboratory*	4
	Research	AC 9	Research and Scholarship*	12
		AC 10	Support for Research*	4
		AC 11	Open Access to Research*	2
Engagement (EN)	Campus Engagement	EN 1	Student Educators Program*	4
		EN 2	Student Orientation*	2
		EN 3	Student Life	2
		EN 4	Outreach Materials and Publications	2
		EN 5	Outreach Campaign	4
		EN 6	Assessing Sustainability Culture	1
		EN 7	Employee Educators Program	3
		EN 8	Employee Orientation	1
		EN 9	Staff Professional Development	2
	Public Engagement	EN 10	Community Partnerships	3
		EN 11	Inter-Campus Collaboration	3

		EN 12	Continuing Education*	5
		EN 13	Community Service*	5
		EN 14	Participation in Public Policy	2
		EN 15	Trademark Licensing*	2
Operations (OP)	Air & Climate	OP 1	Greenhouse Gas Emissions	10
		OP 2	Outdoor Air Quality	1
	Buildings	OP 3	Building Operations and Maintenance*	5
		OP 4	Building Design and Construction*	3
	Energy	OP 5	Building Energy Consumption	6
		OP 6	Clean and Renewable Energy	4
	Food & Dining	OP 7	Food and Beverage Purchasing*	6
		OP 8	Sustainable Dining*	2
	Grounds	OP 9	Landscape Management*	2
		OP 10	Biodiversity*	1-2
	Purchasing	OP 11	Sustainable Procurement	3
		OP 12	Electronics Purchasing	1
		OP 13	Cleaning and Janitorial Purchasing	1
		OP 14	Office Paper Purchasing	1
	Transportation	OP 15	Campus Fleet*	1
		OP 16	Student Commute Modal Split*	2
		OP 17	Employee Commute Modal Split	2
		OP 18	Support for Sustainable Transportation	2
	Waste	OP 19	Waste Minimization and Diversion	8
		OP 20	Construction and Demolition Waste Diversion*	1
		OP 21	Hazardous Waste Management	1
	Water	OP 22	Water Use	4-6
		OP 23	Rainwater Management	2
Planning & Administration (PA)	Coordination & Planning	PA 1	Sustainability Coordination	1
		PA 2	Sustainability Planning	4

		PA 3	Participatory Governance	3
	Diversity & Affordability	PA 4	Diversity and Equity Coordination	2
		PA 5	Assessing Diversity and Equity	1
		PA 6	Support for Underrepresented Groups	3
		PA 7	Affordability and Access	4
	Investment & Finance	PA 8	Committee on Investor Responsibility*	2
		PA 9	Sustainable Investment*	4
		PA 10	Investment Disclosure*	1
	Wellbeing & Work	PA 11	Employee Compensation	3
		PA 12	Assessing Employee Satisfaction	1
		PA 13	Wellness Program	1
		PA 14	Workplace Health and Safety	2
	Innovation & Leadership (IN)	Exemplary Practice		<a href="#">Catalog of credits available</a>
Innovation			<i>Four credits available</i>	1 each

Source: (Association for the Advancement of Sustainability in Higher Education, 2016)

# Appendix C Research Table of General and Specific GRI Disclosures

Table authors own construct. Table is Global Reporting Initiative G4 guidelines (Global Reporting Initiative, 2014b) expanded to include study data.

Standard Disclosure	Disclosure Title
Not considered for South African Higher Education Institution GRI G4 report	GRI G4 disclosure title
Highly recommended for South African Higher Education Institution GRI G4 Report	GRI G4 disclosure title renamed for South African Higher Education Institution context

## General Standard Disclosures

Standard Disclosure	Disclosure Title
Not considered for South African Higher Education Institution GRI G4 report	GRI G4 disclosure title
Highly recommended for South African Higher Education Institution GRI G4 Report	GRI G4 disclosure title renamed for South African Higher Education Institution context

**Specific Standard Disclosures**



# Appendix D The Sustainability Code for Higher Education Institutions

## *Strategy*

<i>1. Materiality</i>	The institution of higher education discloses what aspects of sustainability have a material influence on its activities and how it caters to and systematically addresses these in its strategy.
<i>1a. Sustainability in teaching</i>	The institution of higher education discloses how it promotes sustainability-related syllabuses and how issues relating to sustainability development are implemented in teaching. It demonstrates which didactical concepts are applied in doing so and how the competence to shape social developments is imparted and deepened.
<i>1b. Sustainability in research</i>	The institution of higher education discloses how it promotes sustainability-related research and how issues relating to sustainable development are implemented in research work. The institution of higher education discloses what measures it is taking to eliminate structural obstacles to sustainability research and what contribution it makes to the society in the process.
<i>1c. Sustainability in operations</i>	The institution of higher education discloses how sustainability is implemented in the various areas of its operations.
<i>2. Strategic analysis and action</i>	The institution of higher education discloses how, for its main activities, it analyses the opportunities and risks related to sustainable development. The institution of higher education outlines what measures it is taking to operate in line with the main and recognized higher education, national and international standards.
<i>3. Objectives</i>	The institution of higher education discloses what qualitative and/or quantitative as well as temporal sustainability goals are set and operationalized, and how their level of achievement is monitored.
<i>4. Coherence</i>	The institution of higher education discloses the significance that aspects of sustainability have for the activities of the institution of higher education and how deeply within its decision-making process it reviews sustainability criteria.

## ***Process management***

### ***5. Responsibility***

The responsibilities for sustainability within the institution of higher education are disclosed.

### ***6. Rules and processes***

The institution of higher education discloses how the sustainability strategy is implemented using rules and processes.

### ***7. Control***

The institution of higher education discloses how and what indicators on sustainability are used in periodical internal planning and control. It discloses how the reliability, comparability and consistency of data applied to internal controls and internal and external communications are safeguarded through appropriate processes.

### ***8. Incentive systems***

The institution of higher education discloses how its executive organisational units promote and encourage sustainability processes both materially and immaterially – by allocating project-related or budgeted resources – as well as legitimation and support on all (decision-making) levels. It discloses the extent to which the executive board reviews the effectiveness of such incentive systems.

### ***9. Stakeholder engagement***

The institution of higher education discloses how internal and external stakeholder groups are identified and incorporated into the sustainability process. It discloses whether and how continuous dialogue with them is nurtured and the outcomes of the dialogue are incorporated into the sustainability process.

### ***10. Innovation and academia management***

The institution of higher education discloses how, through appropriate processes, it helps to make innovations improve sustainability in terms of the internal and external use of resources. Where facts of material importance are concerned, the institution of higher education also discloses whether and how their current and future impact will be evaluated in terms of the institution's own social responsibility.

## ***Environment***

### ***11. Usage of natural resources***

The institution of higher education discloses the extent to which natural resources are used for its activities. This involves materials as well as input and output concerning water, soil, waste, energy, land and biodiversity as well as emissions for the life cycle of products and services.

<i>12. Resource management</i>	The institution of higher education discloses what qualitative and quantitative goals it has set itself for its efficient use of resources, the use of renewable energy sources, the increase in raw material productivity and the reduction in usage of eco- system services and how these goals have been met and/or will be met in the future.
<i>13. Climate-relevant emissions</i>	The institution of higher education discloses its greenhouse gas (GHG) emissions in keeping with or on the basis of the Greenhouse Gas (GHG) Protocol or based on the Protocol's standards and indicates the goals it has set itself to reduce emissions.
<b>Society</b>	
<i>14. Rights and involvement of members of the higher education institution</i>	The institution of higher education discloses how it meets nationally recognized standards relating to employee rights, and the rights of students and other members of the institution of higher education, and how it promotes participative involvement in sustainability management.
<i>15. Equal opportunities</i>	The institution of higher education discloses in what way it implements national and international processes and what goals it has in order to foster equal opportunities, diversity, the participation, inclusion and health of members of the institution of higher education as well as their fair pay and a work-life balance.
<i>16. Qualification</i>	The institution of higher education discloses what goals it has set itself and what measures it has taken to promote the ability of members of the institution of higher education to engage in the working and professional world and in terms of adapting to demographic change.
<i>17. Human rights</i>	The institution of higher education discloses what measures it is taking in order to ensure that human rights are respected worldwide, and that forced and child labour as well as all forms of exploitation are prevented, and how it succeeds in raising awareness among members of the institution of higher education.
<i>18. Corporate citizenship and transfer</i>	The institution of higher education discloses what contribution it makes towards corporate citizenship in the regions in which it conducts its core activities and how it promotes the transfer of

corporate citizenship to and the interchange with the society over and above the education of students.

*19. Involvement*

The institution of higher education discloses its involvement in key decisions in politics and the society that lies outside its institutional rights and obligations. It discloses the main aspects pertaining to the involvement of stakeholder groups within the society in decisions made by the institution of higher education.

*20. Conduct that complies with the law and policy*

The institution of higher education discloses what measures, standards, systems and processes are in place to prevent unlawful conduct and corruption, and also to adhere to ethical standards, and how these are verified. It discloses how violations of the rules governing academic work are prevented, uncovered and penalized.

Source: (German Council for Sustainable Development, 2016)

## Appendix E Meeting Minutes

**Date:** 23 May 2017

**Attendees:**

- Prof Heather Nel (Senior Director: Institutional Planning Strategic Planning)
- Prof Andre Calitz (Professor: Computing Sciences)
- Dr Charles Sheppard (Director: Management Information Strategic Planning)
- Mr Garreth Van Leeve (Deputy Director: Information Analysis Strategic Planning)
- Mrs Kumaree Moodley (Personal Assistant: Institutional Planning Strategic Planning)
- Mr Jaco Zietsman (Masters student)

**Minutes:**

Introducing the researcher's study to the members of Nelson Mandela University Institutional Planning Office. Discussion of recommendations for Nelson Mandela University reporting. Department of Higher Education and Training require South African HEIs to produce integrated sustainability reports. Some universities are beginning to embrace the integrated nature of reporting. Nelson Mandela University developed a web portal containing all the MANCO indicators. The web portal uses the top down approach. Future discussion investigates where all the data came from, as well as how the 21 DHET indicators compare to the GRI requirements. Work with Dr Sheppard to determine the contents of South African HEI reports.

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**Date:** 05 June 2017

**Attendees:**

- Dr Ruby-Ann Levendal (Director: Transformation Monitoring and Evaluation)
- Mr Jaco Zietsman (Masters student)

**Minutes:**

Discussed the report submitted to the DHET by Nelson Mandela University. Discussed the recognition/comparison value a GRI report would have to Nelson Mandela University on an international level. A future workshop is required to analyse all GRI disclosures to determine what Nelson Mandela University would need the most based off the international study. Get approval from MANCO.

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**Date:** 27 July 2017

**Attendees:**

- Prof Heather Nel (Senior Director: Institutional Planning Strategic Planning)
- Prof Andre Calitz (Professor: Computing Sciences)
- Dr Charles Sheppard (Director: Management Information Strategic Planning)
- Mr Garreth Van Leeve (Deputy Director: Information Analysis Strategic Planning)
- Mrs Kumaree Moodley (Personal Assistant: Institutional Planning Strategic Planning)
- Mr Andre Hefer (Sustainability Engineer)
- Mr Jaco Zietsman (Masters student)

**Minutes:**

Discussion of the GRI G4 disclosures. Based on the international HEIs data, and the German Sustainability Code, the viability of every GRI disclosure was discussed.

**Challenges Identified:**

- What does integrated reporting mean?
  - Where is the data located?
  - Rewrite the GRI G4 disclosures so the wording is more appropriate for South African HEI context.
  - Create institutional awareness of sustainability reporting.
- 

**Date:** 01 August 2017

**Attendees:**

- Dr Ruby-Ann Levendal (Director: Transformation Monitoring and Evaluation)
- Mr Jaco Zietsman (Masters student)

**Minutes:**

Discussed Nelson Mandela University reporting requirements and mapped those reporting requirements to the GRI G4 disclosures.

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**Date:** 03 August 2017

**Attendees:**

- Dr Ruby-Ann Levendal (Director: Transformation Monitoring and Evaluation)
- Mr Jaco Zietsman (Masters student)

**Minutes:**

Discussed Nelson Mandela University reporting requirements and mapped those reporting requirements to the GRI G4 disclosures. After discussion with registrar able to reword GRI G4 disclosures to fit the HEI context.

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**Date:** 04 August 2017

**Attendees:**

- Dr Ruby-Ann Levendal (Director: Transformation Monitoring and Evaluation)
- Mr Jaco Zietsman (Masters student)

**Minutes:**

Completed the rewording of GRI G4 disclosures to fit a South African HEI context.

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**Date:** 07 August 2017

**Attendees:**

- Prof Heather Nel (Senior Director: Institutional Planning Strategic Planning)
- Prof Andre Calitz (Professor: Computing Sciences)
- Dr Charles Sheppard (Director: Management Information Strategic Planning)
- Mr Garreth Van Leeve (Deputy Director: Information Analysis Strategic Planning)
- Mrs Kumaree Moodley (Personal Assistant: Institutional Planning Strategic Planning)
- Mr Andre Hefer (Sustainability Engineer)
- Dr Samuel Bosire (Chief Information Officer: Information and Communication Technology)
- Dr Thomas Hilmer (Deputy Director: Web System and Development)
- Mr Creswell Du Preez (Director: Information and Communication Technology)
- Dr Ruby-Ann Levendal (Director: Transformation Monitoring and Evaluation)
- Mr Jaco Zietsman (Masters student)

**Minutes:**

GRI G4 HEIs disclosures on international level investigated. Nelson Mandela University have not incorporated GRI at institutional level. Information and Communication Technology stakeholders joined the discussion for awareness of data storage requirements for reporting information. Based on

the identified GRI G4 disclosures where is the data being obtained. Discussion on how the sustainability engineer currently store and retrieve environmental data. The goal would be a sustainability portal where all the data is located.

Current Nelson Mandela University procedure uses combined reporting, where the DHET require integrated reporting. Identified as a compliance risk. Identify which GRI G4 disclosure data is available. Present the project as proposal for future work to MANCO. Require future session to pull together a project plan to present to MANCO to advance the current project.

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**Date:** 31 August 2017

**Attendees:**

- Prof Heather Nel (Senior Director: Institutional Planning Strategic Planning)
- Prof Andre Calitz (Professor: Computing Sciences)
- Dr Charles Sheppard (Director: Management Information Strategic Planning)
- Mr Garreth Van Leeve (Deputy Director: Information Analysis Strategic Planning)
- Mrs Kumaree Moodley (Personal Assistant: Institutional Planning Strategic Planning)
- Dr Samuel Bosire (Chief Information Officer: Information and Communication Technology)
- Ms Reena Chetty (Internal Audit and Risk Management)
- Mr Andre Hefer (Sustainability Engineer)
- Dr Thomas Hilmer (Deputy Director: Web System and Development)
- Mr Thomas Kungune (Director: Academic Administration, Deputy Registrar)
- Dr Ruby-Ann Levendal (Director: Transformation Monitoring and Evaluation)
- Mr Gregory Steenberg (Senior Business Analyst, Human Resources)
- Ms Nonkululeko Tsita (Deputy Director: Costing and Finance)
- Mr Eldridge Van Der Westhuizen (Deputy Director: Information and Communication Technology)
- Mr Rheinard van Onselen (Accountant, Operational Finance)
- Mr Jaco Zietsman (Masters student)

**Minutes:**

Early in the project lifecycle, bring aboard all stakeholders that will ultimately contribute to the project. Proposal to MANCO for approval and funding to advance the current research. Important strategic advantage for Nelson Mandela University. What information do we have currently, what are the gaps and how do we address these gaps?

Current environment demand for quality Higher Education is increasing. Financially Nelson Mandela University must be careful how they utilise resources. Considering recent “fees must fall” events a more sustainable approach is required to optimise resources and manage costs. Change people’s behaviour by monitoring people’s attitude towards sustainability. Aspects not covered by GRI G4 disclosures have been covered by Disclosures on Management Approach.



# Appendix F MANCO

## MANCO SUBMISSION TEMPLATE



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To: MANCO

From: SD Institutional Planning

Date: 31 March 2015

Agenda item Vision 2020 Institutional Dashboard

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### 1. Purpose and decision requested

The purpose of this memo is to provide MANCO with a list of key quantitative indicators (Annexure 1) for consideration as part of the institutional performance tracking and reporting system.

Proposed way forward:

- i. The establishment of an electronic institutional dashboard with key indicators that will be used to track institutional performance for planning and reporting purposes.
- ii. Frequent reporting, where applicable, in relation to the institutional dashboard indicators.
- iii. Use the tool to reflect on past performance and inform the strategic planning process for 2016-2020 and beyond.

### 2. Background and motivation *(to include previous resolutions of MANCO or other committees if required)*

NMMU is celebrating its 10<sup>th</sup> year of existence as a comprehensive university. In order to assist MANCO to direct the implementation of Vision 2020 as well as steering the strategic planning for 2016-2020 and beyond, decision-making will need to be informed by current and past performance. The proactive provision of 10-year data trend analyses in relation to selected high level indicators will assist with the reflection on our performance as part of our 10-review process. Therefore, timeous access to relevant information on at least a quarterly basis, will serve to assist MANCO members in compiling their quarterly reports, thereby providing Council with the relevant information to execute its oversight function in terms of the implementation of Vision 2020.

3. **Consultation process - NIL**
4. **Financial implications NIL**
5. **HR implications NIL**
6. **Infrastructure implications NIL**
7. **Legal implications NIL**
8. **Risk implications** - The performance tracking system will enable MANCO to monitor the effect of risk mitigation in relation to some risks that are included as indicators.
9. **Communication implications NIL**

## Annexure 1

### NMMU INSTITUTIONAL INDICATORS

The following indicators will contrast 2005 and 2014 data, based on availability, and will reflect the **national average**, where applicable and available.

#	INDICATOR	FORMAT OF PRESENTATION
1	Headcount student enrolments by ethnicity and qualification type	Tabular
2	Headcount enrolments by delivery mode (contact, distance) and major fields of study	Graphic
3	Average annual growth rate by qualification type	Graphic
4	First time entering students per faculty: <ul style="list-style-type: none"><li>• Actual numbers</li><li>• Growth rates</li></ul>	Tabular Graphic
5	Student success rates (coursework modules only): <ul style="list-style-type: none"><li>• Per faculty</li><li>• Per ethnic group</li></ul>	Graphic Graphic
6	Number of graduates per annum per faculty and ethnicity	Tabular
7	Average annual growth in enrolments relative to average annual growth rate in graduates	Graphic
8	Completion and drop-out rates of latest cohort (2008): <ul style="list-style-type: none"><li>• At Undergraduate level :<ul style="list-style-type: none"><li>○ 3 year diplomas and 3 year degrees at 3 years and 6 years</li><li>○ 4 year degrees at 4 years and 6 years</li><li>○ B tech degrees at 1 year and 6 years</li></ul></li><li>• At Postgraduate level:<ul style="list-style-type: none"><li>○ PG Diplomas and Honours at 1 year and 6 years</li><li>○ Masters coursework, Masters research, PhD degrees) at 3 years and 6 years.</li></ul></li></ul>	Graphic Graphic
9	Staff: Student FTE ratio per faculty and total ratio	Graphic
10	Academic staff according to highest qualification per faculty	Graphic

<b>11</b>	Weighted graduate outputs produced per permanent academic staff member	Graphic
<b>12</b>	Research outputs per annum according to: <ul style="list-style-type: none"> <li>• Publications (articles, conference proceedings, books)</li> <li>• Masters (Research)</li> <li>• PhD</li> </ul>	Tabular
<b>13</b>	NMMU weighted graduate output units per permanent academic staff member relative to national averages	Graphic
<b>14</b>	NMMU weighted research output units per permanent academic staff member relative to national average	Graphic
<b>15</b>	NMMU staff (academic and PASS) profile (permanent and temporary) based on ethnicity and gender	Graphic
<b>16</b>	Staff turnover (excluding retirements) per ethnic group	Graphic
<b>17</b>	Number of grievances reported to Employee Relations office based on ethnicity of aggrieved staff member	Graphic
<b>18</b>	Sources of income (subsidy, tuition, third stream)	Graphic
<b>19</b>	Staff costs as percentage of : <ul style="list-style-type: none"> <li>• Subsidy and tuition</li> <li>• Total expenditure</li> </ul>	Graphic Graphic
<b>20</b>	Liquidity ratio, i.e. current assets/current liabilities, relative to other comparable universities and the national norm	Graphic
<b>21</b>	Sustainability ratio, i.e. cumulative reserves/annual expenditure relative to other comparable universities and the national norm	Graphic

# Appendix G Annual 2015 Nelson Mandela University

## DHET Report Contents

<i>INTEGRATED INSTITUTIONAL REPORTING FRAMEWORK ALIGNED TO STATUTORY REPORTING</i>	
<i>ANNUAL DHET REPORT</i>	<i>CONTENT AND FORM</i>
<b>Report of the Chairperson of Council (integrated report to reflect matters relating to governance; operations, sustainability and finances)</b>	Council should approve the integrated report which should reflect the following aspects, including the statements and disclosures referred to below:
	Effective ethical leadership and Corporate Citizenship
	- Governance of Risk
	- Governance of Information Technology
	- Compliance with laws, codes, rules and standards
	- Governing Stakeholder (Worker, students and other) Relationships, with specific reference to:
	‡ free education
	‡ equal access
	‡ promotion of PDIs
	‡ quality
	‡ industry demands
	- Remuneration of Councillors
	<b>COUNCIL'S STATEMENT ON GOVERNANCE (King III Code of Governance Principles)</b>
Principles of discipline	
transparency	
independence	
accountability	
responsibility	
fairness	
social responsibility	
conducting business with integrity	
conducting business in accordance with generally accepted practices	

	<ul style="list-style-type: none"> <li>• Council must approve this statement, where date is stipulated, that meeting was quorate and the documentation for approval was circulated with the agenda in advance with due notice</li> </ul>
<b>DISCLOSURE OF NMMU AS GOING CONCERN</b>	Disclosure that NMMU is a going concern and the intention to continue as such
<b>COUNCIL'S STATEMENT OF INTERNAL FINANCIAL CONTROLS</b>	- Internal financial controls (policies and frameworks)
	- Financial control inadequacies
<b>COUNCIL'S REPORT ON RISK MANAGEMENT</b>	- Risk Management and risk tolerance: ‡ how risk management was dealt with
	‡ <b>STATEMENT</b> that Council is responsible for total process of risk management and effectiveness of the process.
	‡ Disclosure confirming that Council maintained a reporting system that enabled it to monitor institutional risk profile
	‡ Disclosure that NMMU has an efficient and effective risk management process, and accordingly it informs Council's awareness of any key current, imminent or forecasted risks to threaten institutional sustainability
	‡ Disclose any material losses and their cause
	‡ Council must demonstrate that it has dealt with the issues of risk management - matters of risk tolerance and risk management process
	‡ Council should assess degree of risk management maturity and disclose its findings in the report
<b>MATTERS OF SIGNIFICANCE CONSIDERED BY COUNCIL</b>	•Operational restructuring (academic and administrative)
	- New senior management appointments (academic and managerial)
	- Academic/Research Achievements
	- Operational sustainability
	- Prestigious awards to staff or students
	- Changes in the permanent infrastructure (new plant/buildings)

	<ul style="list-style-type: none"> <li>• Achievements in meeting social responsibility commitments (including Composition of staff bodies and student bodies):</li> </ul>
	<ul style="list-style-type: none"> <li>• Financial viability:</li> </ul>
	- Funding sources
	- Material changes
	<ul style="list-style-type: none"> <li>• Campus development</li> </ul>
	<ul style="list-style-type: none"> <li>• Facilities and major capital works</li> </ul>
	<ul style="list-style-type: none"> <li>• Events</li> </ul>
	<ul style="list-style-type: none"> <li>• Student services</li> </ul>
	<ul style="list-style-type: none"> <li>• Distance learning (where applicable)</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategic partnerships and projects with industry</li> </ul>
	<ul style="list-style-type: none"> <li>• Significant changes that have taken place</li> </ul>
<b>COUNCIL TO GIVE DUE CONSIDERATION AND REPORT ON THE FOLLOWING:</b>	<ul style="list-style-type: none"> <li>• Borrowings or additional funding raised in the reporting period</li> </ul>
	<ul style="list-style-type: none"> <li>• Additional investments in infrastructure and properly approved process</li> </ul>
	Awarding of large tenders - process followed and composition of tender committee (names and functions)
	<b>Statement</b> on how contracts are managed - service level agreements, monitoring of suppliers' performance and workplace ethics
	<ul style="list-style-type: none"> <li>• Reasons for refusals for requests for information lodged into Promotion of Access to Information Act, 2000</li> </ul>
	<ul style="list-style-type: none"> <li>• Any repeated material or immaterial regulatory penalties, sanctions, fines for contraventions/non-compliance with statutory obligations</li> </ul>
	<ul style="list-style-type: none"> <li>• Council's objectives which have been set for the current year and against which a statement of self-assessment will be made in the following year's report</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Report to be signed by the Chairperson of Council</b></li> </ul>
<b>i.REMUNERATION COMMITTEE REPORT</b>	<b>Statement</b> on remuneration philosophy and implementation thereof.
	<ul style="list-style-type: none"> <li>• ToR must include direct authority for or consideration and recommendation to Council of matters relating to general staff policies; remuneration and prerequisites; bonuses, executive remuneration, remuneration and fees of councillors, service contracts and retirement funds including post retirement MA funding</li> </ul>
	Remuneration policies and strategic objectives that seeks to achieve outcomes
	policy on base pay, use of appropriate benchmarks; average salary at above median requires special justification

	<p>Executive remuneration - all components must be reported; any ex gratia material payments should be fully explained and justified; performance parameters iro performance bonuses and methods of evaluation of performance and determination of such bonuses</p>
	<p>Executive service contracts / consultants should be disclosed, including period of contract and notice of conditions</p>
	<p>Remuneration committee must approve the executive remuneration of current and previous year as reflected in annual financial statements, including fees paid to councillors and committee members.</p>
<b>ii. FINANCE AND FACILITIES COMMITTEE</b>	<ul style="list-style-type: none"> <li>- Recommends NMMU's annual revenue and capital budgets;</li> </ul>
	<ul style="list-style-type: none"> <li>- monitors performance irt approved operating and capital budgets;</li> </ul>
	<ul style="list-style-type: none"> <li>- Ensures financial health of NMMU as going concern;</li> </ul>
	<ul style="list-style-type: none"> <li>- ensure accounting information systems are appropriate with sufficient, suitably qualified personnel component</li> </ul>
	<ul style="list-style-type: none"> <li>- provides input into preparation of medium and long term strategic plans</li> </ul>
	<ul style="list-style-type: none"> <li>- provides input for the preparation of annual budget</li> </ul>
	<ul style="list-style-type: none"> <li>- ensure the financial implications of both capital development programmes and annual operating budget (including implications of resource allocation to strategic activities) are referred to the Finance Committee.</li> </ul>
	<ul style="list-style-type: none"> <li>- ensure compliance with applicable legislation and the requirements of regulatory authorities;</li> <li>— Consideration of sustainability matters</li> </ul>
<b>iii. AUDIT AND RISK COMMITTEE REPORT</b>	<ul style="list-style-type: none"> <li>- monitoring the appropriateness of NMMU's combined assurance model;</li> </ul>
	<ul style="list-style-type: none"> <li>- concluding and reporting to stakeholders on an annual basis on the effectiveness of interal financial controls;</li> </ul>
	<ul style="list-style-type: none"> <li>- matters relating ot financial and internal control, accounting policies, reporting and disclosure;</li> </ul>
	<ul style="list-style-type: none"> <li>- at least annual reviews of the internal auditor's assessment of risks and approves the internal audit plan to ensure that audits are appropriately conducted to mitigate risks identified;</li> </ul>
	<ul style="list-style-type: none"> <li>- internal and external audit policies; activities, scope, adequacy and effectiveness of internal audit function and audit plans;</li> </ul>
	<ul style="list-style-type: none"> <li>- assessment of all areas of financial risk and management thereof;</li> </ul>



<ul style="list-style-type: none"> <li>- review/approval of external audit plans, findings, annual audit management letters, problems, reports and fees;</li> </ul>
<ul style="list-style-type: none"> <li>- discuss and deliberate annual financial statements provided by external auditors and recommends these to the finance and facilities committee;</li> </ul>
<ul style="list-style-type: none"> <li>- monitor effective implementation of recommendations in annual audit report to ensure that problems identified does not recur;</li> </ul>
<ul style="list-style-type: none"> <li>- approve financial policy and amendments thereto;</li> </ul>
<ul style="list-style-type: none"> <li>- ensure policies are in place to protect NMMU assets from loss or unauthorised use, and reporting any losses arising from unauthorised or illegal actions, and actions taken to remedy the situation;</li> </ul>
<ul style="list-style-type: none"> <li>- compliance with Code of Corporate Practices and Conduct;</li> </ul>
<ul style="list-style-type: none"> <li>- compliance with NMMU's Code of Ethics;</li> </ul>
<ul style="list-style-type: none"> <li>- list of members of committee (% internal or external), their qualifications and the number of meetings and who attended.</li> </ul>
<ul style="list-style-type: none"> <li>- Considers all issues of risk (not just financial risk) which may result in some form of exposure for the NMMU</li> </ul>
<ul style="list-style-type: none"> <li>- Maintain a reporting system that enables it to monitor changes in the risk profile of the NMMU and gain an assurance that risk management is effective</li> </ul>
<ul style="list-style-type: none"> <li>- Establish materiality levels and determines risk appetite of NMMU</li> </ul>
<ul style="list-style-type: none"> <li>- Considers all possible risks, their likelihood and were applicable, establishes risk mitigation procedures</li> </ul>
<ul style="list-style-type: none"> <li>- Ensure that a risk management system is in place and the maintenance, monitoring and updating of a risk register.</li> </ul>
<p>Statement that Council is responsible for the IT governance and how Council has fulfilled this role and that MANCO is responsible for the implementation of the NMMU IT governance framework</p>
<p>Alignment of IT with performance and sustainability objectives of the NMMU</p>
<p>How Council is monitoring and evaluating significant IT investment and expenditure</p>
<p>Including IT as an integral part of the NMMU 's risk management</p>
<p>Monitoring that IT assets are managed effectively</p>
<p>Role of ARC in enabling Council to carry out its IT governance responsibilities</p>

	<p>How the committee is constituted and its reporting line</p> <p>NB it should be noted that ICT matters spans across <b>all functional areas</b> within the NMMU, and not only fall within ARC. Since there is no ICT committee, the ICT functions were incorporated into ARC, as most of the issues relating to ICT are tabled at ARC</p>
<b>iv. GOVERNANCE COMMITTEE REPORT</b>	Report on Composition of Council:
	‡ at least 60% external;
	‡ report to include table of Councillors with their representative constituency, indicating % internal and % external members on Council;
	‡ length of service on Council (current and previous Councils of merged institutions) and age of Councillors;
	‡ which subcommittees they sit on;
	‡ number of Council meetings and committee meetings held and respective attendances at these meetings;
	‡ significant directorships held; considers nominations for vacancies in Council
	statement that role of Chair of Council is separate from VC
	statement on proposed length of tenure of Chair of Council
	statement that Council and all subcommittee appraisals had been conducted
<b>v. HUMAN RESOURCES COMMITTEE REPORT</b>	The functions performed by this committee forms part of the report by the VC, as well as the following statements that must be included in the integrated report:
<b>COUNCIL'S STATEMENT ON CONFLICT MANAGEMENT</b>	<ul style="list-style-type: none"> <li>Identified a group of professionally qualified and experienced individuals in mediation, arbitration and dispute resolution, available to Council to assist in the resolution of any disputes between parties in the NMMU, with the objective of avoiding conflict.</li> </ul>
<b>COUNCIL'S STATEMENT ON WORKER AND STUDENT PARTICIPATION (CO-OPERATIVE GOVERNANCE)</b>	<ul style="list-style-type: none"> <li>Variety of structures which has been set up to facilitate participation on issues affecting employees and students directly or materially, with the aim to achieve good employer/employee and student relations through effective sharing of relevant information, consultation and the identification and resolution of conflicts, embracing goals relating to productivity, career security, legitimacy, and identification with the NMMU, including signed recognition agreements with the following staff structures (specifying the dates); Affirmative action programme forming part of NMMU HRD and business plan</li> </ul>

<b>COUNCIL'S STATEMENT ON CODE OF ETHICS</b>	<ul style="list-style-type: none"> <li>• Commitment to the highest standards of integrity, behaviour and ethics in dealing with all its stakeholders, including Council members, managers, employees, students, customers, suppliers, competitors, donors and society at large; Conducting its business through the use of fair commercial competitive practices;</li> </ul>
	<ul style="list-style-type: none"> <li>• Review of the Code of Ethics by Council in the year under review at its meeting dated (specify date), where Council meeting was quorate, and the documentation for approval by Council was circulated with the meeting agenda in advance with due notice.</li> </ul>
<b>COUNCIL'S STATEMENT OF SELF-ASSESSMENT</b>	<ul style="list-style-type: none"> <li>• <b>Statement of self-assessment</b> (including performance evaluation of Council, sub-committees and its members) on the achievement of Council's objectives for review period, including summary of attendance by members at Council meetings</li> </ul>
<b>SENATE'S REPORT TO COUNCIL</b>	<ul style="list-style-type: none"> <li>• Changes in academic structures</li> <li>• Composition of Senate</li> <li>• Significant developments and achievements in: <ul style="list-style-type: none"> <li>‡ Instruction (e.g. modes of delivery)</li> <li>‡ Research</li> </ul> </li> <li>• Composition and size of student body</li> <li>• Instruction: <ul style="list-style-type: none"> <li>‡ Limitations on access to certain courses</li> <li>‡ Levels of academic progress in different disciplines and levels of study</li> <li>‡ Awards and achievements</li> </ul> </li> <li>• Research: <ul style="list-style-type: none"> <li>‡ Summaries of various programmes</li> <li>‡ Awards</li> <li>‡ Funding</li> </ul> </li> <li>• Access to financial aid and the provision thereof</li> <li>• Changes in tuition fees charged and financial aid for students</li> <li>• Identification and management of academic risk</li> </ul>
<b>REPORT OF IF TO COUNCIL</b>	<ul style="list-style-type: none"> <li>• All instances of advice sought by and advice given to Council by IF</li> <li>• Composition of IF</li> <li>• Frequency of meetings</li> <li>• Indicate whether IF was consulted in every instance that deliberations regarding vacancy on Council occurred</li> </ul>

<b>REPORT BY VICE-CHANCELLOR ON MANAGEMENT/ ADMINISTRATION</b>	<ul style="list-style-type: none"> <li>• Report to address the following:</li> </ul> <ul style="list-style-type: none"> <li>‡ Principle managerial/administrative achievements to the plan, goals and objectives set out for the period under review</li> <li>‡ Managerial/administrative aspects of the operations of the institution, including new senior executive/administrative appointments</li> <li>‡ Realistic assessment on the achievements of the administrative structures and resources, regarding both personnel and systems</li> <li>‡ Adequacy of staff levels, particularly in critical areas</li> <li>‡ Extent to which equity targets have been realised</li> <li>‡ Quality of information available to management and the administrative processes involved</li> <li>‡ Student services and extra-curricular activities</li> <li>‡ Relationships with the community, both academic and service</li> <li>‡ Changing patterns in the provision of academic courses</li> <li>‡ Include a summary STATEMENT of SELF-ASSESSMENT OF ACHIEVEMENT OF THE VC detailing the realised achievements in relation to the objectives set by Council for the period under review.</li> </ul>
<b>REPORT ON INTERNAL ADMINISTRATIVE/OPERATIONAL STRUCTURES AND CONTROLS</b>	<ul style="list-style-type: none"> <li>• Report to be developed by Chairperson of ARC and head of Internal Auditing on systems of internal control over financial reporting and safeguarding of assets against unauthorised acquisition</li> </ul> <ul style="list-style-type: none"> <li>• Documented organisational structures: <ul style="list-style-type: none"> <li>Setting out division of responsibilities, policies and procedures, including Code of Ethics</li> <li>Communicated throughout NMMU to foster strong ethical climate (Brief note to be included on how this was communicated and how often)</li> <li>Careful selection, training and development of its people.</li> </ul> </li> <li>• Information systems: <ul style="list-style-type: none"> <li>Developed and implemented according to defined and documented standards to achieve efficiency, effectiveness, reliability and security</li> <li>Application of accepted standards to protect privacy and ensure control over all data, including disaster recovery and "back-up" procedures</li> <li>Password controls and regular reviews thereof</li> </ul> </li> </ul>

	Regular reviews of user access rights and division of duties
	System design for ease of access for all users
	Sufficient integration of systems to minimise duplication of effort and ensure minimum manual intervention and reconciliation procedures
	Development, maintenance and operation of all systems are under the control of competently trained staff
	• Utilisation of electronic technology to conduct transactions with:
	Staff
	Third parties
	To minimise risk of fraud or error
	• Specify date when institutional assessment of the internal control systems was conducted in relation to the criteria for effective internal control over financial reporting described in the institutional internal control manual
	• Review of risk assessment document and developed a programme of internal audits to examine systems, procedures and controls in those areas considered as high risk.
<b>i. REPORT ON RISK EXPOSURE ASSESSMENT AND THE MANAGEMENT THEREOF</b>	<ul style="list-style-type: none"> <li>• Two primary categories of risk: Financial and non-financial; Clear statement of structures that are in place to assess and minimise risk of loss (financial and non-financial) to the NMMU; most significant risks identified together with measures (financial or physical) applied to control these risks within the context of the strategic attitude to risk adopted by the Council and MANCO</li> </ul>
	Council should annually review a comprehensive report on significant risks facing the institution.
<b>ii. ANNUAL FINANCIAL REVIEW</b>	Report of Chairperson of FFC and ED Finance
	Overview of budget process describing how resource allocation promotes attainment of strategic goals and objectives and operational sustainability in foreseeable future (including comment on inclusive stakeholder participation in process)
	Budgetary control mechanism
	Statement distinguishing between financial consequences of the use of assets representing restricted and those representing unrestricted (Council-controlled) funds
	Operational finance - excluding non-recurrent items or dramatic movements in investments

<b>iii. REPORT OF ARC</b>	<ul style="list-style-type: none"> <li>• Provide summary of its role and details of its composition, number of meetings and activities</li> </ul>
	<ul style="list-style-type: none"> <li>• How ARC carries out its duties</li> </ul>
	<ul style="list-style-type: none"> <li>• Whether ARC is satisfied with the independence of the external auditor</li> </ul>
	<ul style="list-style-type: none"> <li>• ARC's view on the financial statements and the accounting practices</li> </ul>
	<ul style="list-style-type: none"> <li>• whether the internal financial controls are effective</li> </ul>
	<ul style="list-style-type: none"> <li>• Recommend the integrated report for approval by Council</li> </ul>
<b>iv. SUSTAINABILITY REPORT</b>	<ul style="list-style-type: none"> <li>• Report on the environmental, social and governance (ESG) issues impacting both positively and negatively on the economic life of the community within which NMMU operates</li> </ul>
	Report should include how Council can improve the positive aspects and eradicate/ameliorate the negative aspects.
	Matters to be dealt with linking governance, strategy, risks and opportunities, KPIs and sustainable development include:
	Inclusivity of stakeholders
	Innovation, fairness, and collaboration
	Social Transformation
	Student numbers and throughput, including pipeline number of students
	Progression on third-stream income
	Adoption, implementation and effect of policies that promote transformation in the HE sector:
<b>v. REPORT ON TRANSFORMATION</b>	Affirmative Action
	Employment Equity
	Broad-Based Black Economic Empowerment
	Gender Equality
	Grievances
	Racism
	Sexual Harassment
	Unfair discrimination
	Clearly indicate initiatives that seek to assist:
	People from historically disadvantaged backgrounds
	Women, and
	People with disabilities (staff and students)
	Other dimensions include:
	Diversity
	Access
	Foundation programmes -enhancing success of students?
	Student support services
Sensitive/inclusive campus environment	

	Integration of student accommodation
	Life skills programmes

- Source: Internal Nelson Mandela University document. Supplied by Dr Ruby-Ann Levendal (Director: Transformation Monitoring and Evaluation).

# Appendix H An Adapted Framework for Environmental Sustainability Reporting using Mobile Technologies

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### An Adapted Framework for Environmental Sustainability Reporting using Mobile Technologies


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Coles College of Business





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# An Adapted Framework for Environmental Sustainability Reporting using Mobile Technologies

Research Paper

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## ABSTRACT

Corporate governance is the process by which organizations are directed and controlled. King IV is regarded as the cornerstone of corporate governance for businesses and emphasizes the importance of sustainability reporting in South Africa. Sustainability reporting guidelines inform organizations how to disclose their most critical effects on the environment, society and the economy. The Global Reporting Initiative (GRI) G4 sustainability reporting framework recommends the Standard Disclosures that all organizations should use to report their sustainability impacts and performance. Sustainability reporting frameworks proposed for the Higher Education sector require reporting principles specific to the needs of Higher Education Institutions (HEIs). The purpose of this study is to adapt a framework that includes environmental data to generate a GRI compliant sustainability report for a HEI. In South Africa, HEIs generally only report on financial and social aspects of sustainability reporting and exclude the environmental aspects. An environmental database capturing electricity, water and waste data was developed for the Nelson Mandela University. A review of existing sustainability reporting frameworks identified a lack of mobile technologies being used in the reporting process. In the adapted framework, financial, people (social) and environmental related data are gathered using Business Intelligence tools and mobile technologies.

## Keywords

Sustainability reporting, Higher Education Institutions, Environmental Framework, Mobile technologies.

## INTRODUCTION

In any organization, including Higher Education Institutions (HEIs), sound governance structures are critical for the development of sustainability reports (Bosire, Cullen & Calitz, 2012). Corporate governance can be defined as the set of systems, principles and process by which an organization is governed (Thomson, 2009). King IV (2017) is seen as the cornerstone of corporate governance for companies and emphasizes the importance of sustainability reporting. King IV's (2017) core philosophy revolves around leadership, principles and practices, which serve as the benchmark for corporate

governance in South Africa. Non-profit organizations, private companies and HEIs in the public sector have experienced challenges in interpreting and adapting King III to their circumstances. The aim of the King IV report is to become more accessible to all types of entities across sectors. The 75 King III principles have been consolidated into 17 principles, each linked to specific distinct outcomes (King IV, 2017).

Organizations are adopting dedicated sustainability reporting frameworks to assist them in complying with the complex sustainability reporting requirements (White, & Koester, 2012). These frameworks are limited in their capabilities and are not all suited to the requirements of HEIs. Many of the frameworks do not cover the entire sustainability spectrum but focus only on the financial and social aspects of sustainability, neglecting environmental reporting.

The number of sustainability reporting frameworks highlights the increased awareness in sustainability and frameworks are continuously being updated (Pina, 2011). These frameworks provide organizations with guidelines on how to report on sustainability. Examples of these reporting frameworks include the Global Reporting Initiative (GRI), ISO 14000 series, the Triple Bottom Line, the International Sustainable Campus Network (ISCN), the Association for the Advancement of Sustainability in Higher Education (AASHE) and the Sustainability Tracking, Assessment and Rating System (STARS). The two most relevant reporting standards for HEIs presently are STARS and the GRI (White & Koester, 2012). Each different category of sustainability is highlighted in both the GRI and STARS. The standard GRI is not optimized for higher education and therefore Lozano (2006) proposed a modified set of BI guidelines that include a category for education. The operations of HEIs differ from standard business enterprises, which causes many of the reporting tools and frameworks, including the GRI, ISO 14000 series and the Triple Bottom Line to be insufficient for HEIs (KPMG, 2012).

Universities that have adopted the GRI share a distinct conceptualization of their role in society (Bice & Coates, 2016). Bice and Coates (2016) further indicate that the GRI framework can assist universities when capturing environmental impacts. They would benefit from adopting an internationally accepted sustainability-reporting framework. HEIs have begun to realize the benefit of the STARS reporting framework (Pina, 2011). Nelson Mandela University (NMU), which will be the focus of this study, is one of these HEIs that has adopted the GRI as its sustainability-reporting framework.

In 2000, the GRI launched the first set of guidelines enabling corporations to conduct comprehensive sustainability reporting on a global level (GRI's History, 2016). GRI's latest sustainability reporting guidelines (G4) allow any organization to report their sustainability information and transform themselves from within, to be more sustainable (Global Reporting Initiative, 2013b). The success of GRI is due to the ability of the GRI guidelines to maintain a balance between the individual and collective interests of their diverse constituencies (Global Reporting Initiative, 2014).

The Stockholm Declaration of 1972 (United Nations, 2017) was the first declaration to reference the importance of environmental sustainability in the education sector. Although the sustainability initiatives of HEIs were not directly mentioned, the principles in the declaration have relevance to this study. The declaration has a clear human-centered focus stating that the protection and improvement of the human environment is a major issue which affects the well-being of the people and economic development throughout the world (United Nations, 2017).

According to Cullen, Bosire and Calitz (2015), the economic aspects are the focus of the majority of South African universities sustainability reporting efforts. The results show that as little as 10% of

reporting is done on environmental data (Cullen et al., 2015). Therefore, it appears that most of the environmental aspects of reporting done by Faculties and Departments at HEIs do not appear on the institutional reports. Almost 50% of South African HEIs do not report on aspects such as the impact on the environment and compliance with legislation, favoring financial reporting instead (Cullen, et al., 2015).

HEIs are in a unique position to demonstrate principles of stewardship and awareness of the natural environment (Neumayer & Dahle, 2001). Green IS initiatives enable environmentally sustainable business processes and products (Loeser, 2013). Green IS can contribute to sustainability through automating processes and behaviors to support environmental sustainability. Greening within the context of a HEI refers to the reduction of environmental impacts based on the decisions of the institution and promoting environmental awareness within the different human communities (Neumayer & Dahle, 2001).

Several frameworks have been developed for use by HEIs to assist with sustainability reporting (Wright, 2002). This paper discusses two existing sustainability frameworks developed at NMU and adapts one framework to make use of mobile technologies to capture environmental data. The literature review identifies how sustainability reporting is currently being implemented in HEIs and the influence that the GRI has on these processes. A lack of implementing mobile technologies in the reporting processes specifically relating to environmental sustainability reporting is identified as a problem with current sustainability reporting efforts. The adapted framework incorporates the use of mobile technologies into the reporting process to better extract the data needed to produce a GRI compliant sustainability report.

### **THE PROBLEM INVESTIGATED IN THIS STUDY**

Presently there are various frameworks for sustainability reporting for South African HEIs. Generally, the economic, social (people), research and teaching and learning data are reported on by HEIs to the Department of Higher Education and Training. However, there are currently no frameworks using mobile technologies to report on environmental data. The reason for the omission is that the environmental data are mostly not available in the HEI environment. The environmental data generally includes electricity and water usage, waste management and CO<sub>2</sub> emissions. The focus of this paper is to obtain the environmental data and adapt a framework that uses the data to produce an integrated sustainability report. The study will specifically address the following research question:

*What are the components of a framework that makes use of mobile technologies to include environmental data to enable the creation of a GRI report for HEIs in South Africa?*

The main research objective (RO<sub>M</sub>) of this study is:

*Adapt a sustainability-reporting framework for HEIs in South Africa that includes environmental data utilizing mobile technologies.*

### **LITERATURE REVIEW**

The number of HEIs internationally producing sustainability reports has increased; however, in Africa no HEIs have published a comprehensive GRI compliant integrated sustainability report. In this section sustainability reporting and specifically by HEIs will be discussed with a focus on environmental sustainability reporting.

## Sustainability Reporting by HEIs

One of the fastest changing fields in Higher Education is sustainability reporting, however HEIs in Africa are having trouble in reporting on environmental sustainability (Cullen, et al., 2015). Presently, the first world opinion is generally united on achieving increased sustainable development. Industry leaders are incorporating environmental sustainability into their vision and sustainability reporting (Esty & Winston, 2009).

At the Stockholm Conference in 1972 (United Nations, 2017) it was established that there is a connection between the role that education plays in the fostering of environmental protection. Since then, declarations made by academic institutions have evolved to include the fostering of environmental education (Lozano, et al., 2013). According to Lozano et al. (2013), the number of HEIs engaged in sustainable development is still small. Out of over 20,000 HEI in the world, only 35 have published sustainability reports, none of them in South Africa (Cullen et al., 2015). In contrast, 5377 organizations globally published GRI sustainability reports in 2015 (GRI Reports List, 2015).

The process of sustainability reporting is a means for organizations to report their efforts with regard to Sustainable Development (SD) to various stakeholders (Joseph, 2012). According to Lozano (2010), sustainability reporting in HEIs is still in its infancy, both because of the low quality of reporting outcomes and the lack of a substantial number of HEIs reporting on their SD. In conjunction, with the lack of scientific studies in HEIs addressing the sustainability reporting topic (Fonseca, Macdonald, Dandy, & Valenti, 2011), there is a need for in-depth studies on sustainability reporting in HEIs. These studies require a large level of abstraction, where the results of each study can be transferred to other HEIs, offering added value to the research (Ceulemans, Molderez, & Van Liedekerke, 2015).

The GRI sustainability reporting process discloses results, within the reporting period, of the organization's strategies, management and commitments. Sustainability reporting guidelines direct the process that is followed to create GRI reports. Different principles were defined to ensure the quality and correctness of GRI reports. Among these principles are Standard Disclosures, consisting of Performance Indicators and guidelines on specific technical topics. The Performance Indicators provide definitions and other information to assist report writers to interpret all the Performance Protocols consistently. Sector supplements are used to complement the application of the guidelines and should be used with the guidelines rather than in place of the guidelines (Global Reporting Initiative, 2011). Figure 1 provides an overview of the GRI Reporting Framework and indicates that standard disclosures are used to determine what to report. The protocols as well as principles and guidance are used to determine how to report the selected standard disclosures.

Reporting principles work in conjunction with the Reporting Guidelines to achieve transparency in sustainability reporting. It is recommended that all organizations following the GRI Reporting Guidelines implement the reporting principles when preparing a sustainability report. HEIs are lagging in the implementation of sustainability reporting. Thus far, the literature reveals a fragmented approach to the implementation of sustainability reporting in HEIs.

Figure 2 indicates the process of generating a sustainability report using the GRI Reporting Guidelines. The principles and guidelines determine how the topics and indicators are reported, while the Standard Disclosures determine what information should go into the report. There are three types of Standard Disclosure indicators (Global Reporting Initiative, 2011):

- Strategy and Profile disclosures set the context necessary to gain an understanding of the organization's profile and governance;

- Management approach disclosures addresses organizational performance; and
- Performance Indicators disclosures are used as a comparative indicator for the organization's performance.

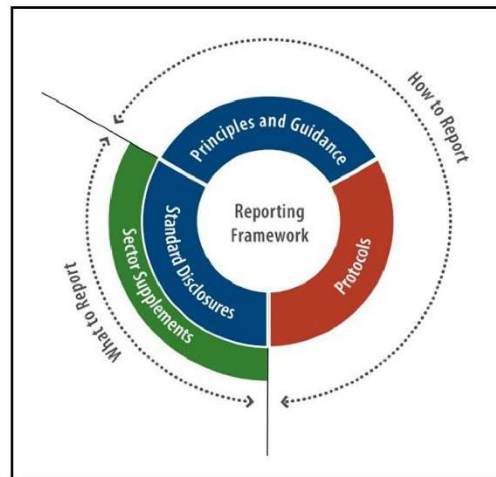


Figure 1: The GRI Reporting Framework (Global Reporting Initiative, 2011)

### Existing Sustainability Reporting Frameworks

Several frameworks have been developed for use by HEIs (Cullen, et al., 2015). The frameworks this study is based on are the frameworks developed by Jonamu's (2014) and Haupt (2015).

#### *A framework for the management of environmental information in higher education institutions.*

Jonamu's (2014) study identified a gap in the field of environmental sustainability at HEIs. Existing sustainability programs for HEIs have shown weaknesses that include failures to set effective baselines, flaws in data acquisition and missing documentation. The study therefore proposed and developed a framework to support effective and efficient management of environmental information in HEIs.

The proposed framework (Figure 3) analyzed the current state of environmental information management processes at HEIs and how these processes can be improved. Research revealed that the prioritization of environmental indicators and comprehensive data acquisition processes could dramatically improve the efficiency and availability of environmental data.

The acquisition of reliable data prohibited Jonamu (2014) from testing the developed prototype in a real-world environment. Even with this constraint, the study revealed the need for analytical tools to support senior management. It was recommended that future research of environmental performance dashboards is necessary for the communication of environmental data to the stakeholders of HEIs.

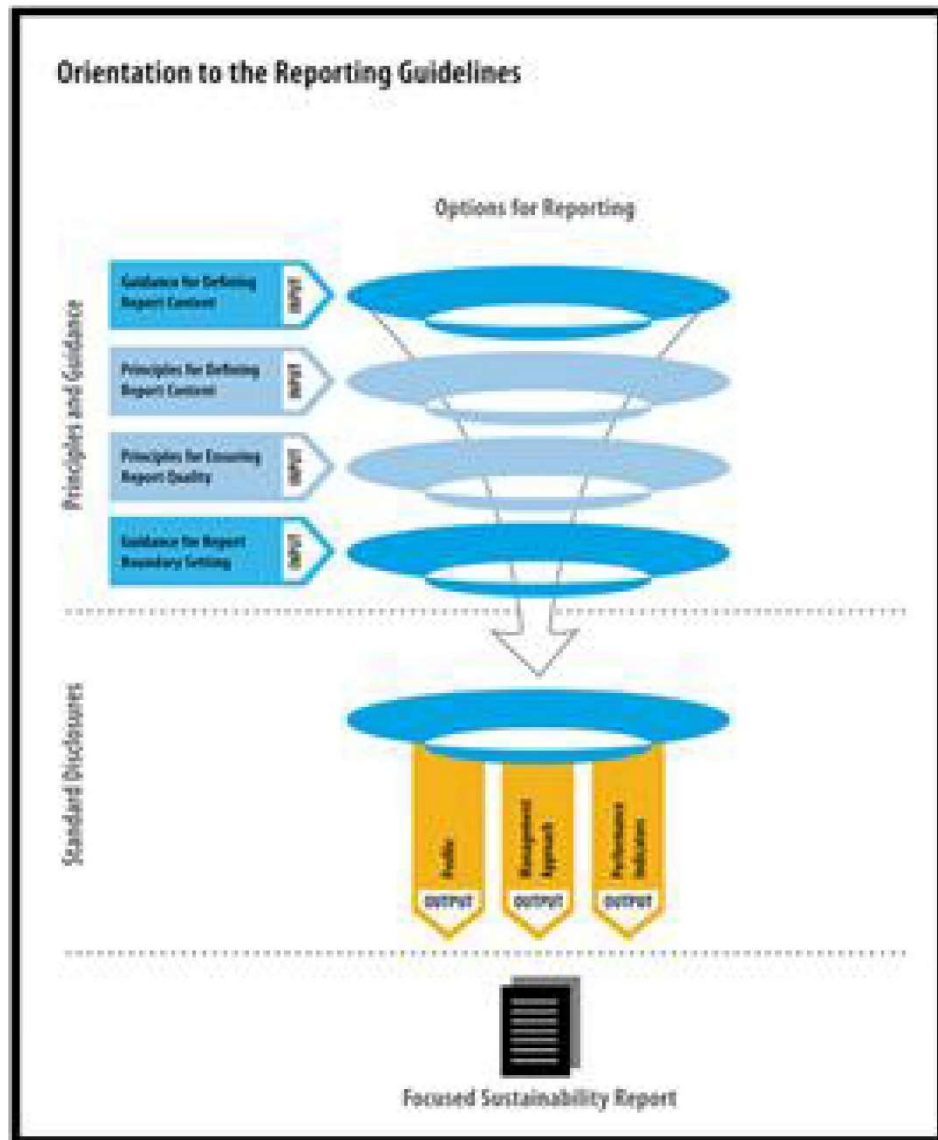


Figure 2: Overview of the GRI Reporting Guidelines (Global Reporting Initiative, 2011)

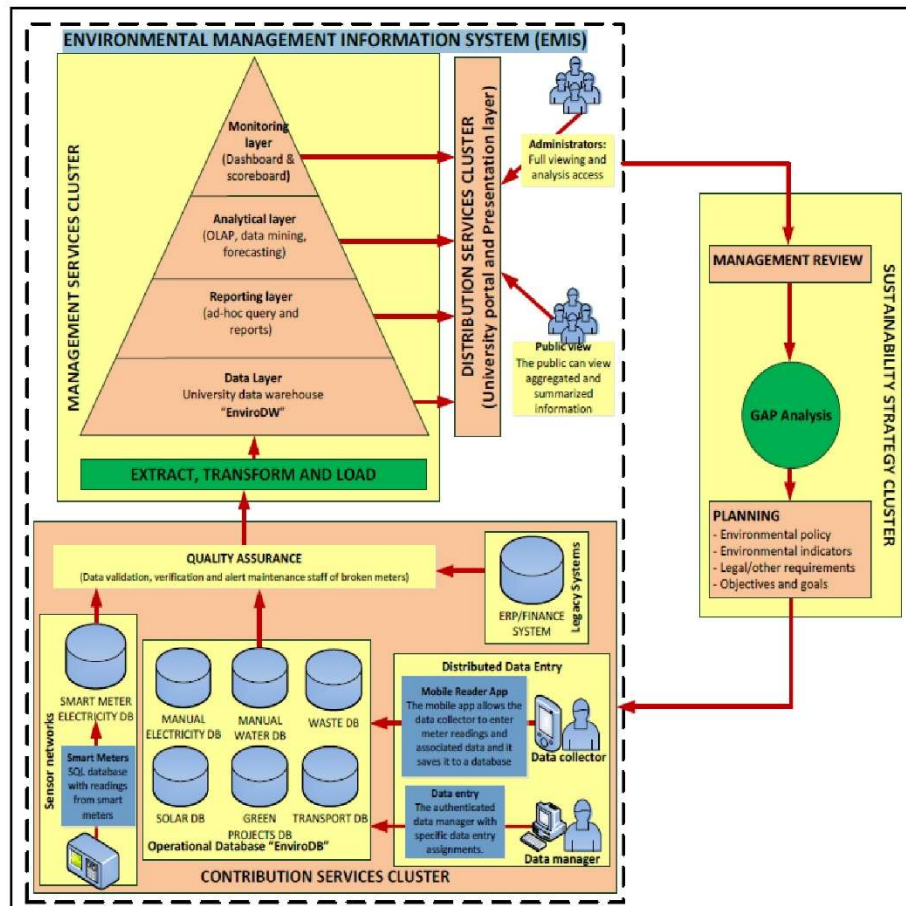


Figure 2: Environmental Information Management Framework for HEIs (Jonamu, 2014)

*A business intelligence framework for supporting strategic sustainability information management in higher education*

Haupt (2015) developed a Business Intelligence (BI) framework for supporting strategic sustainability information management in HEIs (Figure 4). Lozano (2011) indicated that the GRI guidelines are best suited for standard business enterprises and cautions against using these guidelines for HEIs without the necessary modifications. Lozano (2011) proposed a set of modified guidelines, however GRI have not yet officially accepted these guidelines for HEIs. Haupt (2015) therefore also considered the Sustainability Tracking, Assessment and Rating System reporting method. Combining these methods Haupt (2015) created a BI framework (Figure 4) to support sustainability information management for HEIs.

The BI framework was proposed by Haupt (2015) after an analysis of existing literature, as well as conducting interviews with relevant stakeholders at the Nelson Mandela University (NMU). Haupt (2015) used the information to determine the requirements for the proposed BI solution, as well as the challenges of implementing a BI solution.

Using NMU as a case study to test the created Sustainable BI prototype, Haupt (2015) integrated the environmental and educational data into the BI framework. Access to economic and social data prevented Haupt (2015) from covering the entire sustainability spectrum in the prototype evaluation. Haupt (2015) indicated that for future research, by including economic and social data, the prototype can cover the entire spectrum of sustainability. It was also mentioned that additional research is required to investigate approaches to improve the data collection from the different sources including environmental data at NMU.

### **Comparison of current Frameworks**

An important step towards evaluating the efficiency of sustainability reporting frameworks in HEIs would be to reach greater consensus on the importance of sustainability reporting frameworks. Sustainability reporting practices are taking place in an increasingly environmentally friendly driven climate where the outcome of these reports is likely to be prioritized.

Both the frameworks make provision for the storage and retrieval of sustainability data for sustainability information management at HEIs. The Environmental Information Management framework (Figure 3) is more focused on recording environmental information to be included in a sustainability report. In doing so, it emphasizes the importance of the environmental aspect in sustainability reporting by describing its different components. The Environmental Information Management framework indicates the collection of electricity and water meter readings into the database. Zisman (2015) has implemented the use of mobile technologies, to record the meter readings directly into an environmental database.

### **Mobile Technologies**

Mobile technology is defined as any device with Internet capability that is accessible from anywhere the user is. Current devices in this category include devices such as smartphones, tablets, some iPods and laptops (Zietsman, 2015). One of the Millennium Development Goals (United Nations, 2017) calls for using information and communications technologies to foster human development across the world. Since the goals were set in 2000, mobile technology has proven to be a powerful tool in bringing change to the field of development, especially monitoring and evaluation (PACT, 2014).

The rapid expansion of mobile technologies offers people real time interactive communication, using affordable communication channels to provide people with access to information where they previously had little or no access (Zambrano, Seward, & Ludwig, 2012). In addition, mobile phones increase personal security by keeping people in touch with each other (Zambrano et al., 2012). Comin, Klein and Rigoni (2014) suggest that the influence of the use of mobile technologies depends primarily on the location of the activity (Figure 5). Successful implementation of enterprise mobility can greatly benefit the efficiency of activities (Comin et al., 2014).



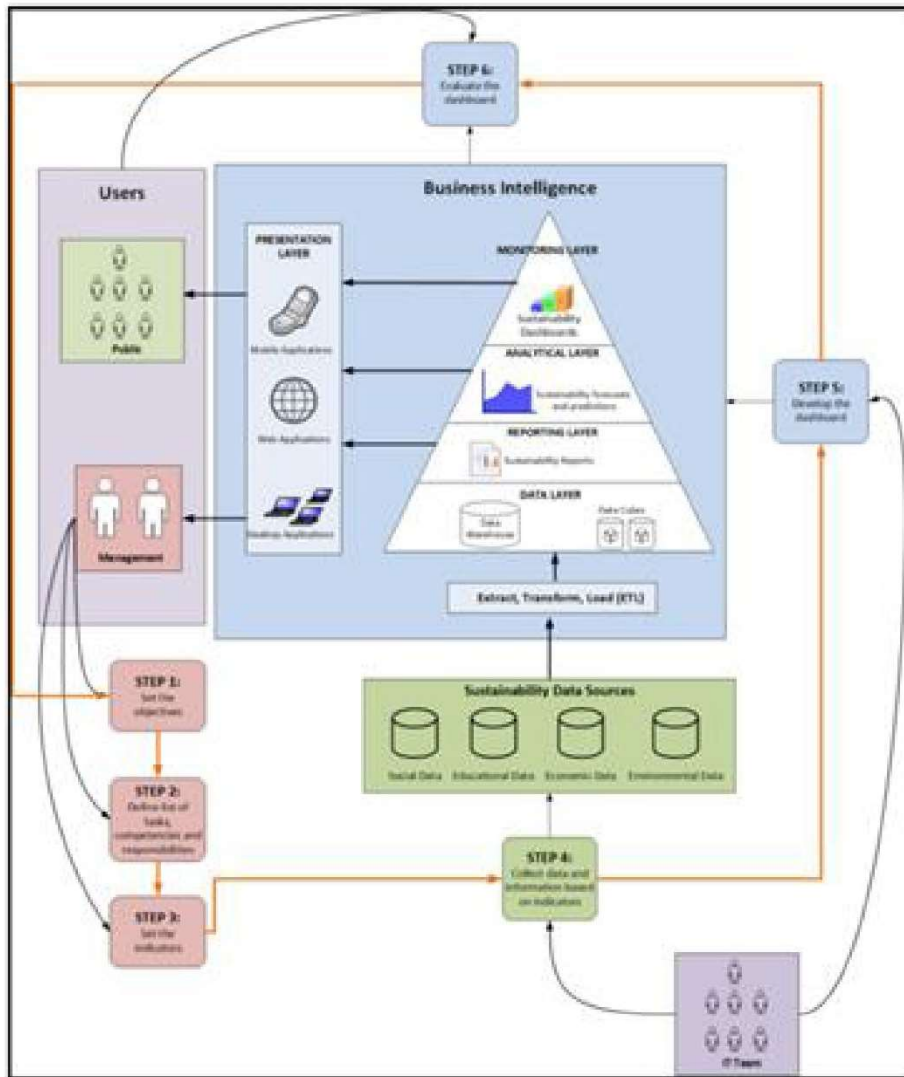


Figure 4: BI framework for strategic sustainability information management in higher education (Haupt, 2015)

Mobile applications are used to gather real time assessment data-demonstrating capabilities for collecting data beyond simple self-reports. Applications can be designed to prompt the user for specific information at any time (Heron & Smyth, 2010). The use of mobile technologies further assist with the capturing of environmental data, such as electricity and water readings, in real-time. At NMU, water and electricity meter readings are captured monthly and is a manual process (Zietsman, 2015). The process consists of capturing meter readings using a paper-based system. Figure 6 shows one of the electricity meters currently in use at NMU.

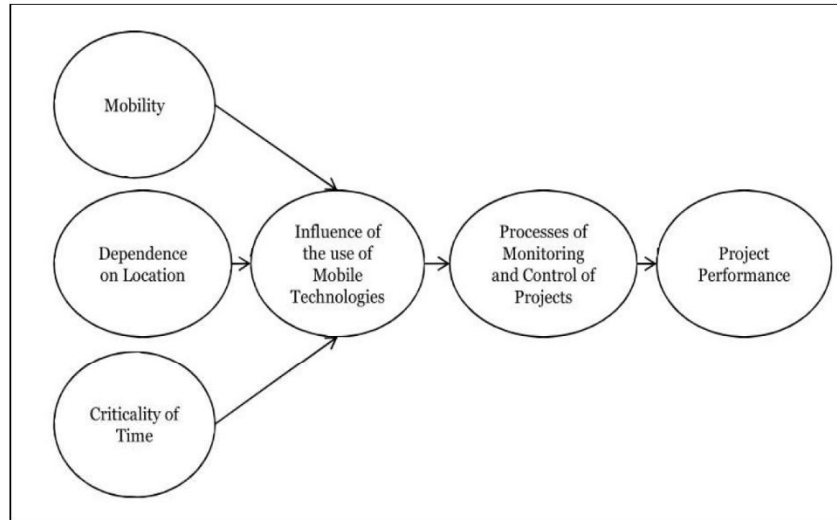
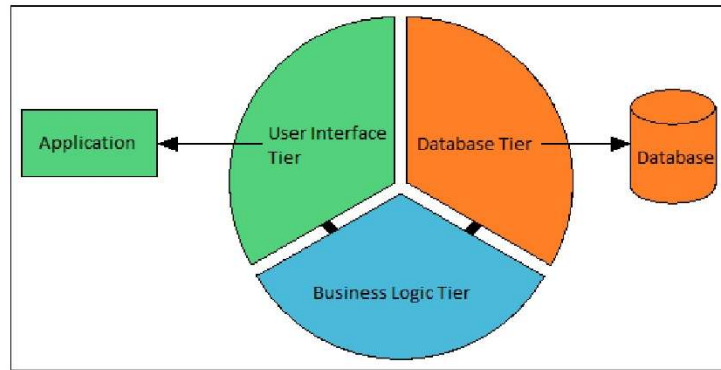


Figure 3: Influences on mobile technology use (Comin et al., 2014)



Figure 6: Electricity meter with kWh output (Zietsman, 2015)

Zietsman (2015) developed a mobile application to capture the meter readings for electricity and water directly into an environment database. The application makes use of barcodes applied to the meters to identify each meter uniquely. Figure 7 indicates how the application uses a three-tier approach to communicate with the database.

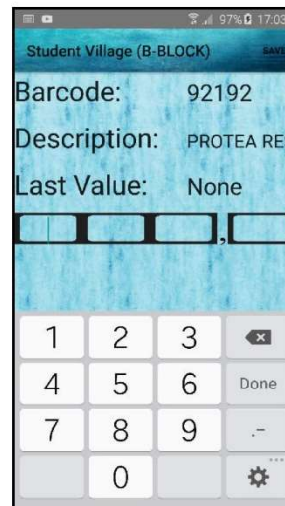


**Figure 4: Three-Tier Layout (Adapted from Marston (2012))**

The application allows the user to scan the barcode of a meter (Figure 8), after which the application will allow the user to input the meter’s reading (Figure 9). Once the all the meter readings are collected, the user can synchronise the captured meter readings with the environmental database, in which the water and electricity meter readings are stored.



**Figure 5: Scanner Screen Layout (Zietsman, 2015)**



**Figure 6: Mobile Application Capture Screen (Zietsman, 2015)**

## RESEARCH METHODOLOGY

This section discusses the research process. The methodology used as well as data collection methods are covered.

### Research Design

The Design Science Research methodology was used in this study for the development of the environmental (electricity and water meter readings data) collection mobile application (Zietsman, 2015). Design Science Research (DSR) is a constructive research paradigm that is widely used by project managers specifically in the Information Technology sector. DSR has three cycles, namely the Relevance Cycle, the Design Cycle and the Rigor Cycle. The Relevance Cycle is used to determine the requirements for the artefacts in this research. The requirements were determined through a literature review and structured interviews with relevant stakeholders. The process of identifying problems in the relevance cycle are iterative in nature. Equivalently the solutions to the identified problems will also be an iterative process (Peffer et al., 2006). The criteria, by which the evaluation of the artefact will take place, are also determined in the Relevance Cycle phase (Hevner & Chatterjee, 2010).

The Design Cycle involves developing and evaluating design alternatives based on the requirements identified in the Relevance Cycle and knowledge from the Rigor Cycle. The final version of the artefact developed in the Design Cycle should demonstrate experimental design and solve the problem identified in the Relevance Cycle. The Rigor Cycle evaluates the artefacts developed in the Design Cycle and in the process determines how the artefacts provide a solution to the problem in the Relevance Cycle. All past knowledge of existing systems in the domain is incorporated into the evaluation of the artefact in the Rigor Cycle.

Two existing frameworks were used in this study as they gathered data from a variety of sources to assist in the compilation of a sustainability report. The frameworks developed by Jonamu (2014) and Haupt (2015) both included environmental data. The data these frameworks require are obtained from a variety of sources (Figure 10). The economic data is acquired from the ITS ERP database used by NMU. The educational data are a combination of teaching and learning information from the ITS database as well as data acquired from the research office. The environmental data, which could previously not be recorded is a combination of data from the mobile application developed by Zietsman (2015) and other sources. The mobile application records water and electricity data and waste data are obtained from technical management.



Figure 10: Sustainability Data Sources (Authors own construct)

An evaluation of the mobile application revealed the effectiveness of the application regarding accuracy and the capturing time of the environmental data. The next section discusses the reporting of environmental sustainability data and the evaluation of the mobile application.

## **EVALUATION OF THE MOBILE APPLICATION**

This section describes the tests that the mobile application went through for its evaluation phase. The evaluation of the system was done with a User-Centred Design (UCD) process. Due to the limitations of the applications functional environment, the UCD process was customised which resulted in an overlap between the evaluation and development phase of the application.

The mobile application was developed to replace the manual process of capturing the water and electricity meter readings at NMU. The manual process consisted of writing down the meter readings on paper by a field worker and then capturing the readings in an Excel spreadsheet. The mobile application replaced the process to reduce errors in the capturing process and make the data more readily available. Zietsman's (2015) mobile application was a real world implementation and as such was tested in its functional environment.

The mobile application was evaluated in two phases. Both phases recorded the time it took to capture the meter readings with the mobile application as well as the conventional manual method. The functionality of the mobile application relies on operational data for each meter. The first evaluation recorded the average time it took to capture the meter readings with the mobile application as well as the conventional method. The evaluation also validated the operational data for each meter. Between the first and second evaluation, amendments to both the mobile application as well as the database were implemented to improve on the efficiency of the application. The second evaluation concentrated on the time it took to capture the data using the mobile application and well as usability of the application. On average, the capturing time is 93.7 seconds for the conventional method and 76.8 seconds for the mobile application.

Evaluation revealed that both the capturing speed and accuracy of information obtained was increased by using the mobile application. The mobile application lowers the cognitive load of the user and allows researchers quicker access to the meter readings. The next section proposes a framework that will be able to report on all the data required for GRI sustainability reporting by a HEI.

## **PROPOSED FRAMEWORK**

The top level GRI requirements for HEIs based on the G4 guidelines (Global Reporting Initiative, 2013a) are depicted in Figure 11. The Toolbox depicted in Figure 11 is extracts from work done by Haupt (2015) and Zietsman (2015) to indicate some of the Toolbox's components. HEIs do require reports on some business processes, however these reports are not consolidated and depict limited sustainability information (Bosire, Cullen, & Calitz, 2012). Therefore, by consolidating systems developed by Jonamu (2014), Haupt (2015) and Zietsman (2015) it is possible to create a toolbox that can deliver the necessary information to create a sustainability report that adheres to the GRI requirements.

The GRI evaluates an organisation's triple bottom line by looking at the effects of an organisations activities on the economy, social equity and the environment (Stenzel, 2010). The mobile collection app is responsible for collecting the water and electricity meter readings from the different collection points

on campus. The information is then uploaded to the environmental database where the toolbox will use the data to generate the report.

The NMU technical staff are required to visit the physical location of each electricity and water meter on the different campuses weekly, to record the meter readings. The meter readings recorded on the mobile devices are uploaded into the environmental database (Figure 11). The economic, environmental, social and educational data are then extracted through an extract, transform, load (ETL) process to be presented in the HEI GRI sustainability report for NMU.

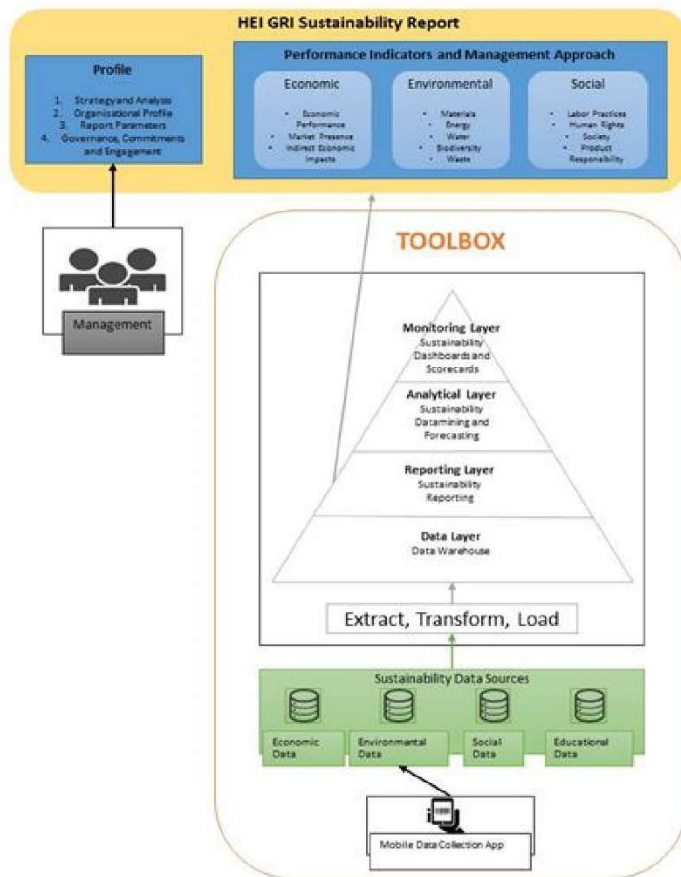


Figure 11: Proposed Framework (Authors own construct)

Sustainability reporting requires a comprehensive report on all sustainability practises in a HEI. However, due to the nature of how reports are currently used in South African HEI environments, there is no easy method for creating a single sustainability report that would include all the reporting requirements for a GRI sustainability report.

## CONCLUSIONS

Sustainability reporting in South African HEIs is receiving increased attention. There is a local and global need to promote sustainability and increase sustainability reporting practises. Most of the components needed to create sustainability reports have been researched in the past. Various systems and frameworks exist to create specific reports even though most of these reports are created for specific use by an entity in a HEI. This leads to reports that are created in a fragmented manner, leaving gaps in the overall reporting process. Most of the tools and mobile technologies necessary to create a complete sustainability report are in place, however no consolidated process exists that can combine these processes for effective use to create a sustainability report.

This paper examined existing sustainability reporting frameworks in a HEI context. A comparison of the sustainability frameworks suggested a lack of the use of mobile technologies. The resulting proposed framework incorporated mobile technologies into the reporting process. The proposed framework is currently in the design and development phase of the DSR methodology. Current research is creating a platform to retrieve and store all the data required to generate an integrated sustainability report in a data warehouse and to produce the first GRI compliant integrated sustainability report for a HEI in Africa.

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