

Project Stakeholder Management at the National Research Foundation (NRF)



Research Proposal_ MBLREP

**Presented to the Graduate School of Business
Leadership
University of South Africa**

**In partial fulfillment of the requirements for the
Masters Degree in Business Leadership
University of South Africa**

By

R M Mathatho_7825-8642

Supervisor: Ms S W Nhlabatsi

Final Submission 30 November 2017

Declaration

I declare that the work contained in this proposal is my academic work done as part of the requirement for MBLREP in partial fulfillment of the degree in Masters in Business Leadership for University of South Africa. Harvard system was used to reference all the research information sourced.

Name: R M Mathatho

Student Number: 7825-8642

Signature: 

Date: 29 November 2017

Reviewed by Supervisor: Ms S W Nhlabatsi

Submitted: 30 November 2017

Acknowledgement

I would like to express my sincere thanks to my supervisor, Ms S. W. Nhlabatsi for her insight, guidance in the discipline of project management, valuable input, technical and academic knowledge toward the completion of this research study.

I wish to thank Dr. N. B. Nthambeline and the NRF Executive for granting me the permission to use their organisation as a case study for my study. Special gratitude goes to Ms M. Julies for assisting me with the information I needed and especially arranging appointments with the NRF Executive.

I would like to thank Prof T. Phasha, who was there with timely advice.

My sincere gratitude goes to my Executive Director, my family especially my little sister Chobedi Mathatho and my daughter Rethabile Mathatho for their encouragement during my study.

Table of Contents

1. Project Stakeholder Management: Proposal.....	11
1.1. Introduction and Background	11
1.1.1. The Global Context	11
1.1.2. The African Context.....	13
1.1.3. The South African Context	14
1.1.4. The Project Management Office Context.....	17
1.2. Problem Statement.....	19
1.3. Research Questions.....	20
1.4. Research Objectives	20
1.5. Research Methodology	20
1.6. Outline of the Research Report.....	21
2. Project Stakeholder Management: Theory and Practice.....	23
2.1. Introduction.....	23
2.2. Definitions	23
2.2.1. Stakeholder Management	23
2.2.2. Types of Stakeholders.....	24
2.2.3. Project Management Office (PMO).....	25
2.3. Management of Stakeholders in a Project Environment.....	26
2.3.1. Stakeholder Management Theory	26
2.3.2. The Project Management Office Theory	36
2.4. Practice.....	41
2.4.1. Global Practice.....	41
2.4.2. Practice in African Continent	45
2.4.3. Practice within the NRF.....	46
2.5. Conclusion	49
3. Research Methodology and Design	50
3.1. Introduction.....	50

3.2. Overview of Research Method	50
3.3. Preferred Methodology for this study.....	55
3.4. Research Design	56
3.4.1. Target Population.....	56
3.4.2. Sample Selection	56
3.4.3. Sample Units	57
3.4.2. Sample Size.....	57
3.5. Data Collection	58
3.6. Research Instrument.....	59
3.7. Data Analysis	60
3.8. Validity and Reliability Constructs of this Research	62
3.8.1. Validity of the measurement instrument	62
3.8.2. Reliability of the measure instrument	63
3.9. Limitation of this Research.....	63
3.10. Ethical issues.....	63
3.11. Conclusion	64
4. Research Results.....	65
4.1. Introduction.....	65
4.2. Response Rate.....	66
4.3. Summary of Data Analysis Techniques	66
4.4. Respondents Profile.....	67
4.4.1 Gender	68
4.4.2 Age	69
4.4.3 Ethnic Group	70
4.4.4 NRF Division	71
4.4.5 Brief Description of Project Management Background.....	72
4.5. Which Project Stakeholders play the most important role	73
4.5.1 Respondents perceptions on project implementation	73

4.5.2	Respondents perceptions on project stakeholder identification	74
4.5.3	Respondents perceptions on key stakeholder and their role.....	74
4.5.4	Respondents perceptions on stakeholder influence	75
4.5.5	Respondents perceptions on why 4.5.4. have the most influence.....	76
4.5.6	Respondents perceptions on monthly/quarterly meetings	76
4.6.	Gaps between best Practice Stakeholder Management and Application at the NRF	77
4.6.1	Respondents perceptions on critical success factors (CSF)	77
4.6.2	Respondents perceptions on CSF that have influence	77
4.6.3	Respondents perceptions on the NRF stakeholder register.....	77
4.6.4	Respondents perceptions on the NFR's communication with stakeholders	78
4.6.5	Respondents perceptions on stakeholders that have control.....	78
4.6.6	Respondents perceptions on stakeholders cause project stoppage	79
4.6.7	Respondents perceptions on HOW project stakeholders are managed.....	80
4.6.8	Respondents perceptions on stakeholders that are managed proactively	82
4.6.9	Respondents perceptions on project management stakeholder model.....	82
4.6.10	Respondents perceptions on how to improve stakeholder processes.....	83
4.7.	Presentation of Findings: Key Informal Interview	84
4.8.	Conclusion	86
5.	Research Analysis and Synthesis	87
5.1.	Introduction.....	87
5.2.	Research Objective	87
5.3.	Demographic Biographical of the Respondents.....	88
5.4.	RQ 1: Which Project Stakeholders plays the most important role in Project Outcomes?.....	88
5.4.1.	Stakeholder Management	88
5.4.2.	Type of Stakeholders	90
5.4.3.	Project Management Office (PMO).....	91
5.5.	RQ 2: What are the Gaps between best Practice Stakeholder Management and Application at the NRF?.....	92
5.5.1.	Stakeholder Management and The Project Management Office (PMO)	92

5.6. Conclusion	95
6. Conclusions and Recommendations	96
6.1. Conclusions	96
6.1.1. Stakeholder Management	96
6.1.2. Project Management Office	96
6.2. Recommendations	97
6.2.1. Recommendations Based on Stakeholder Management	97
6.2.2. Recommendations Based on the Project Management Office	98
6.3. Recommendations for Future studies	98
Reference	99
Annexure A: NRF Questionnaire	103
Annexure B: Ethical Approval	104
Annexure C: Supervisor Letter	105
Annexure D: Turnitin Report	106

List of Figures:

Figure 2.1 Two types of stakeholders.....	24
Figure 2.2 Stakeholder Theory.....	26
Figure 2.3 Saliency Model	29
Figure 2.4 Project Management Stakeholder Model.....	32
Figure 2.5 Stakeholder Matrix	34
Figure 2.6 ICSU Stakeholder Model	42
Figure 2.7 ICSU Stakeholder Stages.....	42
Figure 2.8 ARC Project Implementation Model.....	44
Figure 2.9 TETFund Stakeholder Model	45
Figure 2.10 NRF Stakeholder Management Process	46
Figure 2.11 NRF Communication Plan.....	47
Figure 2.12 Matrix Organisation Structure	48
Figure 4.1 Gender.....	68
Figure 4.2 Age	69
Figure 4.3 Ethnic Group.....	70
Figure 4.4 Division at NRF.....	71
Figure 4.5 Project Management Background.....	72
Figure 4.6 Stakeholder Management within NRF.....	73
Figure 4.7 Stakeholder Influence	75
Figure 4.8 Stakeholder that have control	79
Figure 4.9 Stakeholder that cause stoppage on project	80
Figure 4.10 Project Stakeholder managed within lifecycle	81
Figure 4.11 Stakeholder Model.....	82

List of Tables:

Table 2.1 Project Stakeholder Processes.....	36
Table 2.2 Project Cycle	39
Table 3.1 Research Designs in Qualitative Method	51
Table 3.2 Weaknesses & Strengths Qualitative Method.....	52
Table 3.3 Weaknesses & Strengths Quantitative Method	53
Table 3.4 Difference between Qualitative and Quantitative Method.....	54
Table 3.5 Data Analysis.....	61
Table 4.1 Breakdown of the Respondents	66
Table 4.2 Respondents Profile	67
Table 4.2 Key Stakeholder and their Role	75
Table 5.1 Stakeholder Model Best Practice	93
Table 5.2 Project Lifecycle Phases Best Practice	94

List of Abbreviations

APP	Annual Performance Plan
ARC	Australian Research Council
DHET	Department of Higher Education and Training
DST	Department of Science and Technology
FARA	Forum for Agricultural Research in Africa
GMSA	Grants Management and System Administration
HEI	Higher Education Institution
HICD	Human and Infrastructure Capacity Development
IAA	International Association of Academies
ICSU	International Council for Science
IT	Information Technology
IR	Institutional Repositories
IRC	International Research Council
KFD	Knowledge Fields Development
MOU	Memorandum of Understanding
MTSF	Medium Term Strategic Framework
NDP	National Development Plan
NAE	National Academy of Engineering
NAM	National Academy of Medicine
NAS	National Academy of Sciences
NFI	National Research and Innovation Fund
NRF	National Research Foundation
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project Management Office
PO	Project Office
PWC	<i>PriceWaterhouseCoopers</i>
RCCE	Research Chairs and Centers of Excellence
R & D	Research and Development
RISA	Research and Innovation Support and Advancement
RSA	Republic of South Africa
TETFund	Tertiary Education Trust Funds
USAID	US Agency for Information Development

Definitions

Project	A temporary endeavor to create a unique product or services (PMBOK,2013)
Stakeholders	A person, group or organization that has interest in a project or organization
The Standish Group's Report	An independent international IT research advisory firm, known for their reports about information systems implementation projects in the public and private sector

1. PROJECT STAKEHOLDER MANAGEMENT: PROPOSAL

1.1. INTRODUCTION AND BACKGROUND

Project stakeholder management plays an important role in the success of a project, and according to The Standish Group one of the factors that contribute to project failure is the lack of stakeholder management. According to Vos and Achterkamp (2006) stakeholder management involvement in innovation is a task of growing importance. They further indicated that stakeholder classification is a necessary step, and that identifying stakeholders goes beyond this step, and a classification model structure is used to identify different stakeholder groups. The Guide to the Project Management Body of Knowledge (PMI, 2013), “indicates that stakeholder management is the process of identifying all people or organisations impacted by the project and documenting relevant information regarding their interest, involvement and impact on project success”.

1.1.1. The Global Context

PMI (2013) a leading international Project Management Institution, defines stakeholders as “any person or organisation that is actively involved in a project or whose interests may be affected positively or negatively by execution of the project”.

Eskerod and Huemann(2013) indicate that "the current project stakeholder practices represent mainly a management of stakeholders approach, i.e. making stakeholders comply to project needs, whereas a management for stakeholders approach may be beneficial to Sustainable development and project stakeholder management”.

A study by Eskerod, Huemann and Savage .(2016) in Australia indicates that, “dealing with individuals or groups who may affect or be affected by the project processes, contents, or outcomes (i.e., the project stakeholders) has been acknowledged as a core task within project management for a long time”.

Aaltonen (2008) indicates that “stakeholder management is particularly important in global projects, which are carried out in institutionally demanding environments. Existing research suggests that management gives attention to stakeholders whose claims are perceived to be more salient in terms of power.”

According to Greenaway (2006) The International Council for Science (ICSU) is an international organization devoted to international cooperation in the advancement of science, based in America. Its members are national scientific bodies and international scientific unions. ICSU stakeholders are comprised of 120 multi-disciplinary National Scientific Members, Associates and Observers representing 140 countries and 31 international, disciplinary Scientific Unions and 22 Scientific Associates. ICSU is one of the oldest non-governmental organizations in the world and represents the evolution and expansion of two earlier bodies known as the International Association of Academies (IAA; 1899-1914) and the International Research Council (IRC; 1919-1931). An ICSU project includes Technology and Innovation, Science projects. This organization has a similar mandate to the NRF, although within a larger context.

The National Research Council (NRC) based in American, is the research arm of the National Academies of Sciences, Engineering, and Medicine. Stakeholders include the National Academy of Sciences (NAS), the National Academy of Engineering (NAE), and the National Academy of Medicine (NAM). The purpose of the Council is “increased use of scientific research in the development of American industries, the employment of scientific methods in strengthening the national defense and such other applications of science as will promote the national security and welfare”. The NRC has three integrated research and development (R&D) project focus areas, namely technology, Engineering and Life Science. This organization has a similar mandate to the NRF.

The Australian Research Council (ARC) is tasked to identify excellence in research by comparing Australia's university research effort against international benchmarks, creating incentives to improve the quality of research and identifying emerging research areas and opportunities for future development.

The ARC is legislated by Australian Research Council Act 2001, and aims to “facilitate excellent research outcomes for Australia”.

1.1.2. The African Context

Elming and Abrahamsson (2010), indicated that the National Research and Innovation Fund (NRI) in Mozambique has a problem in formulating the needs of the country, and this is best done by the researchers in corporation with stakeholders management. NRI stakeholders include students, researchers, private companies and other government Departments. NRI project focus areas include Science, Technology and Innovation, Institute for Social Study, and support to the education sector.

Fageha and Aibinu (2014)’s article relating to stakeholder perceptions in Nigeria states that there are two types of stakeholders, namely internal stakeholders and external stakeholders. Both internal and external stakeholders should be considered in this study. They indicate that internal stakeholders are formal members who are actively and directly involved in project activities. They include owners, financiers, customers, employees and suppliers. Chinyio and Olomolaiye, (2010) indicate that external stakeholders are those indirectly involved but are directly or indirectly affected by the project; for example, the local community, general public, families and industry actors.

The Federal Government of Nigeria aims to increase the cost of funding in tertiary education in Nigeria. The Federal Government of Nigeria promulgated enabling law to institutions of higher education towards producing high level relevant manpower training, self-reliance, national development through the establishment of both conventional and special universities, polytechnics, monotechnics and colleges of education in different parts of the country by the Federal, state governments, private organisations and individual (Abdulkareem, Fasasi and Akinubi, 2011).

Bako (2005) indicates that the bulk of university research in Nigeria has been self-funded by graduate students; staff in training and academic staff and over 80% has been from salaries and parents. In Nigeria research, funding is capital intensive.

Nigeria has one major research-funding agency called Tertiary Education Trust Fund (TETFund). The Fund was established in pursuant to the TETFund Act 2011 for resuscitation of research activities in Nigeria. The objective is to improve the quality of education in Nigeria, and funding areas of research includes Science, Technology and Innovation, Humanities and Social Science and Cross Cutting Themes. TETFund stakeholder includes:

- a. Ministry of Finance;
- b. National Universities Commission;
- c. National Board for Technical Education;
- d. Federal Inland Revenue Services
- e. Universities;
- f. Polytechnics; and
- g. Colleges of Education

TETFund programme include the following, Academic Staff Training and Development:

- a. Education Support Services; and
- b. Project Management

1.1.3. The South African Context

Rwelamila (2001b) indicates that “it is important to include exposure to critical aspects such as communicating with stakeholders at various levels, team building, business fundamentals, and understanding why the customer is king”. He further indicates that the project plan and its components are some of the most important and fundamental guiding documents for all stakeholders in the execution of a project (Rwelamila ,2001b).

In the Republic of South Africa (RSA) there are a number of researches funding programs such as Horizon 2020. Horizon 2020 is a financial instrument used to implement the Innovation Union, a Europe 2020 flagship initiative aimed at securing

Europe's global competitiveness.

Running from 2014 to 2020 with an €80 billion budget, Europe's new programme for research and innovation is part of the drive to create new growth and jobs in Europe. The funding is for Technology Research and innovation between SA and Europe. Europe has partnered with The Department of Science and Technology (DST) and they have the following programs:

- a. Science and Technology programme in seed funding; and
- b. Cost seed funding.

The primary sources of research funding for the universities is the Department of Higher Education and Training (DHET) by offering block grants to all South African Universities. DHET also offers universities with Teaching Development Grant (TDG) such as Grown Your Own Timber (GYOT) which funds Masters and Doctorates students.

The National Research Foundation (NRF) is a statutory body established through the National Research Foundation Act (No. 23 of 1998). The NRF supports the development and implementation of national strategy and policy.

According to the NRF Annual Report (2015/16) the organisation funds research to support the development of high-end human capacity, and provides access to critical research infrastructure to promote knowledge production across specific disciplinary fields.

According to the NRF Annual Report (2015/16), the NRF promotes public science engagement to inspire a representative and globally competitive research community. Together with higher education institution, research institutes, business, industry and international partners, the NRF acts as a catalyst for knowledge production in science and technology in order to improve the quality of life of all the people of the Republic. The NRF has made significant contribution to the National system of innovation by dramatically increasing:

- a. The number of rated researchers;
- b. The number of Masters students;
- c. The number of Doctoral students and;
- d. The number of PHD's students.

The NRF mandate is contextualized in terms of national priorities as set out in the National Development Plan (NDP) 2030, and the Medium Term Strategic Framework (MTSF) 2014 to 2019. The mandate is also contained in the strategies and policies of the Department of Science and Technology (DST) and other government departments. The NRF also considers shifts in the global research agenda in order to ensure excellence and relevance.

The following key stakeholders are central to the success of the organisation:

- a. The Department of Science and Technology (DST);
- b. The Department of Higher Education and Training (DHET),
- c. The Higher Education Institution (HEI);
- d. Global Funding Agencies;
- e. The Southern African Development Community (SADC)
- f. The Forum for Agriculture Research in Africa (FARA);
- g. The United States Agency for Information Development (USAID).

The NRF provides services to the research community especially at Higher Education Institutions (HEIs) and Science Councils. The NRF informs all the HEIs about funding via an online and issues an open call for all HEIs to apply.

All HEI's are NRF stakeholders and the research will seek to establish how NRF stakeholders are managed.

According to the NRF Annual Report (2015/16), one of the NRF programme is to identify and reach unemployed graduates and place them at host institutions to create opportunities for them to gain work experience and life skill.

The NRF Annual Performance Plan (APP) (NRF, 2015/16) states that the Corporate Relations Division facilitates both internal and external communications brand building and stakeholders relations. The APP (NRF, 2015/16) indicates that the "effective

project stakeholder management will be established in order to keep all the key stakeholders in the loop”. There is no tool in place to address project stakeholder management. Project stakeholder management should happen at the beginning of the project, during the project execution and project implementation. All stakeholders must be involved and have knowledge of how to use the instrument developed NRF funding instruments include the following:

- a. Funding Instruments for Established Researchers;
- b. Funding Instruments for Emerging Researchers;
- c. Funding Instruments for Next Generation Researchers; and
- d. Strategic Investment Funding Instruments.

1.1.4. The Project Management Office Context

The NRF has a Project Management Office (PMO) that is responsible for executing NRF projects. The Project Management Institute (PMI) (2013) describes the project management office as a strategic driver for organizational excellence, which seeks to enhance the practices of execution management, organizational governance, and strategic change leadership.

The PMI (2013) further indicates that the maturity of an organisation with respect of project management systems, culture, style, and organisation structure and project management office can influence the project.

PriceWaterhouseCoopers (2013) indicates that the organisation that executes projects successfully employs effective project management as a tool to drive change. They further indicate that to be successful there should be an alignment between the portfolios with the organization’s strategy using the Project Management Office (PMO).

Hut (2012), indicate that Project Management Office (PMO) is part of the organizational structure and it include administrative functions for the projects.

According to Phan (2015) “PMO is a department or group that defines and maintains standards for project management within the organisation”

Hut (2012), defines “project office (PO) as a short-term facility that is used as an office for a project. A PO is used whenever office facilities are needed near a long-term temporary endeavor”. Fageha & Aibinu (2014) indicate, “Project office is used to achieve the strategic objectives”.

Based on the above literature project management office and project office are not the same.

In 2012, the NRF established a PMO in order to achieve their strategic objectives. The PMO assists the NRF to manage stakeholders and ensure that projects are executed as per the Memorandum of Understanding (MOU) signed by both parties. The PMO receives approval for the new project and arranges a kick off meeting. The PMO coordinates the work of the project team and assists with the work breakdown schedule for all the NRF projects. The PMO experiences challenges with the divisions within which include staff not understanding the role of the PMO resulting in the PMO being unable to perform their duties to their best of their ability.

According to the NRF strategic plan (2020, p.6):

The NRF has multiple stakeholders usefully classified as research providers, research students, users of research and complementors. The NRF aims to support strategy development through the provision of system intelligence to the DST and other strategic stakeholders

At the NRF stakeholder engagement involves identifying and managing relations with the key stakeholders.

The current practice is that the NRF identifies stakeholders and keeps a stakeholder register all the time. Part of the NRF’s mandate is to provide training to all stakeholders. This study will assist the NRF to identify the existing gaps in how project stakeholder management is applied, and provide recommendations for improvement. In addition, the outcome of the study will add to the existing knowledge of the subject

1.2. PROBLEM STATEMENT

Project stakeholders at the NRF are only considered at the beginning and at the end of the project, and not during the full project life. According to The Standish report (2015) one of the factors that cause projects to fail is lack of stakeholder's involvement. The NRF Annual Report 2015/16 reveals that management is exploring a suitable stakeholder management framework, and the organisation is committed to the engagement and partnership with the Department of Science and Technology (DST) and the Department of Higher Education and Training (DHET) as well as Universities.

Currently the NRF identifies potential stakeholders globally and in Africa, once agreement is reached the PO and Legal services finalizes the process. It is important to have stakeholder's management in place in order to achieve the organisation's objectives.

The purpose of this study is therefore to evaluate how project stakeholder management is implemented at the NRF in order to identify the shortcomings and make recommendations to the management to ensure that internal and external stakeholders are managed properly. Meredith and Mantel (2012) indicated that setting strategic goals and selecting projects and project teams, senior leaders in organisations should lead the charge in developing project management in the organization. The PO must develop a stakeholder management framework to be implemented and embedded throughout the full project life cycle.

The study aimed to determine the gaps between best practice project stakeholder and the current practice within the NRF, and identifying influential project stakeholders that have an impact on project outcomes.

1.3. RESEARCH QUESTIONS

The following primary Research Questions (RQ) were addressed:

- a. RQ1 - Which project stakeholders play the most important role in the determination of project outcomes?
- b. RQ2 - What are the gaps between best practice stakeholder management and application on NRF projects?

1.4. RESEARCH OBJECTIVES

The overall objectives of the research were:

- a. Objective 1: To identify project stakeholders that plays the most important role in the determination of project outcomes.
- b. Objective 2: To the gaps between the best practice stakeholder management and to provide a clear process of improving stakeholder management at NRF.

1.5. RESEARCH METHODOLOGY

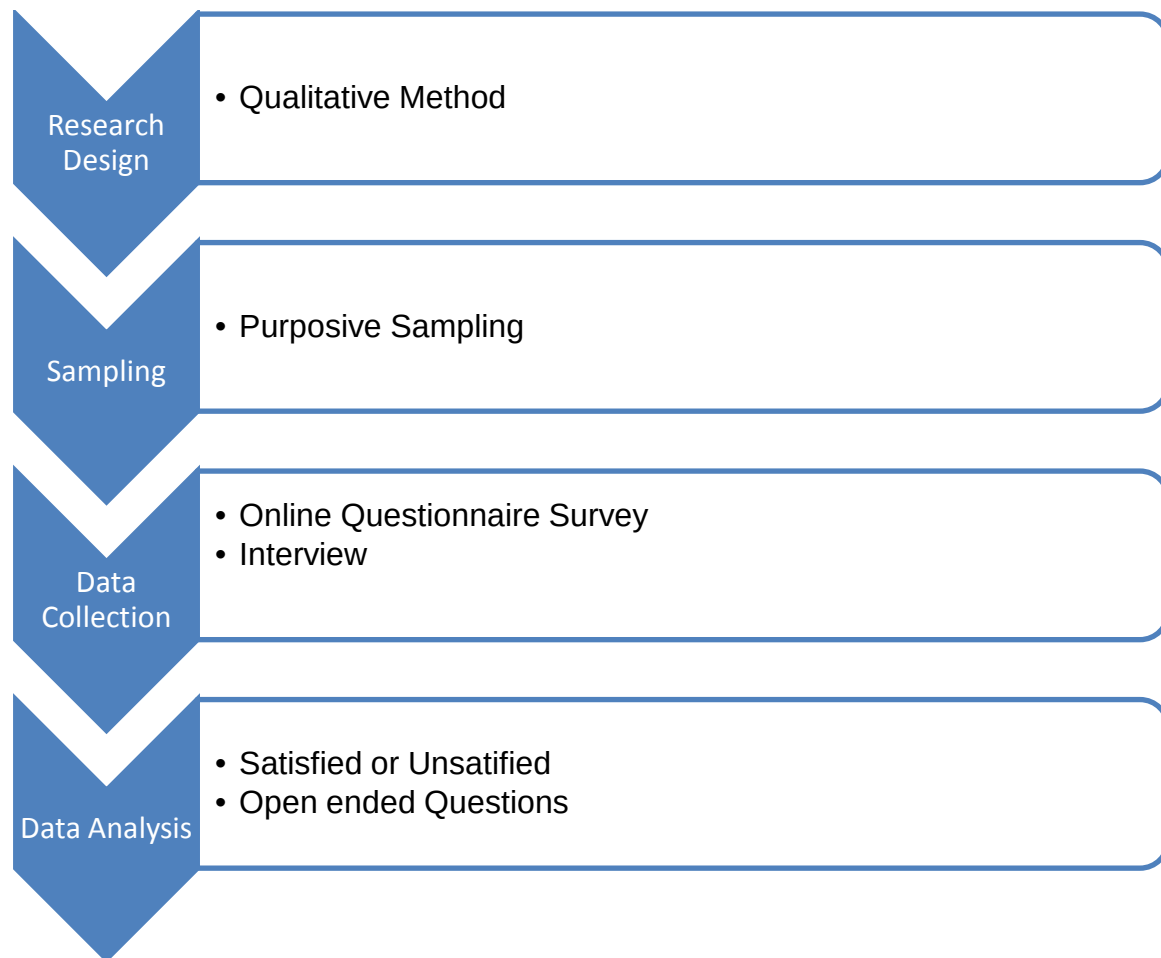
A qualitative methodology was applied for this study, and a survey and interviews were conducted via a questionnaire containing relevant project stakeholder management questions. According to Leedy and Ormrod (2015), “qualitative study is often more holistic and emergent, with the specific focus, design, measurements tools (i.e. observation, interview), and interpretations developing and possible changes along the way”. Leedy & Ormrod (2015) further indicate that the variables emerge from the data, leading to information that helps to explain the phenomenon under the study.

Leedy & Ormrod (2015) also describe primary data as the event within the past decades and can be found in interviews of people who participate in them. They further indicate that secondary data are historians who have interpreted and write about the primary data. Two groups of participants were used, one group was face-to-face

interviews in order to obtain more depth of the respondent's experiences, and the second group was asked to complete the survey.

The study randomly selected a sample size of 20 project stakeholders, 10 internal stakeholders which included 4 top management and 10 external stakeholders.

Data analysis was as follows:

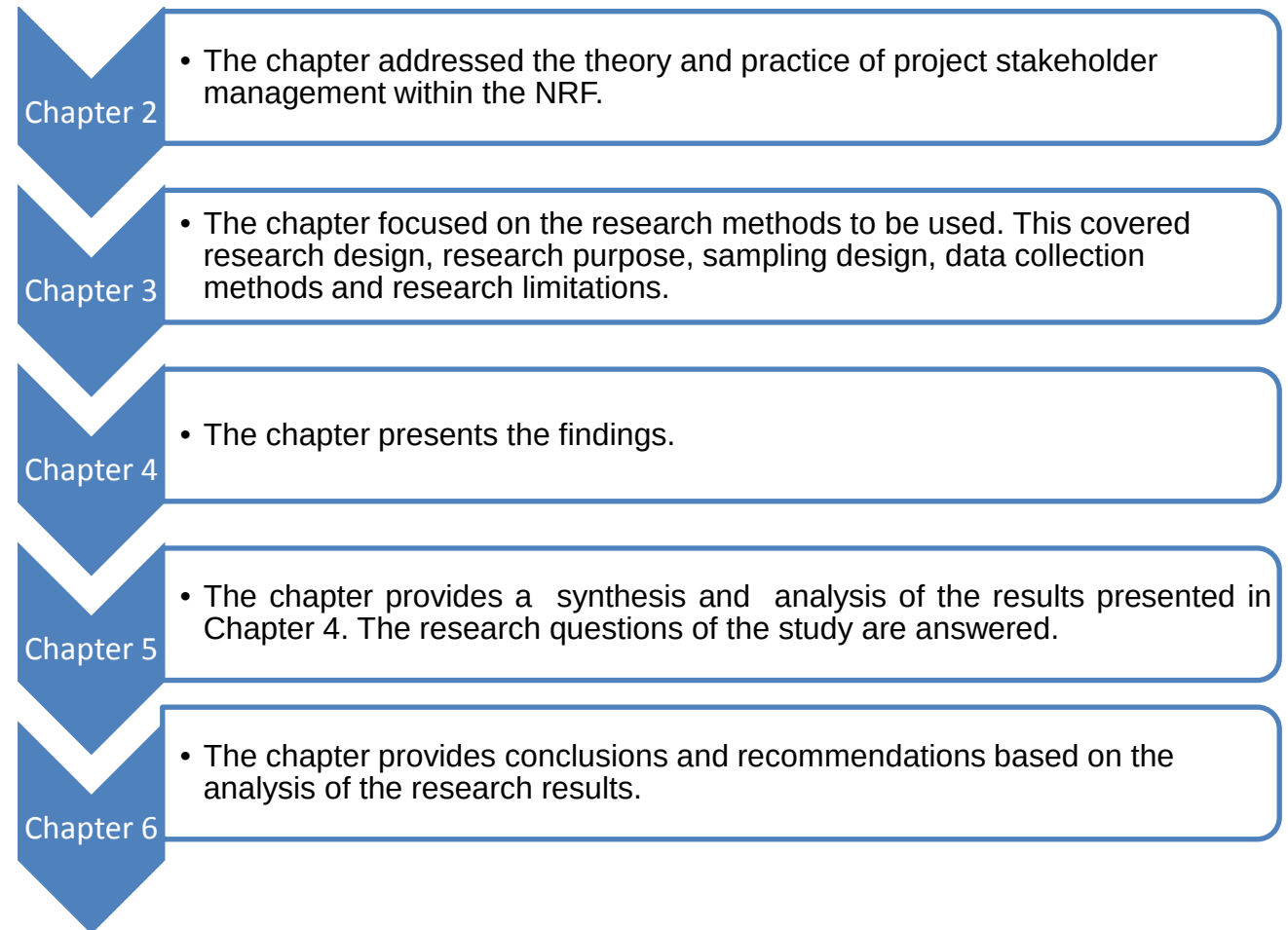


Graph designed by R M Mathatho, 15 March 2017

1.6. OUTLINE OF THE RESEARCH REPORT

The study outlines the importance of project stakeholder's management at NRF. The focus was on identifying project stakeholders that play the most important role in the determination of project outcomes and stakeholder mapping gaps between the best

stakeholder's management and provide a clear process of improving stakeholder management at NRF.



The study was limited to NRF project stakeholders for the past five (5) years.

2. PROJECT STAKEHOLDER MANAGEMENT: THEORY AND PRACTICE

2.1. INTRODUCTION

The chapter provides theory and practice to evaluate stakeholder management in a project environment. Stakeholder theory provides a solid basis for identifying, classifying and categorizing stakeholders. The aim was to review the current theory on stakeholder management in the project management environment.

The focus of the study was on articles on project stakeholder management, including the process model in a project environment published in the last ten years, thus excluding any article published before 2004.

2.2. DEFINITIONS

2.2.1. Stakeholder Management

The generally accepted definition of a stakeholder management process is critical in achieving stakeholder needs and satisfaction, an important project success factor. The Guide to the Project Management Body of Knowledge (PMI, 2013) indicates that stakeholder management is “the process of identifying all people or organisations impacted by the project and documenting relevant information regarding their interest, involvement and impact on project success”. Further, they state that management of stakeholder expectations is “the process of communicating and working with stakeholders to meet their needs and addressing issues as they occur”.

According to Beringer et al. (2013), stakeholder management is considered from both a professional and academic stand point to be extremely important for achieving success in projects. They further indicate that stakeholders have a dual relationship with the performance of the project because their actions can influence the project.

The researchers above agree that stakeholder management is crucial to the successful management of projects.

2.2.2. Types of Stakeholders

The Guide to the Project Management Body of Knowledge (PMI,2013) indicates that “a stakeholder is any person or organisation that is actively involved in a project or whose interests may be affected positively or negatively by execution of the project”.

Stakeholders include investors, suppliers, customers, users and employees. Stakeholders were ignored in the past but this has changed. Organisations realized that projects are failing because stakeholders are not involved throughout the project life cycle. Stakeholders affect the success of the project to be achieved. Friedman and Miles, (2006:1) quote Freeman (1984:46) when they define a stakeholder as “any group or individual who can affect or is affected by the achievement of the organization’s objectives”.

There are two types of stakeholders, namely internal and external stakeholders. Both stakeholders play different roles in a project. Both types of stakeholders are considered in this study. Fageha & Aibinu (2014)state that “internal stakeholders are formal members who are actively and directly involved in project activities while external stakeholders are those indirectly involved but are directly or indirectly affected by the project. Internal stakeholders include employees, users, owners and external stakeholders include suppliers, society, government, creditors shareholders and customers. Users might be internal stakeholders or external stakeholders. Nayab, (2017),is in agreement as presented in **Figure 2.1** below.

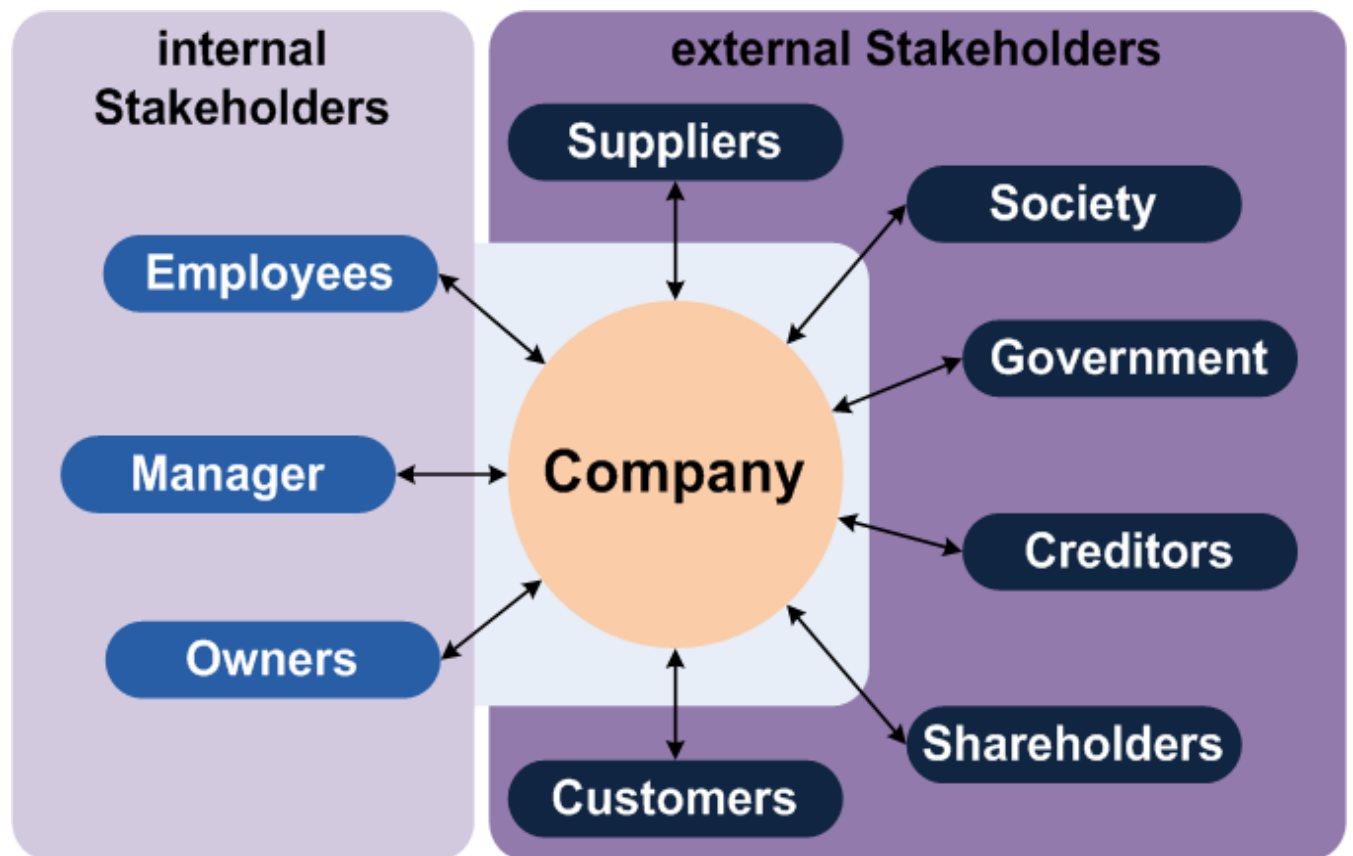


Figure 2.1 Two types of stakeholder (Nayab, 2017).

2.2.3. Project Management Office (PMO)

A Project Management Office (PMO) maintains standards for project management within the organisation. In many organisations the PMO is used to achieve their strategic objectives. The Project Management Institute (PMI, 2013) describes the “Project Management Office (PMO) as a strategic driver for organizational excellence, which seeks to enhance the practices of execution management, organizational governance, and strategic change leadership”.

The institute further indicates that the maturity of an organisation with respect of project management systems, culture, style, and organisation structure and project office can influence the project. According to Meredith & Mantel (2012) “a project management office strives to develop multi-project management expertise throughout the organisation to evaluate interrelationships between projects and to ensure projects are related to the organisation goals”.

2.3. MANAGEMENT OF STAKEHOLDERS IN A PROJECT ENVIRONMENT

2.3.1. Stakeholder Management Theory

The **stakeholder theory** is a theory of organizational management that addresses morals and values in managing an organization. Freeman (2004) adds a new principle, which reflects a new trend in stakeholder theory. Further, he states that “stakeholders may bring an action against the directors for failure to perform the required duty of care”. Stakeholder theory can be seen as three theories, which contributes to the principle of stakeholder concept. Donaldson and Preston (1995), description of the stakeholder theory is presented in **Figure 2.2** below.

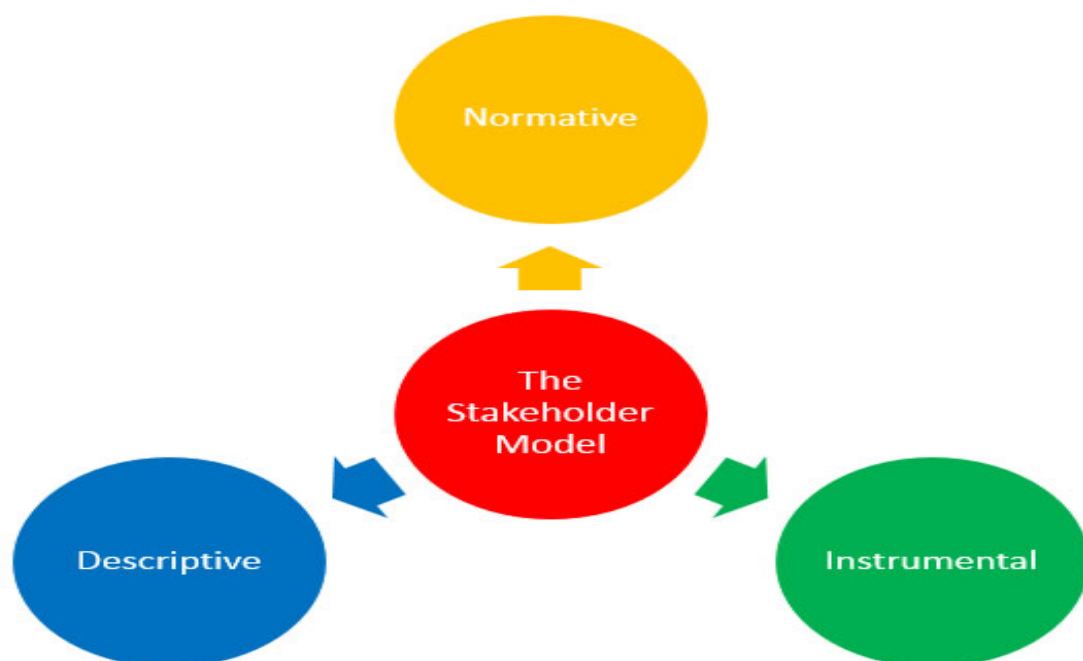


Figure 2.2 The stakeholder theory (Donaldson and Preston,1995)

The stakeholder theory comprises of normative, instrumental and descriptive and are described as follows:

- a. **Normative stakeholder theory**, state how stakeholders and managers should act and view the organisation purpose. Identification of morals linked to the activities or the management of the organisation. The objective of the normative theory is to answer the following questions, what are the responsibilities of the organisation in respect of stakeholders? and why should the organisation take care of the stakeholders interest?. Normative is linked to morals, values and philosophic purposes. Normative is the core of the stakeholder theory. Stakeholders have a legitimate interest in the organisation values.

The stakeholder theory is in a broad sense managerial because it is descriptive, it enables predictions to be made, and it makes recommendations that together constitute stakeholder management (Carroll and Bucholtz,2014).

- b. **Descriptive stakeholder theory**, state how stakeholders and managers behave and how they view their action and roles. The aim of descriptive is to understand how managers deal with stakeholders and how they represent their interest. Stakeholder Theory is useful in helping to understand, and manage organisations, which is why the language of stakeholder theory is used widely in business, not for profit, government etc. (Carroll & Bucholtz,2014).
- c. **Instrumental stakeholder theory**, state how managers should act if they want to work for their interest. Examine stakeholder management and the achievement of various organisation goals. The stakeholder model also allows for the testing of the connections between managing stakeholders and reaching business targets (Carroll & Buchholtz,2014).

The above stakeholder theories maximize organisation profit and maximize stakeholder value. This indicates that if managers treat stakeholder right, the organisation will be more successful in the long run.

The stakeholder theory is more sensitive to globalization, which they find expressed in new power relations. (Jensen and Sandstorm, 2011).Therefore stakeholder management is very important.

Stakeholder management is one of the ten knowledge areas recognized by PMI, (2013) and is the heart of project management. Stakeholder theory is that the organisation has relationships with many organisations that have interest in the project. In the past stakeholders were not important but they became more important in recent years. Organisations realized that one of the factors that contribute to project failure is the lack of stakeholder's involvement. Stakeholder Management is essentially stakeholder relationship management as it is the relationship and not the actual stakeholder groups that are managed (Friedman & Miles, 2006). According to PMI, (2013) stakeholder's management is essential to achieve stakeholder's needs and satisfactions.

For every project the key stakeholders must be identified, and then apply the classification model to determine an approach for managing stakeholder relationships. Jensen & Sandstorm, (2011) state that stakeholders are classified based on power, legitimacy and urgency. Vos & Achterkamp (2006) describe a situation where a project was badly delayed by the oversight in stakeholder identification, using this type of experience to call for refinements in the identification process. They further state, "management of stakeholder involvement in innovation is a task of growing importance" and that "stakeholder classification is a necessary step, although identifying stakeholders goes beyond this step with the classification model structure identifying different stakeholder groups".

PMI (2013) identifies four areas of stakeholder classification as power-interest, power-influence, influence-impact within the salience model. The first three areas are similar and are used to classify project stakeholders. The fourth area is called salience uses three parameters to classify stakeholders. The stakeholders are classified as power, urgency, and legitimacy PMI (2013).

Sign (2017) quotes Mitchell, Agle and Wood (1997) when they identify the salience model. Further they state that while power is a crucial factor in stakeholder salience, the legitimacy and urgency also play a part. Some stakeholders may not have power but they are still important to the organisation and the project.

Sign (2017), provided the salience model presented in **Figure 2.3** below

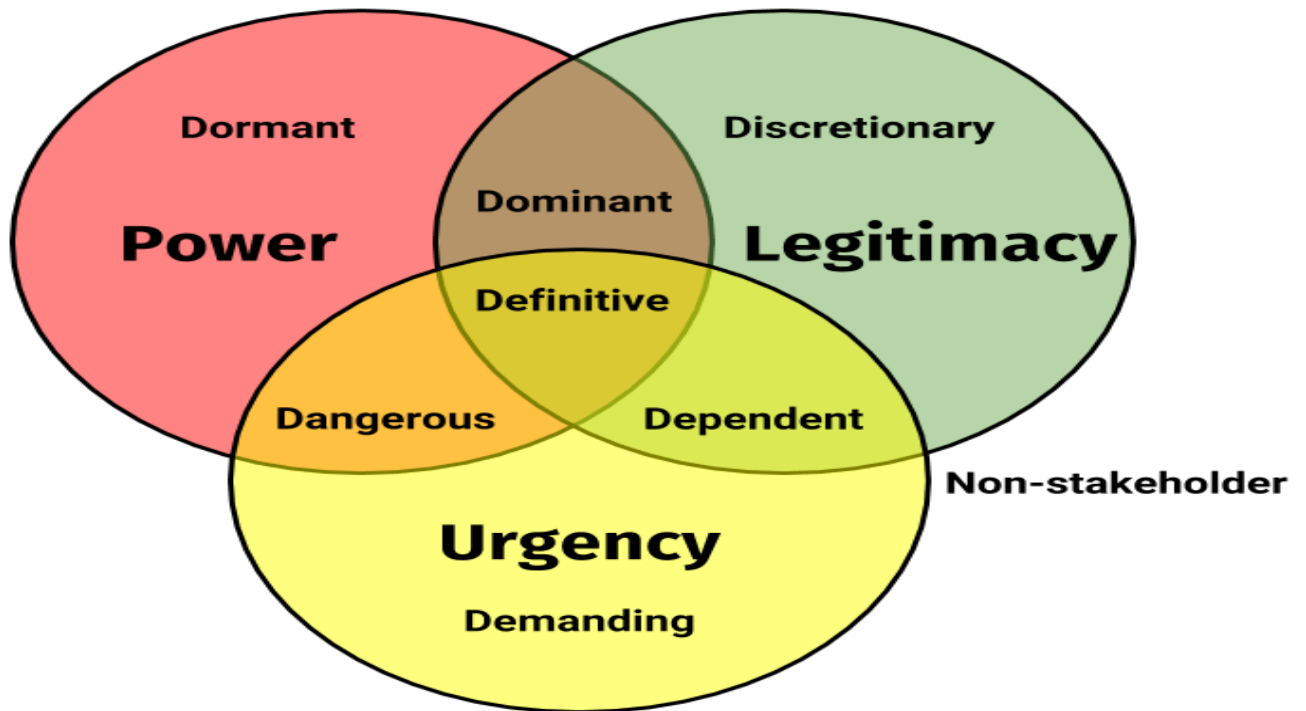


Figure 2.3 Salience Model (Mitchell, Agle and Wood ,1997)

The salience model is applied for stakeholder classification as follows:

Power is defined as authority and influence in the organisation and on the project outcomes. The probability that one stakeholder will carry out his or her own will. The power of the stakeholder may come from their ability to withdraw resources from the project.

Legitimacy is the assumption that action of any organisation is appropriate within the system norms and values. An organisation may pay more attention to stakeholders that are legitimate. Legitimate stakeholders are those that really count on the project.

Urgency is when stakeholders claim immediate attention. Urgency is based on two attributes, namely stakeholders need time (time-sensitivity) and critical to the stakeholder.

There are eight types of stakeholder, as explained in the salience model as follows:

Dormant Stakeholders only possess power but have no legitimacy or urgency. They do not require active engagement. The Project manager must recognize them.

Discretionary Stakeholders are legitimate but have no power, and their interests are not urgently considered. A stakeholder may be legitimate but unless the stakeholder has power or needs urgent attention, they would not receive the attention of the project manager.

Dominant Stakeholders are those who possess both power and legitimacy, but not urgency. These stakeholders have legitimate stakes in the project and also possess the power to act on those stakes. They matter to the project manager. The project manager needs to actively engage these stakeholders and have a strategy to manage these stakeholders.

Definitive Stakeholders possess power and legitimacy, and have an urgent need. They demand the utmost attention from the project manager and need to be attended to in a timely manner.

Dangerous Stakeholders possess power and urgency but do not possess the legitimacy to their claims. Such stakeholders can be coercive or even violent in some cases. The Project manager needs to recognize these dangerous stakeholders and the threat they bring to the project.

Dependent Stakeholders lack power but have urgent and legitimate stakes in the project. They rely on other “powerful” stakeholders to uphold their interests

Demanding Stakeholders are those who have urgent demands, but no power or legitimacy. They create “noise” and can be irritants, but are not dangerous to the project as they lack the power and legitimacy.

Non-Stakeholders or Potential Stakeholders. According to this model, entities with no power, legitimacy, or urgency in relation to the project are not stakeholders and will be perceived as having no salience by the project team. In summary, definitive stakeholders must be managed closely. Dominant and Dangerous stakeholders must

be kept satisfied. Dependent stakeholders must be informed all the time. Dormant, Discretionary and Demanding stakeholders must be monitored all the time.

The purpose of the organisation should then be to manage the interests, needs and viewpoints of all the above stakeholders. It must act in the interests of the stakeholders as their agent, it must act in the interests of the organisation to ensure the survival of the firm, and in so doing safeguard the long-term stakes of each group (Friedman & Miles 2006: 1)

Stakeholder management processes use a combination of tactics to inform decision making and guide an organisation towards the achievement of its business objective. Stakeholder management can mean different things to different people Eyiah-Botwe, Aigbavboa, and Thwala, (2016) indicated that an effective and formal stakeholder management process is critical in achieving stakeholder needs and satisfaction, which is an important project success factor. They further associate project failures to poor stakeholders' performance, the absence of a formal stakeholder management process ,industry challenges, and lack of proper documentation in developing countries. PMI, (2013) describes the Project Management Stakeholder process as presented in **Figure 2.4** below

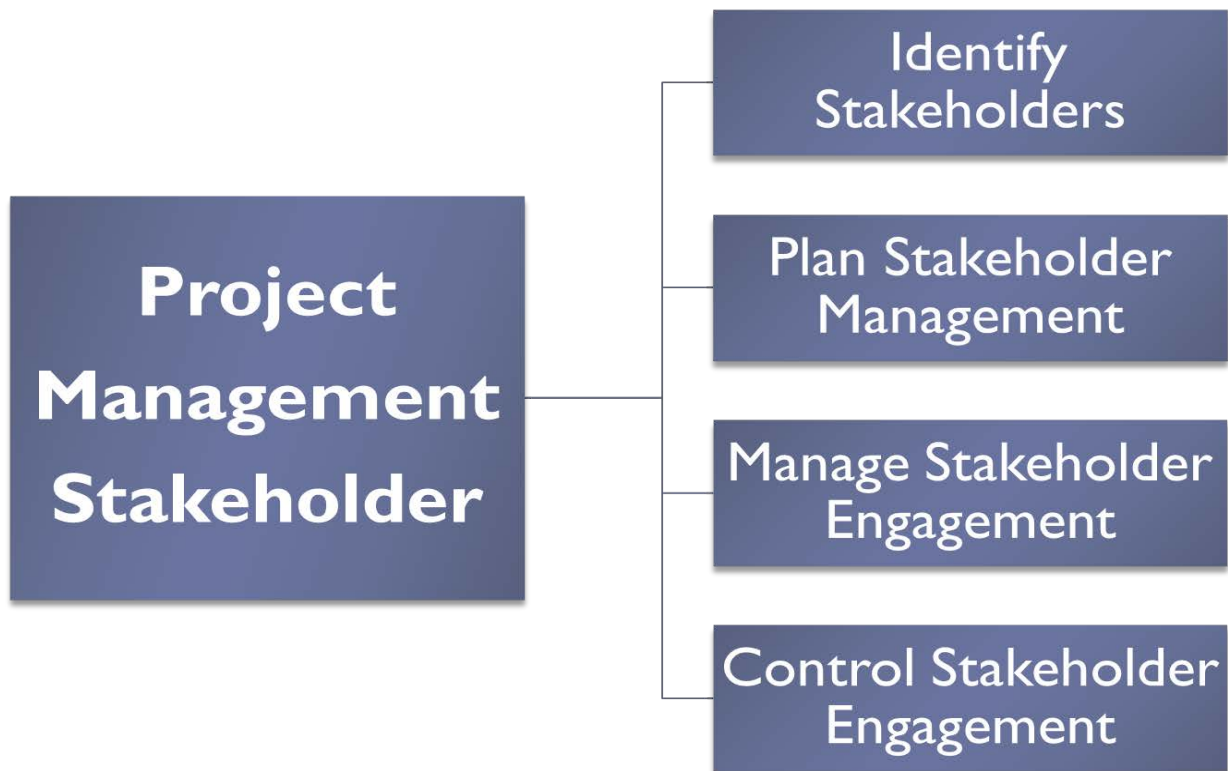


Figure 2.4 Project Management Stakeholder Model (PMI,2013)

The tactics of the stakeholder management process are identified below:

- a. **Identify Stakeholders:** One crucial step in stakeholder analysis is to identify the various stakeholders. The best approach is a priority list that defines the preference and set limits on the number of stakeholder, based on the resources available.
- b. **Plan Stakeholder Management:** Potential users of the information and devise a plan for using the information. The sponsor or initiator of the stakeholder should lead the issues.
- c. **Manage Stakeholder Engagement:** Engage and manage stakeholder by understanding each stakeholder attitude and develop targeted communication.
- d. **Control Stakeholder Engagement:** Monitor and manage stakeholder relationships.

Stakeholder Analysis is a technique used to identify and assess the influence and importance of key people, groups of people, or organisations that may significantly impact the success of your activity or project (Friedman & Miles 2006).

Abalone, (2011), identifies project stakeholder analysis as follows:

- a. Data collection concerning project stakeholders and their characteristics;
- b. Stakeholder identification and classification;
- c. Formulation of stakeholder management strategy based on the results of stakeholder identification and classification.

There are five steps which guide the process of identifying the right stakeholder during the lifecycle of the project, and develop the most appropriate communication strategies for engaging these important stakeholders (Bourne, 2011). The five steps are as follows:

Step 1: Identify all stakeholders and document their expectations.

Step 2: Prioritise.

Step 3: Map the current stakeholder community, showing each stakeholder's relative importance, power and influence.

Step 4: Engage through understanding each stakeholder's attitude to the activity and develop targeted communication.

Step 5: Monitor the effectiveness of this communication

The first step in stakeholder analysis is to identify all stakeholders, the next step is to work out their power, influence and interest, the final step is to monitor the effectiveness of the communications. This can be done on a stakeholder map, as indicated in **Figure 2.5** below:

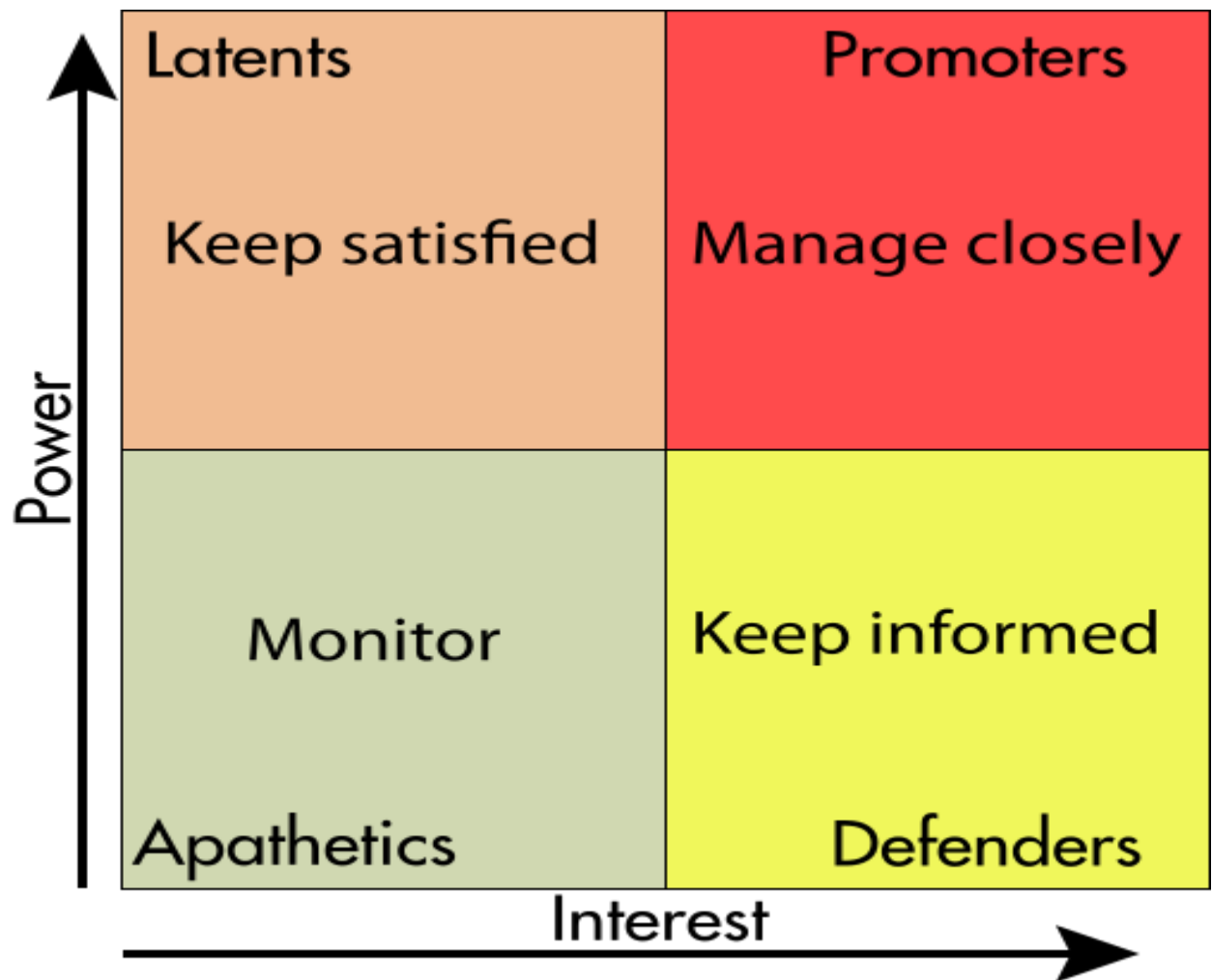


Figure 2.5: A stakeholder Matrix (Bourne, & Walker, 2005)

Power stakeholders are able to influence the project outcomes and the level of interest they have in the project. Power stakeholders are defined as authority and influence in the organisation and on the project outcomes. They must be kept satisfied all the time as they can stop the project if they are not happy.

Latents - keep satisfied, meet their needs, engage and consult on interest area.

Promoters - manage closely; they are involved in decision-making bodies.

Apathetics - monitor; inform via general communication such as e-mails.

Defenders - keep informed and consult on interest area.

A **stakeholder strategy** guides how to communicate and involve the stakeholders during the project phase. It helps to define who should participate during the project phase. To formulate appropriate stakeholder strategies, the following elements must be considered:

- a. Approach to involve stakeholders;
- b. Meeting stakeholders' expectations;
- c. Create buy-in and ownership;
- d. Use influence of stakeholders to the project advantage;
- e. Best method to communicate with stakeholders;
- f. Eliminate negative impact of stakeholders.

PMI, (2013), is placing increasing emphasis on stakeholder management, and has elevated it from being just a part of communications management to its own knowledge area outright. Project stakeholder process is shown in **Table 2.1** below.

Process Group	Process Name	Process Description
Initiating	Identify Stakeholders	Identifies people, groups, or organizations that could impact or be impacted by a decision, activity, or outcome of the project. Analyzes and documents their interests in and influence on the project.
Planning	Plan Stakeholder Management	Develops appropriate management strategies to effectively engage stakeholders throughout the project.
Executing	Manage Stakeholder Engagement	Communicates and works with stakeholders to meet their needs/expectations, address issues as they occur, and support stakeholder engagement.
Monitoring & Controlling	Control Stakeholder Engagement	Monitors overall project stakeholder relationships, adjusts strategies and plans for engaging stakeholders.

Table 2.1 Project stakeholder process (PMI, 2013).

In order to obtain project success, project manager needs to facilitate the contribution of stakeholders in various project phases, (PMI, 2013). A stakeholder plays a crucial role in the successful management of projects.

2.3.2. The Project Management Office Theory

Project Management Office (PMO) is a division in an organisation that aims at executing the strategic objective of the organisation. Project management is the discipline of planning, organising, securing and managing resources to bring the successful completion of project goals and objectives (Taylor, 2011). He further states that the main objective of a PMO is to establish project administration procedures and ensure that projects are executed according to the approved plan and are within the budget and completed on time. PMOs also act as a repository for project reporting.

The PMO strives to standardize and introduce economies of repetition in the execution of projects, and states that the PMO is the source of documentation, guidance and metrics on the practice of project management and execution (Darling and Whitty, 2016).

Organisations may choose to adopt a specific methodology in the PMO, PMBOK Guide developed by PMI or PRjects IN Controlled Environment (PRINCE2), or others.

Darling & Whitty (2016) state that the definition of the PMO's function has evolved over time:

- a. In the 1800s the project office was a type of national governance for the agricultural industry;
- b. 1939 appears as the earliest instance of the term 'project office' being published;
- c. The 1950s concept of the PMO is representative of what a contemporary PMO looks like; and
- d. Today the PMO is a dynamic entity used to execute the project and ensure that projects are successfully completed as planned.

There is complexity of interconnections in PMO intellectual capital and even though the rationale for PMO establishment is often used to enhance stakeholder satisfaction with projects, often the establishment of the PMO leads to significant dissatisfaction by senior management (Darling & Whitty, 2016).. Further, they indicate that the degree of control and influence that PMOs have on projects depends on the type of PMO structure within the organisation; it can be:

- a. Supportive, with a consultative role;
- b. Controlling by requiring compliance for example and
- c. Directive by taking control and managing the projects.

There are five basic types of PMO, (Taylor, 2011):

A Departmental PMO is a small group that manage specific projects within their own division and with their own resources. Benefit of using own resources is that projects are completed as planned as all resources work toward achieving the project goal.

A Special –purpose PMO is created for a special need. In this case PMO can be created to help with the administration of the special project.

An Outreaching PMO role is to oversee project methodology and practice and standards. PMO has a set of skills they offer to the projects outside of their organisation. Challenge with outreaching PMO is that skill may not be properly transferred to the organisation during the implementation of the project.

An External PMO is created to ensure that organisation customers' projects deliver the return on investment.

An Enterprise PMO operates at corporate level and allows the PMO to gain strategic position in the organisation. Projects are aligned to the strategy of the organisation. An Enterprise PMO gains executive support though out the organization.

A PMO ensures that projects are executed as planned and there are five project lifecycle phases used as shown in **Table 2.2** below:

#	Phase	Description
a.	Initiate	Processes in this group are used to recognize that a project of phase should begin and gathers the commitment required to get it started.
b.	Plan	Part of the project is to devise and maintain a schedule of task and resources that are required to fulfil the business need the project is about to address. The processes in this group are used to identify the plan and resources for that schedule.
c.	Executing	After creating a workable plan, the next set of processes provide the method for coordinating the people and resources to execute the project task
d.	Controlling	Handling unexpected hurdles and keeping promises are two factors involved in ensuring the project is success
e.	Closure	When deliverable of the project are complete, the last set of processes formalize the acknowledgment that the project is complete and bring it to an orderly end.

Table 2.2 Project cycle (PMI, 2013).

The above project phases are linked to the project stakeholder management processes. The PMO is devoted to the investigation of how project management and administration can be organized in order to perform with efficiency, effectiveness and consistency (Meredith & Mantel, 2012).

The PMO might be successful or be unsuccessful. The organisations that execute projects successfully employ effective project management as a tool to drive change. A successful PMO must be tailored to the organisation. The PMO must be supported by the Executive management and aligned to the organisation strategy and objectives. A successful PMO must have an effective project manager in place to help ensure the adoption of successful project management methodology. Stakeholders play a crucial role in the successful management of projects. (Beringer et al., 2013).

Taylor (2011) states that the following factors need to be taken into account in order to have a successful PMO;

- a. Tailor your PMO to your business needs;
- b. Understand your organization's culture;
- c. Reduce surprises;
- d. Start with an audit and action plan;
- e. Act like a business leader and not a project manager;
- f. Focus on people and process
- g. Train employees on the project management
- h. Obtain upper management support
- i. Have proper project management system in place
- j. Be Project orientated organisation (POO)
- k. Project stakeholder involvement.

Other organisations have unsuccessful PMOs because of the following:

- a. Lack of Executive support;
- b. No proper project management system in place;
- c. PMO not tailored to the business needs,
- d. Organisation culture not allowing PMO to function;
- e. Not a project orientated organisation
- f. Employee not trained
- g. PMO lead by accidental project manager
- h. Lack of project stakeholders involvement

Project stakeholders must be involved for the PMO to be successful. Setting strategic goals and selecting projects and project teams, senior leaders in organisations should lead the charge in developing a PMO in the organization. Stakeholder management mapping must be attached to the proposal and no project must be approved if the document is not in place (Meredith & Mantel, 2014).

2.4. PRACTICE

2.4.1. Global Practice

Globally, a number of shareholder management approaches are used. Some of these approaches include the stakeholder salience model, stakeholder analysis, stakeholder map, stakeholder management process, strategic stakeholder management model. **The International Council for Science (ICSU)** in France still needs to define its stakeholders and work on a stakeholder engagement strategy that takes into account the fundamental need for ICSU to maintain its integrity and independence while fulfilling its mission. They use the normative stakeholder theory. and approach stakeholder management in the following way:

- a. Interdisciplinary approach;
- b. Collaboration with stakeholders;
- c. System analysis methodology; and
- d. Project lifecycle process

According to the ICSU, stakeholders are much broader, have interest and direct or indirect relationship and influence, include audience, focus and different by topic some have obstacles.

Good stakeholder management practice is that organisation must implemented stakeholder engagement strategy, which include stakeholder identification, clear purpose of the stakeholders; stakeholder engagement approach. Stakeholder includes funders, broad scientific community and the media. Concerning outreach, the media should be considered as an important stakeholder.

The purpose of stakeholder engagement in ICSU is::

- a. To increase impact on society including policy making;
- b. To mobilize resources; and
- c. To complement ICSU's activities.

One core activity of ICSU is to strengthen internal and external communication among its members, promote collaboration and stakeholders. ICSU use the following stakeholder model, shown in **Figure 2.6** below:

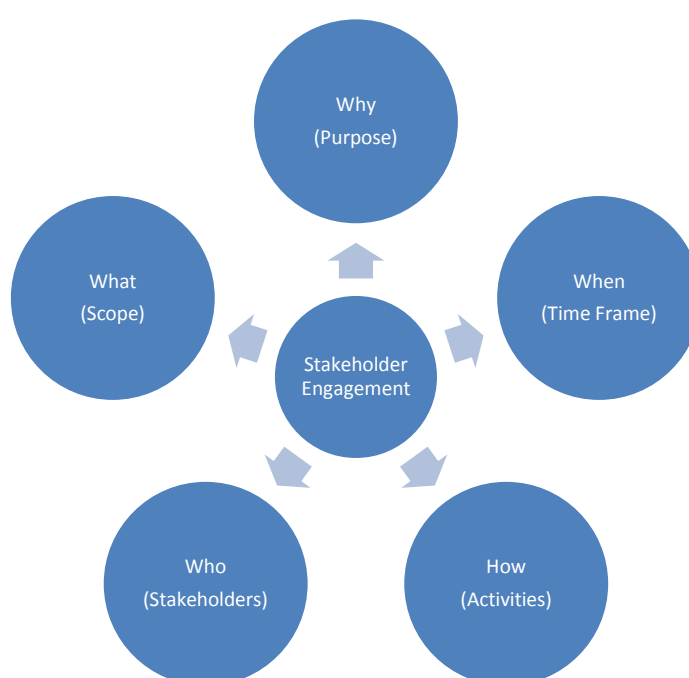


Figure 2.6 ICSU Stakeholder Model (Report 2015)

ICSU also uses a four stage stakeholder model, shown in **Figure 2.7** below:



Figure 2.7 ICSU Stakeholder Stages (Report 2015)

The ICSU has three integrated themes, namely international research collaboration, science and policy and university of science. It utilizes a departmental PMO to execute their projects throughout the country. The ICSU PMO is successful as it is used to achieve the organisation strategy and objectives, and it is supported by upper management. Project stakeholders are involved throughout the project lifecycle. Their projects include Technology and Innovation, and Science projects. ICSU stakeholders includes internal stakeholder which are employees and scientists, and external stakeholders are industry, governments, politicians, scientific journals.

They uses four project lifecycle phases namely initiate, plan, execute and closure to execute stakeholders in their departmental PMO. They linked the project lifecycle to the project stakeholder management processes. The departmental PMO investigates how project management and administration is organized in order to perform with efficiency, effectiveness and consistency.

The **Australian Research Council (ARC)** is a global organisation manages and estimated budget of \$777.7 million, with more than 90% of it going towards providing research support. It ensures that the stakeholders inform policy development. It delivers policies and programmes that are responsive to stakeholder needs, and maintains and improves stakeholder satisfaction with the research partnerships supported though ARC funded research. The ARC also consults stakeholders with regard to potential changes with programmes and policies. They use descriptive stakeholder theory to manage stakeholders and their interest

The following model shown below in **Figure 2.8** is used by the Research office to deal with project implementation.

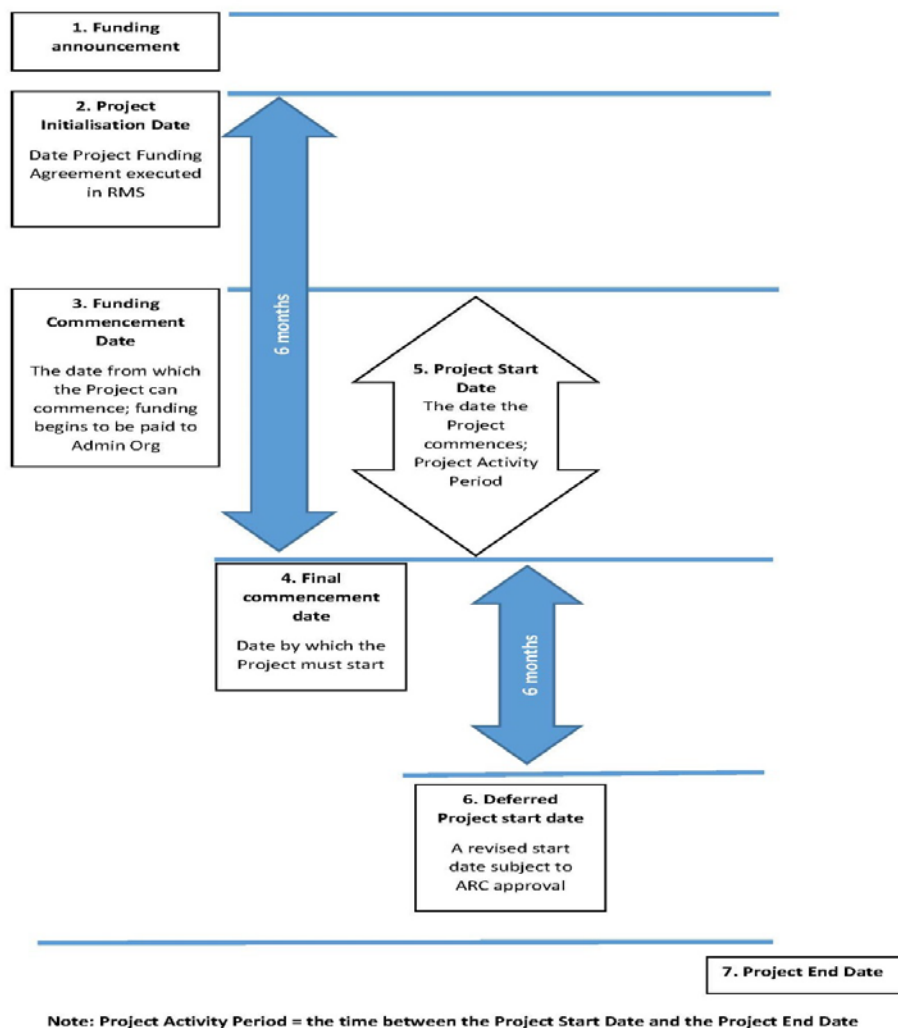


Figure 2.8 ARC Project Implementation Model (Report,2014)

ARC internal stakeholders include employees and external stakeholders are universities, government entities, Industry, businesses and international research agencies. They use a departmental PMO in executing their projects. The ARC PMO is successful as it is used to achieve the organisation strategic objectives and it is supported by upper management.

2.4.2. Practice in African Continent

In Africa the following shareholder management approach are used, namely stakeholder salience model, stakeholder analysis and stakeholder management process. The Stakeholder management process is used more frequently in Africa. The **Tertiary Education Trust Fund (TETFund)** in Nigeria has stakeholders in the education sector. They manage a total estimate budget for NGN825 millions. Programmes include Academic staff training and Development, Education support services and project management.

TETFund uses the stakeholder management process as their framework. They have established a departmental PMO to execute their projects that is successful as it is supported by the executive and it is executing the project as per the organisation strategy.

Internal TETFund stakeholders include employees, and external stakeholders are universities, government entities, Colleges of Education and Polytechnics. They use the descriptive stakeholder theory to manage stakeholders and their interest. The TETFund stakeholder model is shown in **Figure 2.9** below:



Figure 2.9 Stakeholder Model (TETFund, 2014)

2.4.3. Practice within the NRF

The National Research Foundation (NRF) has established effective project stakeholder management in order to keep the entire key stakeholders in the loop. They facilitate both internal and external communications, brand building and stakeholder relations. The NRF applies the Stakeholder management process. Stakeholders are identified at the beginning of the project and they are involved throughout the project lifecycle. They apply the stakeholder process model as indicated in **Figure 2.10** below.



Figure 2.10 NRF Stakeholder Management Process (APP,2016)

The NRF uses the descriptive stakeholder theory to manage stakeholders and their interest. The Department of Science and Technology (DST) is the key stakeholder for the NRF. All projects are funded by the DST, and the NRF conducts quarterly stakeholder workshops to provide a platform for robust discussions. The workshops present an opportunity to share experiences, network and engage in robust discussions to support effectiveness in the implementation of science council mandates. This is done at the beginning of the project with all the key stakeholders both internal and external. Internal stakeholders include employees and external stakeholders are the Department of Science and Technology (DST), South African Universities, the Department of Higher Education and Training (DHET), donors and students.

The NRF compiles a grant register that provides information to all NRF stakeholders on the grants awarded in each financial year. The registers serve as a collaborative platform across disciplines and between institutions,

The NRF is an agency of the DHET, thus reports to the DHET. Most projects consider stakeholders during the planning phase. It uses descriptive stakeholder theory to manage both internal and external stakeholders. It keeps a stakeholder register and meets with the stakeholders as and when there is new information that needs to be shared.

The NRF has a clear stakeholder communication plan in place. The plan includes five communication processes to communicate information to project stakeholders as shown in **Figure 2.11** below

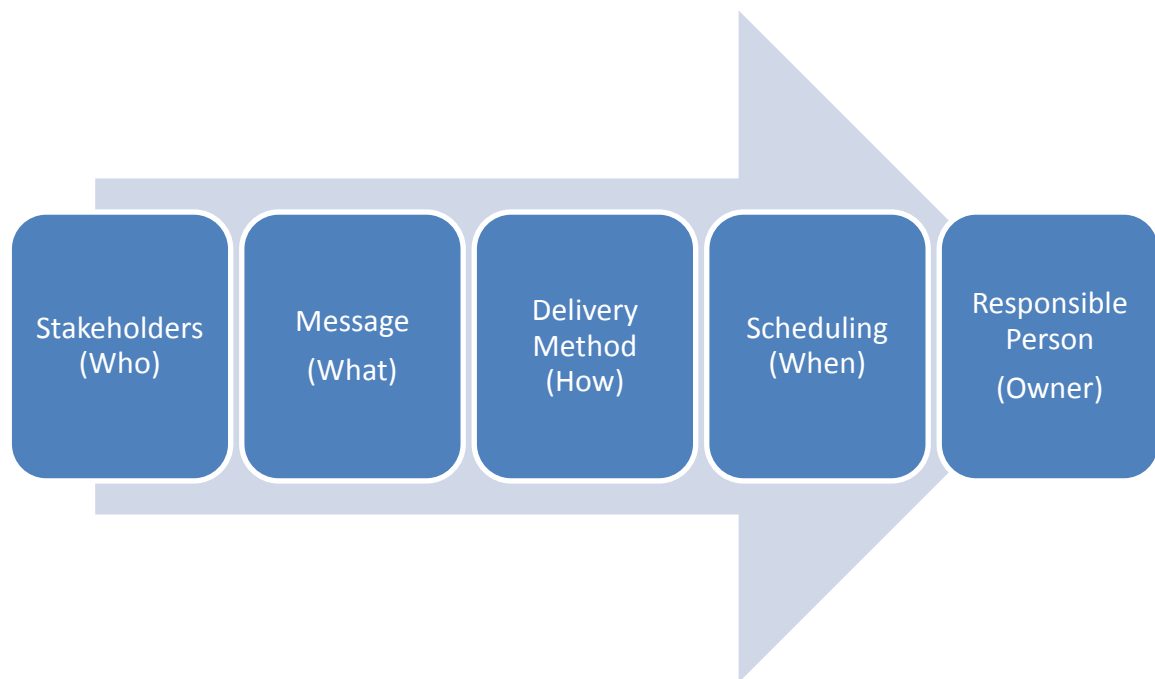


Figure 2.11 NRF Communication Processes (Strategic Plan, 2016)

The NRF uses a departmental PMO to implement its projects, which was established in order to achieve its strategic objectives. It manages projects valued at R1 billion. The PMO helps the NRF to manage stakeholders and ensure that projects are executed as per an MOU signed by both parties.

The NRF uses four project lifecycle phases namely initiate, plan, execute and closure to execute projects within the PMO. The project lifecycle is linked to the project stakeholder management processes.

The NRF uses a Matrix Organisation Structure to execute the projects. This requires cross- departmental cooperation in order to deliver a successful project. All projects are registered in the Departmental PMO and resources are allocated. As indicated in the **Figure 2.12** below, project team comes from different departments.



Figure 2.12 Matrix Organization Structure (APP,2016)

Programmes offered by NRF include Human and Infrastructure Capacity Development (HICD), Research Chairs and Centers of Excellence (RCCE) and Knowledge Fields Development (KFD). All these programmes are funded by the DST. The Department involved include Grants Management and System Administration (GMSA) call management, Research and Evaluation (R & E), GMSA Grants, Information Technology (IT), Research and Innovation Support and Advancement (RISA) Finance and PMO.

2.5. CONCLUSION

This chapter reviewed the theory and practice of project stakeholder management at the NRF. The initial part of the chapter reviewed the definitions of stakeholder management, stakeholder types and PMO. It was confirmed that projects stakeholder management is an important critical success factor in any organisation and stakeholder type must be identified to ensure that their interest is taken into account. Stakeholders include internal and external.

The second part of the chapter reviews the theory and practice of project stakeholder management and theory on project management office. This section reviews stakeholder management models and five types of PMO.

The final part of the chapter gave a clear practice of stakeholder management used globally, Africa and at NRF. The field study is uncovered whether the NRF should improve the project stakeholder management, and the outcome of the study will add to the existing knowledge of the subject.

3. RESEARCH METHODOLOGY AND DESIGN

3.1. INTRODUCTION

The chapter outlines the research methodology for this study and the manner in which ethical standards are maintained. The chapter further displays the systematic process that was followed to reach the appropriate research methodology for this study. These are research design, data collection, data instrument, data analysis, validity and reliability, study limitations and ethical considerations.

Leedy and Ormrod (2015) define research methodology as an attempt to systematically find answers to research questions with the support of demonstrable facts. They further indicate that the “systematic research processes, methods and procedures are applied in order to ensure that a credible conclusion is reached and those acceptable research methods are observed and applied”. Further they define research methodology as the general approach the researcher takes in carrying out the research project. Research methodology refers to the way in which data are gathered for a research project (Blumberg, Cooper and Schindler, 2014)

3.2. OVERVIEW OF RESEARCH METHOD

Research methods are categorized into three types, qualitative method, quantitative method and mixed method. Qualitative method concentrate on words and observation to express reality, while quantitative method considers numbers that represent opinions and mixed method which is a mixed of both qualitative and quantitative analysis.

3.2.1 Qualitative Approach

Leedy & Ormrod (2015), describe qualitative research “as an exploratory method that aims to generate information about unknown aspects of a phenomenon”. They further indicate that a qualitative approach can be chosen for one or more of the following reasons: description, interpretation, verification or evaluation. They furthermore indicate that qualitative research is not useful in research problems where there is a need to

identify a cause and effect relationship. Five research designs in qualitative method as shown in **Table 3.1** below:

Design	Purpose	Focus	Methods of Data Collection
Case study	To understand one person or situation(or perhaps a very small number) in greater depth	One case or a few cases within its / their natural setting	Observations Interviews Appropriate written documents and / audio visual material
Ethnography	To understand how behaviours reflect the culture of the group	A specific field site in which a group of people share a common culture	Participant observation Structured or interviews with "informants " Artifact/ document collection
Phenomenological study	To understand an experience from the participants' point of view	A particular phenomenon as it is typically lived perceived by human beings	In-depth unstructured interviews Purposeful sampling of 5-25 individuals
Grounded theory study	To derive a theory from data collected in a natural setting	A process including human actions and interactions and how they form and influence one another	Interviews Any other relevant data sources
Content analysis	To identify the specific characteristics of a body of material	A verbal, visual, or behavioral form of communication.	Identification and possible sampling of the specific material to be analysed Coding of the material in terms of predetermined and precisely defined characteristics

Table 3.1; Source: Leedy and Ormrod, (2015:p276)

According to Leedy & Ormrod (2015) these are the following weaknesses and strengths of a qualitative research method as shown in **Table 3.2** below:

Weaknesses	Strengths
It is lot more open to personal opinion and judgment	Qualitative method is useful when a subject is too complex to be answered by a simple yes or no hypothesis.
It require a lot of careful thought and planning, to ensure that the results obtained are as accurate as possible	Qualitative methods are not as dependent upon sample size as quantitative method
Design is usually unique and cannot be exactly recreated, meaning that they do lack the ability to be peer reviewed.	Designs are much easier to plan and carry out

Table 3.2: Source: Leedy and Ormrod (2015)

3.2.2 Quantitative Approach

Cooper and Schindler (2011), indicate that quantitative research attempts precise measurement of variables such as opinion, knowledge, time, behavior and attitudes and that the focus of the study is to define, explain and make generalizations to the population rather than understanding and interpreting to generate theory over a long time.

Leedy & Ormrod (2015), describe quantitative research “as a method that explains phenomena by collecting numerical data that are analysed using mathematically based methods such as statistics. Further they describe two major types of quantitative research as descriptive and experimental studies.

The descriptive research study is one that describes the features of the observed phenomenon and examining the situation as it is. Four descriptive designs are defined as follows:

Observation studies: Focus is usually on certain aspects of behaviour, especially if human beings are involved.

Correlation studies: At least two variables or characteristics are measured to see if there is correlation (association) or not.

Developmental designs: Cross sectional study or longitudinal study can be used in this regards. In a cross-sectional study, the researcher collects data at a single point in time and in a longitudinal study one collects data over a lengthy period of time. A cross-sectional study can be an advantage in this study as sampled subjects can be quantified once the relationships are determined.

Survey research: Collects data from one or more people about opinions, attitudes, and experiences and then quantifies the information using statistical tables about the responses.

A quantitative approach involves collecting and analysing numerical data applying statistical tests. With the view of trying to understand the relationship between one thing (independent variable) and another (dependant variable) in a population.

According to Leedy & Ormrod (2015) these are the following weaknesses and strengths of a quantitative research method as shown in **Table 3.3** below:

Weaknesses	Strengths
Quantitative method requires extensive statistical analysis.	Quantitative method is standard across many scientific fields and disciplines.
Clearly and precisely specifying both the independent and the dependent variables under investigation	It follows the statistical analysis, a comprehensive answer is obtained and the results can be legitimately discussed and published.
Quantitative study must be carefully planned to ensure that there is complete randomization and correct designation of control groups.	Limited outcomes to only those outlined in the original research proposal due to closed type questions and the structured format.

Table 3.3; Source: Leedy and Ormrod, (2015)

Kumar (2005) explains the differences between qualitative and quantitative research categories as shown in **Table 3.4** below:

DIFFERENCE WITH RESPECT TO	QUANTITATIVE RESEARCH	QUALITATIVE RESEARCH
Underpinning philosophy	Rationalism: "that human beings achieve knowledge because of their capacity to reason" (Bernard 1994:2)	Empiricism: "the only knowledge that human beings acquire is from sensory experiences" (Bernard 1994:2)
Approach to enquiry	Structured/rigid/predetermined methodology	Unstructured/ flexible/open methodology
Main purpose of investigation	To quantify extent of variation in a phenomenal situation of issue .	To describe variation in a phenomenon, situation, issue etc.
Measurement of variables	Emphasis on some form of either measurement or classification of variables	Emphasis on description of variables
Sample size	Emphasis on greater sample size	Fewer cases
Focus of enquiry	Narrows focus in terms of extent of enquiry, but assembles required information from a greater number of respondents	Cover multiple issues but assembles required information from fewer respondents
Dominant research value	Reliability and objectivity (value free)	Authenticity but does not claim to be value free
Dominant research topic	Explains prevalence, incidence, extent, nature of issues, opinions and attitudes; discovers regularities and formulate theories	Explores meanings, experiences, perceptions and feelings
Analysis of data	Subjects variable to frequency distributions; cross-tabulations or other statistical procedures	Subjects responses, narratives or observation data to identification of things and describes these
Communication of findings	Organisation more analytical in nature, drawing inferences and conclusions, and testing magnitude and strength of a relationship.	Organisation more descriptive and narrative in nature

Table 3.4; Source: Kumar, (2005)

3.2.3 Mixed Methods Approach

Mixed method can be use in a single study. This method is a third concept known to be profoundly comprehensive through integration of thematic and statistical data to investigate a certain phenomenon (Jogulu and Pansiri,2011). The main advantages of mixed method is having a more in depth understanding of the phenomenon studied and also enhancing the validity and reliability of results (Leahey,2007). Furthermore, he indicated the disadvantage of the mixed method is that the discussion dwells too much on theoretical frame with limited practical guidelines on how to implement.

In a mixed method, a researcher must be well-versed in most or all of the following skills set (Creswell and Plano Clark,2011):

- a. Identifying focused and useful research questions,
- b. Formulating and strategically testing hypotheses,
- c. Controlling for confounding variables,
- d. Conducting structured, semi structured and open ended interview,
- e. Analysis qualitative data,
- f. Calculating and drawing inferences from descriptive and inferential statistics.

3.3. PREFERRED METHODOLOGY FOR THIS STUDY

A qualitative methodology was selected for this study. The method is more useful to answer the what, how and why certain phenomena occur or nor occur as sought by the purpose, objectives and research questions of this study. Another reason for choosing a qualitative method is that it provides an array of interpretative techniques which seek to describe, decode and translate the meaning, not frequency of certain occurring phenomena (Cooper & Schindler, 2008).

Qualitative method allows researchers to gain new insight about issues and phenomenon, develop new concepts about the phenomenon and discover the problems that exist within a phenomenon (Leedy & Ormrod, 2015).

Further they indicate that qualitative study is often more holistic and emergent, with the specific focus, design, measurements tools (for example observation, interview), and interpretations developing and possible changes along the way. Primary data is the event within the past decades and can be found in interviews of people who participate in them (Leedy & Ormrod, 2015). They also indicate that secondary data is used by historians who have interpreted and write about the primary data.

For purposes of this study primary data was obtained by administering a written questionnaire among a selection of employees at the NRF and external Stakeholders, and interviews conducted with a selected group of respondents using the same questionnaire.

3.4. RESEARCH DESIGN

3.4.1. Target Population

The target populations were staff members at the National Research Foundation (NRF) that are directly involved in the management of project stakeholders, and internal stakeholders. In addition, some of the NRF's external project stakeholders were also part of the target population.

3.4.2. Sample Selection

A purposive sampling method was used and the units chosen were based on the judgment of the researcher. The respondents were chosen based on their engagement with regard to NRF projects either as an internal or external stakeholder.

The internal stakeholders are group 1 which represents NRF employees. Group 1 includes NRF top management and other employees that are directly or indirectly involved in projects. NRF has a population of 213.

Group 2 consists of external stakeholders represent the Department of Science and Technology (DST), South African Higher Education Institution (HEI) and the Department of Higher Education and Training (DHET).

The DST research funding office has population of 100 and they completed a questionnaire via survey monkey and a follow up e-mail with questionnaire will be forwarded to them in case they have problem opening survey monkey.

HEI research office has population of 3 in each university and they will complete questionnaire via survey monkey and a follow up e-mail with questionnaire will be forwarded to them in case they have problem opening survey monkey.

DHET research funding office has population of 20 and they will complete questionnaire via survey monkey and a follow up e-mail with questionnaire will be forwarded to them in case they have problem opening survey monkey.

3.4.3. Sample Units

Sample unit consists of internal stakeholders consists top management and employees that are directly or indirectly involved in projects and external stakeholders consists of Department of Science and Technology (DST), Higher Education Institution (HEI) and Department of Higher Education and Training (DHET).

3.4.2. Sample Size

Charmaz (2006) suggested that 25 participants are adequate for smaller projects in a qualitative research. Guest, Bunce and Johnson (2006) suggested at least 15 interviews; Cooper & Schindler (2008) recommended a minimum of 5 and a maximum of 15 respondents regardless of the necessity of theoretical sampling; while Green and Thorogood (2009) stated that little new insight comes out of interviews after 20 people have been interviewed.

Sample unit consists of internal and external stakeholders. Internal stakeholder represent Group 1 has a sample size of 10 was selected which consists of 4 top management and 6 employees that are directly or indirectly involved in projects.

Out of the 10 sampled respondents 4 respondents are top management and they will be interviewed. The remaining 6 employees completed a questionnaire via survey monkey and a follow up e-mail with the questionnaire attached was be forwarded to them in case they had a problem opening survey monkey.

External stakeholders represent Group 2 has a sample size of 10 was selected which consist of 3 representatives from the Department of Science and Technology (DST), 4 representatives from South African Higher Education Institution (HEI) and 3 representatives from the Department of Higher Education and Training (DHET).

For this research, it was decided that a maximum of 20 respondents consists of two groups. Group 1 represents internal stakeholders and structured interview will be conducted with 4 top management .The other 6 employees will complete questionnaire via survey monkey. Group 2 represents external stakeholders and 10 will complete questionnaire via survey monkey.

3.5. DATA COLLECTION

Type of data is collected to solve research problem has an important bearing on the research methodology used. Leedy & Ormrod (2015), indicate that different questions lead to the collection of different types of information and different types on interpretation of that data.

The following was used to collect the data:

- a. **Primary data** will be collected through an online questionnaire, which will be e-mailed to the respondents or they were requested to access the questionnaire online using Survey Monkey platform (www.surveymonkey.com). Group 1 and group 2 will complete the survey monkey.
- b. **Structured interviews**, face-to-face and telephonic interviews were held with the identified respondents, depending on the preference and availability of the respondents. Interview will allow for flexibility of discussion and follow-up questions with the aim to elicit in depth information and an understanding of

project stakeholders management in NRF. Group 1 representing top management will be interviewed.

Respondents identified for interview were contacted first via e-mail or telephonically with requests to schedule interview dates in advance. During the interview, notes were taken.

3.6. RESEARCH INSTRUMENT

An interview guide were crafted consisting of three sections, namely biographical data, questions to answer research question 1 and questions to answer research question 2 to address stakeholder's management at NRF. Questions were broken into sub questions to probe and access information.

A questionnaire was completed using survey monkey (www.surveymonkey.com) and same questionnaire was converted into an interview guide for the NRF top management. Interviews and a questionnaire were used as the instruments to collect data for this study. The questionnaire (Appendix A) used for both survey monkey and interview comprised of 21 questions as follows:

- a. Question 1.1 to Question 1.5 : Biographical information of Respondents
- b. Question 2.1 to Question 2.6: These are linked to Research Question 1: Which project stakeholders play the most important role in the determination of project outcomes?
- c. Question 3.1 to Question 3.10: These are linked to Research Question 2: What are the gaps between best practice stakeholder management and application on NRF projects?

The questionnaire was designed in such a way to obtain expert opinion when collecting the data. Open-ended questions were asked to obtain in-depth information regarding project stakeholder management at NRF. It was sent out to identify stakeholders electronically using online survey and the same questionnaire was used for the interview. The responses to the survey will be stored in a database. The questionnaire

will comprise of five biographical information, nine open-ended questions with five short questions and two questions requesting respondents to express their views in terms of how NRF can improve stakeholder management tool.

During the interview, themes were identified and coded for judging the responses numerically for statistical analysis.

3.7. DATA ANALYSIS

Blumberg, Cooper & Schindler (2014) indicated that a systematic analysis of the collected data is essential, even if the research objective is more exploratory. The data received from the respondents was analysed using thematic analysis. The data collected during the field study was coded so that responses can be traced back to the respondents.

All data was collected from the questionnaires and interviews. Results were analysed and findings linked back to two research questions in order to obtain recommendations on how to improve NRF project stakeholder management

Leedy & Ormrod (2015) also describes primary data as the event within the past decades and can be found in interviews of people who participate in them. Further they indicate that secondary data are historians who have interpreted and write about the primary data.

Data analysis was conducted as follows in **Table 3.5** below:

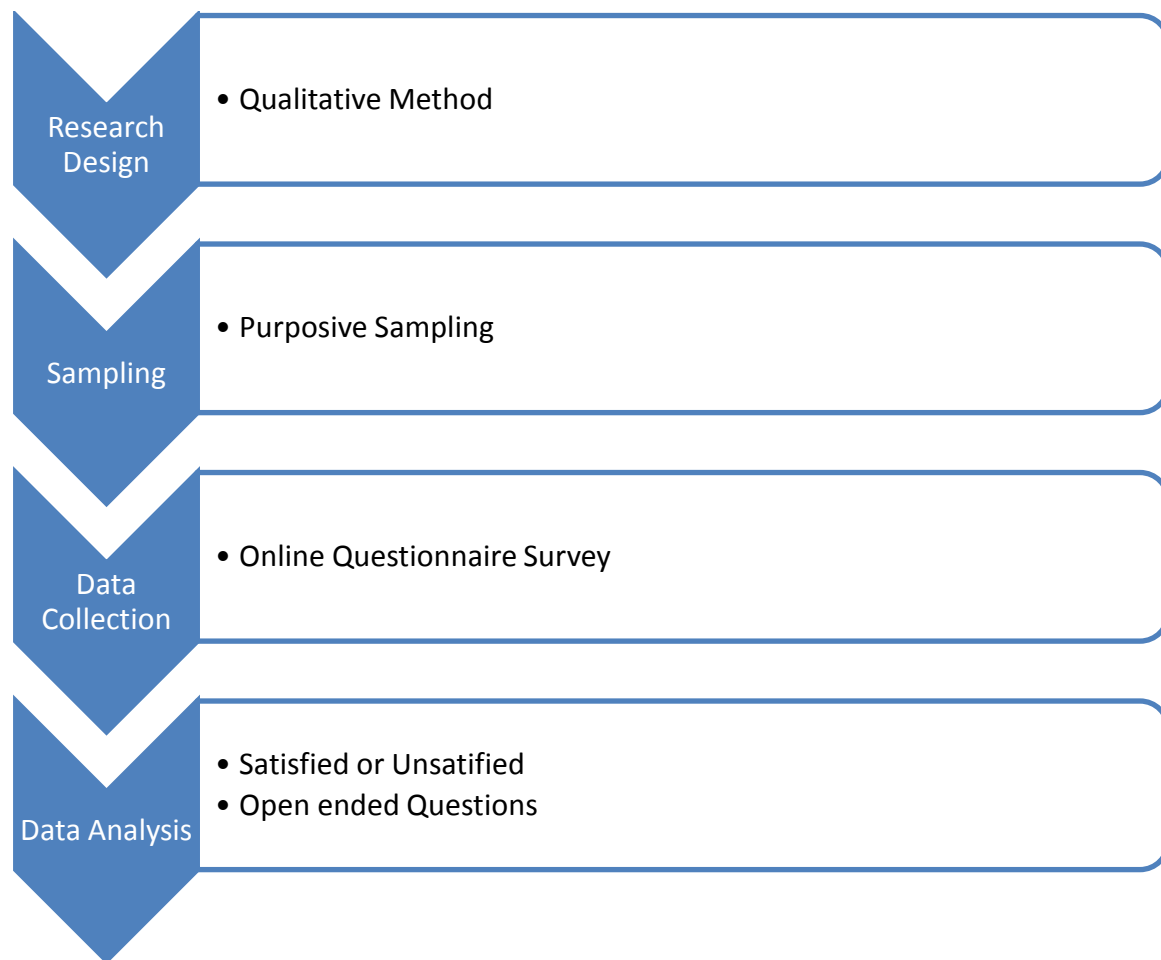


Table 3.5 Source: Graph designed by R M Mathatho, (2016)

3.8. VALIDITY AND RELIABILITY CONSTRUCTS OF THIS RESEARCH

3.8.1. Validity of the measurement instrument

According to Saunders and Lewis, (2012), results obtained from structured interview and self-administered questionnaires raise data quality concerns related to validity from a bias and generalization. Document analysis was also be utilised to check information derived from annual financial statements and strategic documents. The following was applicable to this research.

(a) Credibility

Interviews were recorded to capture the responses correctly. Findings indicate participants' views without alteration and were confirmed by sending back transcripts to the participants to confirm the accuracy of the interview. For the questionnaires the data was collected by Monkey Survey, and the Researcher was not be able to alter the responses.

(b) Dependability

The interview guide was administered to eliminate observation error, ensuring that the researcher asked the same questions to each respondent. Furthermore, the same survey monkey link was sent to all respondents, thus they all responded to the same questions.

(c) Conformability

Findings presented in this study are a culmination of the data collected, which is comprised of sufficient interviews to reach saturation. In addition, the optimum number of respondents responds to the survey via survey monkey.

(d) Transferability

An effort was made by the Researcher to ensure that the interviews/questionnaires could be generalised by interviewing respondents across the organisation who are

involved with projects and university research officers across a number of universities. However, it is expected that generalisability could not be fully achieved, and this was one of the limitations of the research, as it is focused on one company.

3.8.2. Reliability of the measure instrument

Reliability of this study was dependent on the consistency of results obtained from the interviews.

3.9. LIMITATION OF THIS RESEARCH

The study focuses on internal stakeholders in top management and within the NRF PMO, and external stakeholders of the NRF.

3.10. ETHICAL ISSUES

Number of ethical issues pertaining to this study were considered and adhered to:

- a. Approval of the research questionnaire: Collection of data started upon the receipt of the ethical clearance from SBL ethical committee;
- b. Permission letter was obtained from NRF;
- c. Participation to this study was voluntary;
- d. Consent was obtained from each respondent prior to completion of the questionnaire;
- e. Information obtained from the participants was treated confidentially;
- f. Upon the completion of the research, the results will be presented to the NRF Executive.

3.11.CONCLUSION

This chapter addresses all aspects of the research design and methods. It further highlights the research design, target population, sample selection, sample unit, sample size and research questionnaire, instrumentation and data analysis.

Qualitative research may pose challenges and present shortcoming to any research, it was decided that reliability, validity, limitations and ethical issues be presented in full. The next chapter focuses on the results from this study.

4. RESEARCH RESULTS

4.1. INTRODUCTION

The chapter outlines the findings of the analysis of the responses made to the survey monkey questionnaire and interviews conducted. The findings will be presented in line with the methodological descriptions detailed in Chapter 3 (provided information of the research methodology that was adopted in order to achieve the objective of the study).

The purpose of this study is to evaluate how project stakeholder management is implemented at the NRF in order to identify the shortcomings and make recommendations to the management to ensure that internal and external stakeholders are managed properly. Data analysis in this study was done to respond to the research questions and objectives of the study. The data gathered was based on the following research questions:

RQ1 - Which project stakeholders play the most important role in the determination of project outcomes?

RQ2 - What are the gaps between best practice stakeholder management and application on NRF projects?

The survey questionnaire was sent to the respondents via an online tool called survey monkey (www.surveymonkey.com) and the respondent had to complete the questionnaire. An interview guide was developed using the same questions as those on the questionnaire. Two groups were identified, group 1 consisted of internal stakeholders, these were further categorized as top management that were interviewed, and other employees that completed the questionnaire on the survey monkey. Group 2 represented external stakeholders and they all completed the questionnaire on the survey monkey.

The respondents were given four weeks to complete the questionnaire. The final responses were gathered after the closing date and were used to compile a summary of the research results.

4.2. RESPONSE RATE

This study made use of a purposive sampling method. A total number of 21 questionnaires were distributed to the following respondents as shows in **Table 4.1** below:

Table 4.1: Breakdown of Respondents

Respondent Group	Target Sample Size	Respond Count	Respond Rate in %
Group 1	4	3	75%
Group 1	6	5	83%
Group 2	10	6	60%
Total	20	14	70%

There was no disqualified responded, all 14 responded were used. Of 14 responded, 4 were top management and only 3 were interviewed that gives a respond rate of 75%. The remaining 5 responded were received in group 1, which gives a respond rate of 83%. Group 2, only 6 responded were received, which gives a respond rate of 60%. Total response rate for this study is 70%.

4.3. SUMMARY OF DATA ANALYSIS TECHNIQUES

The questionnaire is divided into three sections:

Section A: represents biographical data consisting of questions 1.1 to 1.5.

Section B represents questions that will answer research question 1:

Which project stakeholders play the most important role in the determination of project outcomes? This consists of questions 2.1 to 2.6.

Section C represents questions that will answer research question 2: What are the gaps between best practice stakeholder management and application on NRF projects? This consists of questions 3.1 to 3.10.

The following technique was employed to carry out the data analysis as follows:

Section A, the data was collected and the results were analysed using Microsoft Excel that produced graphs.

Section B and C, qualitative data was collected and results will be presented verbatim.

4.4. RESPONDENTS PROFILE

As stated in Chapter 3, this study made use of a purposive sampling method and the units chosen were based on the judgment of the researcher. The respondents were chosen based on their engagement with regard to NRF projects either as an internal or external stakeholder. The respondents profiles are shown in **Table 4.2** below:

Table 4.2: Respondents Profiles

Group	Stakeholder Type	Target Sample Size	Questionnaires	Role and Responsibility
Group 1	Internal Stakeholders	4	Interview	NRF Top Management
Group 1	Internal Stakeholders	6	Survey Monkey	NRG Employees dealing with projects
Group 2	External Stakeholders	10	Survey Monkey	Donor and Researchers
Total		20		

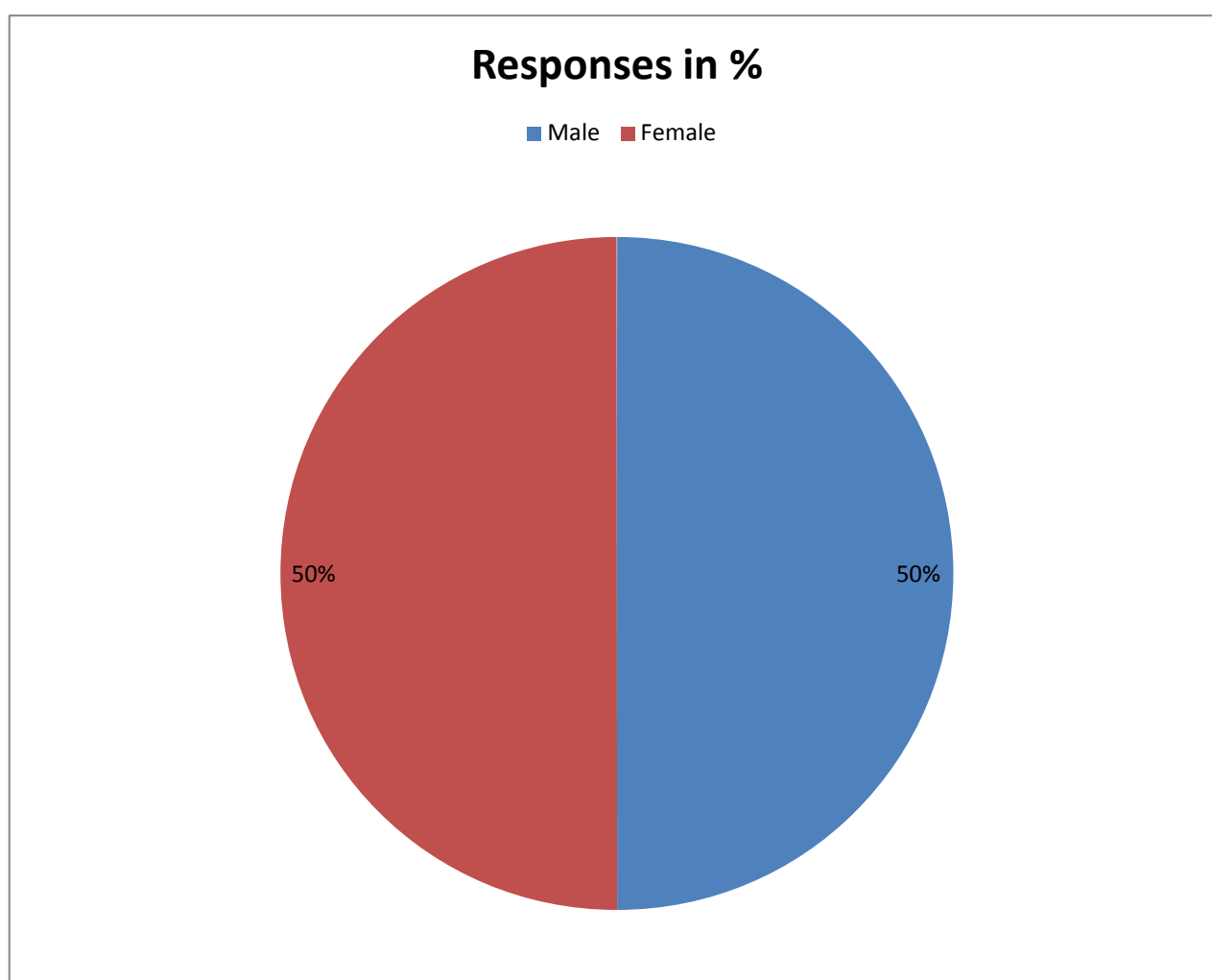
Results for Section A are presented in the Figures below:

4.4.1 Gender

Target sample size for the study was 20 but only 14 respondents were received. Figure 4.1 indicates the gender of the respondents indicating that 50% of the responses were male and 50% were female.

Figures 4.1: Gender

Answer Choices	Responses in %	Responses Count
Male	50%	7
Female	50%	7
Total	100%	14

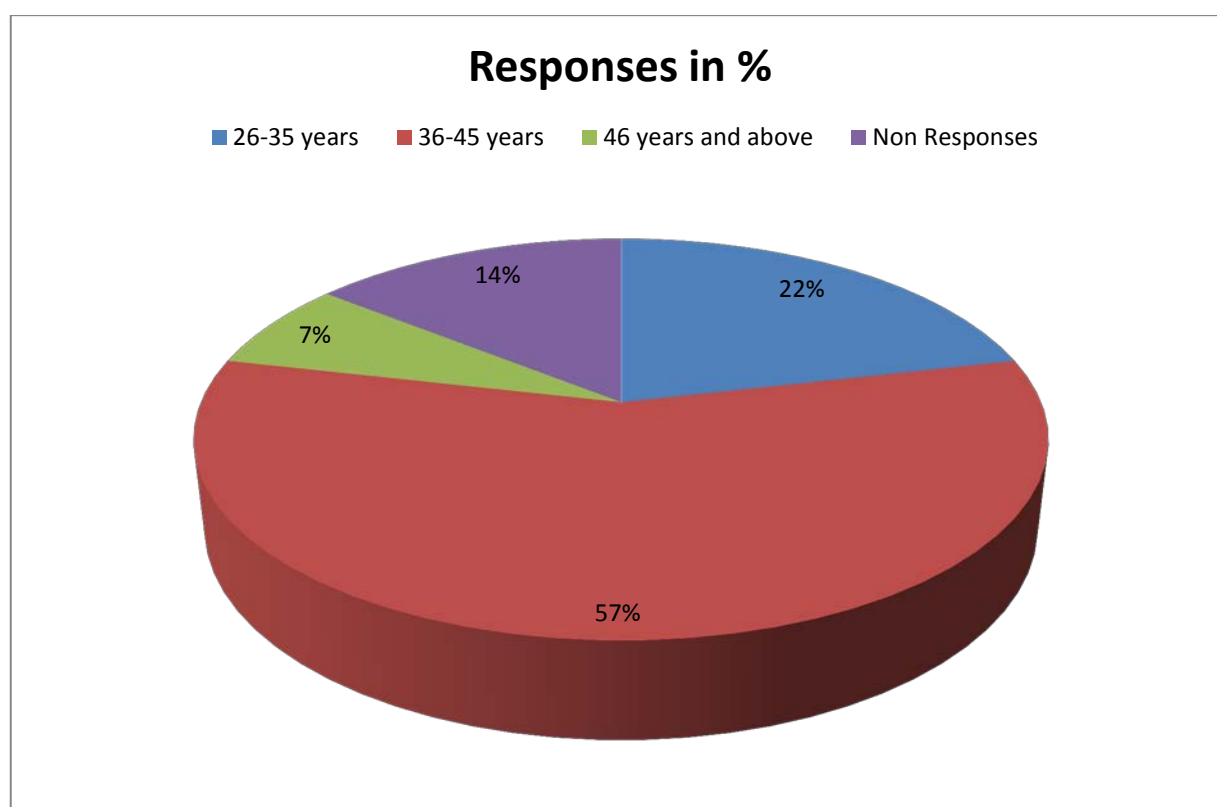


4.4.2 Age

Figure 4.2 indicates the age of the respondents indicating that 21% of the responses are from individuals between the ages of 26 and 35 years. 57% of the respondents aged between 36 and 45 years, 7% of the response 46 years and above and 14% not responded to the question.

Figures 4.2: Age

Answer Choices	Responses in %	Responses Count
26-35 years	21%	3
36-45 years	57%	8
46 years and above	7%	1
Non Responses	14%	2
	100%	14

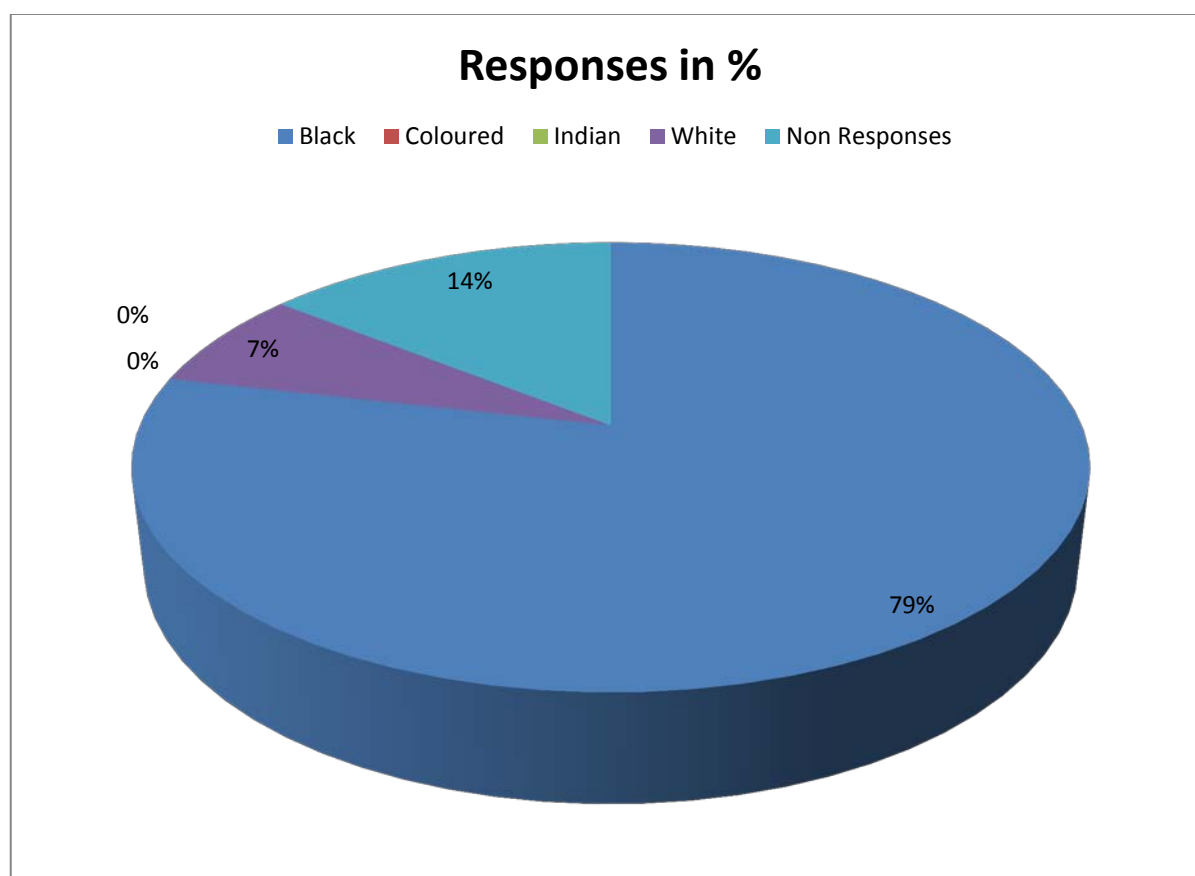


4.4.3 Ethnic Group

Figure 4.3 indicates the ethnic group of the respondents indicating that 79% of the responses are black, 0% coloured, 0% Indian, 7% white and 14% no response.

Figures 4.3: Ethnic Group

Answer Choices	Responses in %	Responses Count
Black	79%	11
Coloured	0%	0
Indian	0%	0
White	7%	1
Non Responses	14%	2
	100%	14

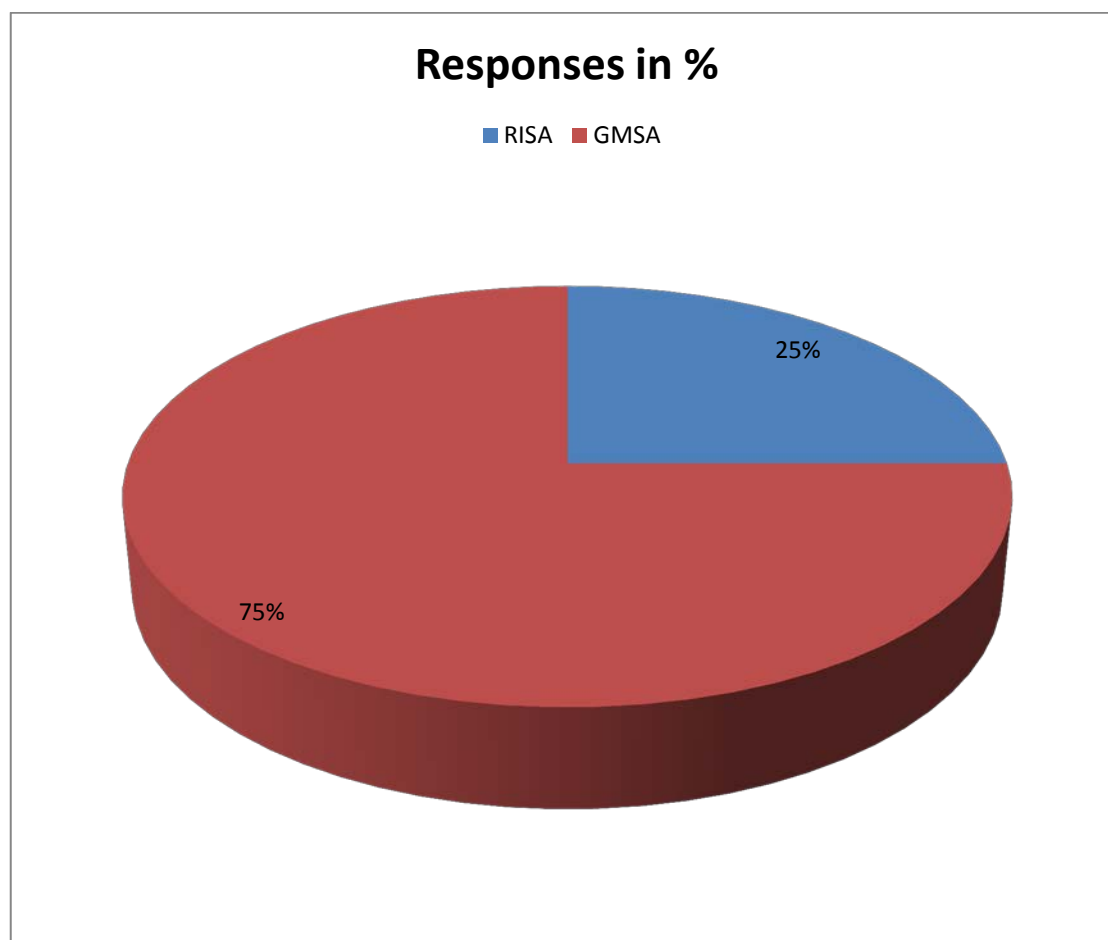


4.4.4 NRF Division

From the total response of 14, only 8 respondents were internal stakeholders and the questionnaire is applicable only to internal stakeholders. The Figure 4.4 below indicates NRF division and respondents indicating that 25% responses work at RISA, 75% work at GMSA. This specific question was not relevant and should not included in the questions for external stakeholders

Figures 4.4: NRF Division

Answer Choices	Responses in %	Responses Count
RISA	25%	2
GMSA	75%	6
	100%	8

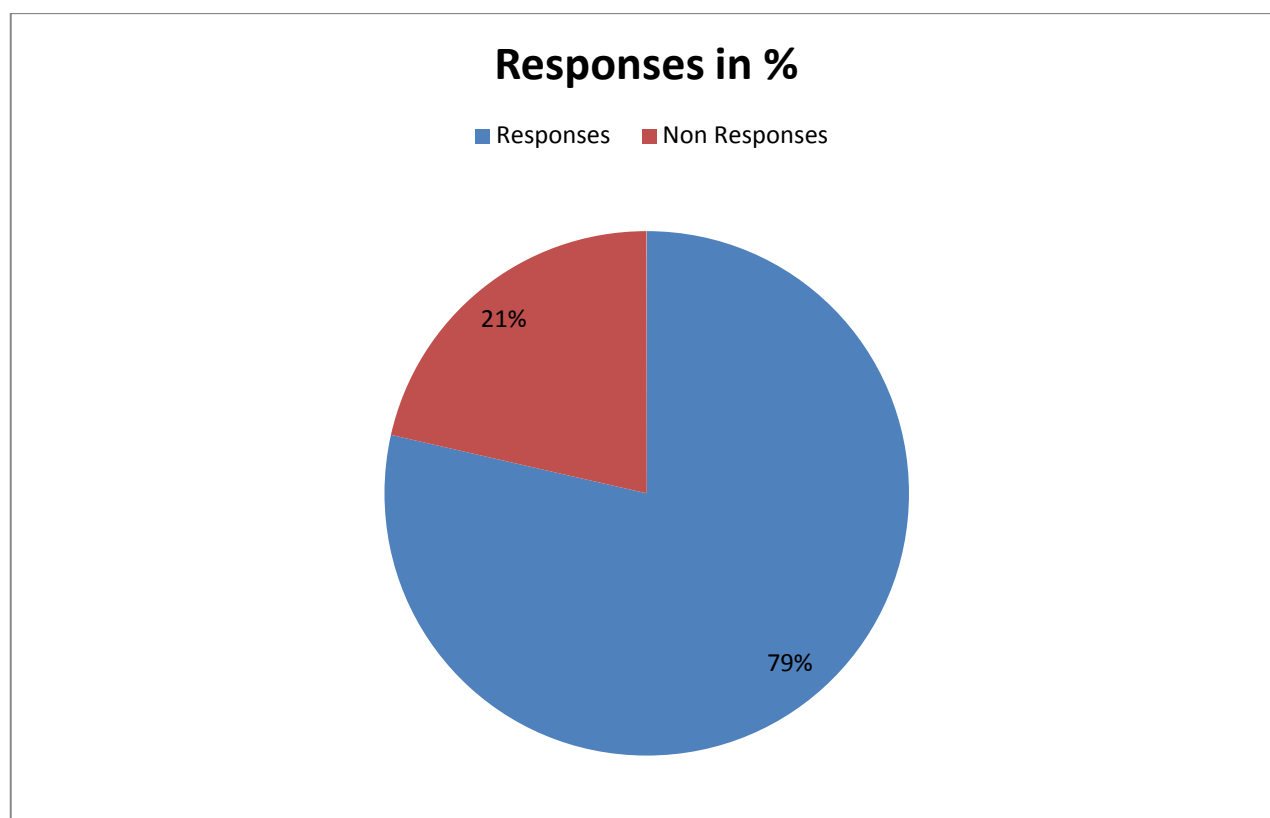


4.4.5 Brief Description of Project Management Background

Figure 4.5 indicates the project management background respondents indicating 79% responses and 21% did not respond. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders

Figures 4.5: Project Management Background

Answer Choices	Responses in %	Responses Count
Responses	79%	11
Non Responses	21%	3
	100%	14



Below is a response from two of the respondents:

"Am a Director of the programme and project manager, therefore we apply project management principle and engage stakeholders always"

"I recently did a beginner course in project management. The stakeholders in my case would be the Donor (NRF), as I work at the University as central Finance in the Research office".

4.5. WHICH PROJECT STAKEHOLDERS PLAY THE MOST IMPORTANT ROLE

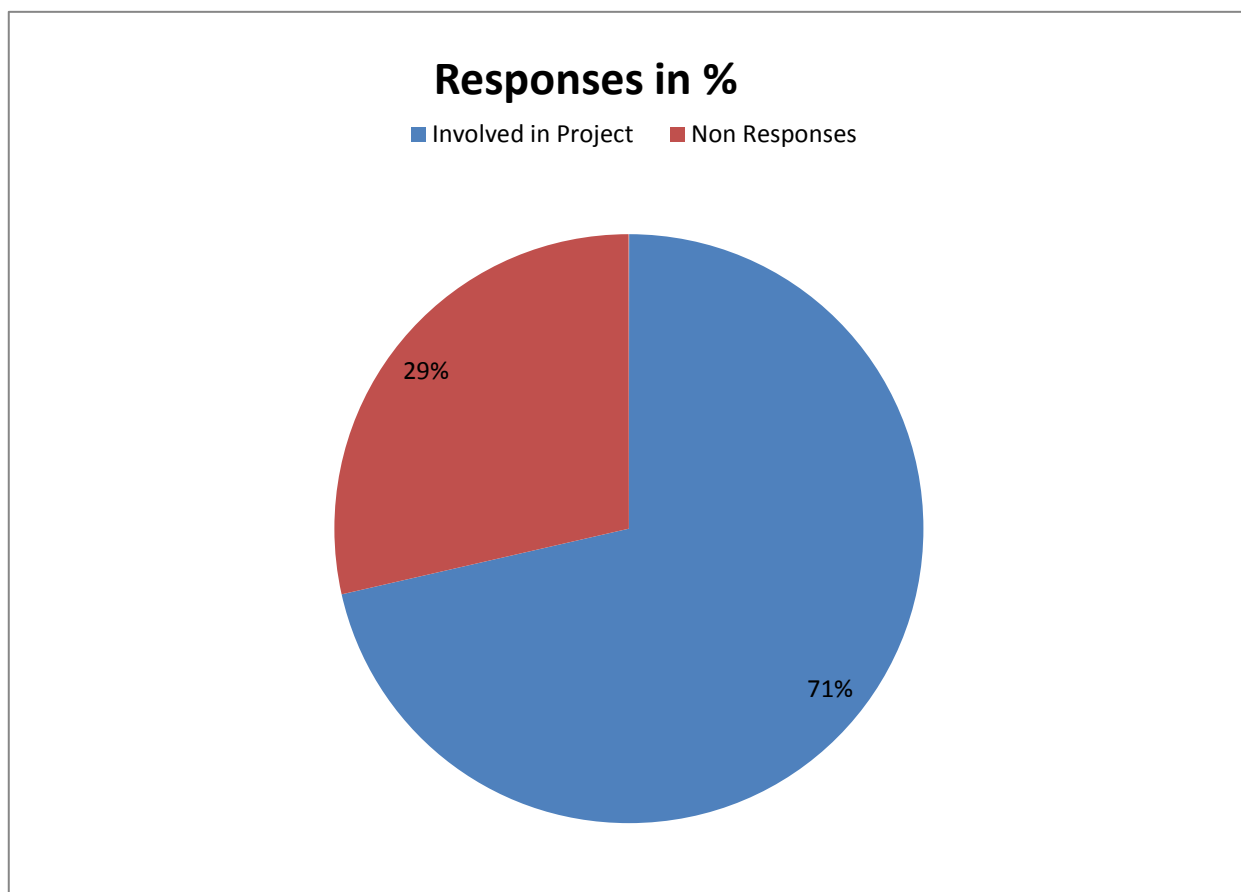
The second part of the questionnaire consisting of questions 2.1 to 2.6 which measures research question 1: Which project stakeholders play the most important role in the determination of project outcomes?

4.5.1 Respondents perceptions on project implementation

Figure 4.6 indicates the involvement in stakeholder management during project implementation, respondents indicated that 79% responses are involved and 21% did not respond to the question. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders.

Figures 4.6: Stakeholder Management within NRF

Answer Choices	Responses in %	Responses Count
Involved in Project	71%	10
Non Responses	29%	4
Total	100%	14



4.5.2 Respondents perceptions on project stakeholder identification

Responses received indicate that when the NRF obtains funds from the DST, a Memorandum of Understanding (MOU) is issued stating who the stakeholders are, and that stakeholders are expected to be involved from planning of the project to the end of the project.

4.5.3 Respondents perceptions on key stakeholder and their role

The following stakeholders and their roles were identified as indicated in **Table 4.3** below:

Table 4.3: Key Stakeholder and their Role

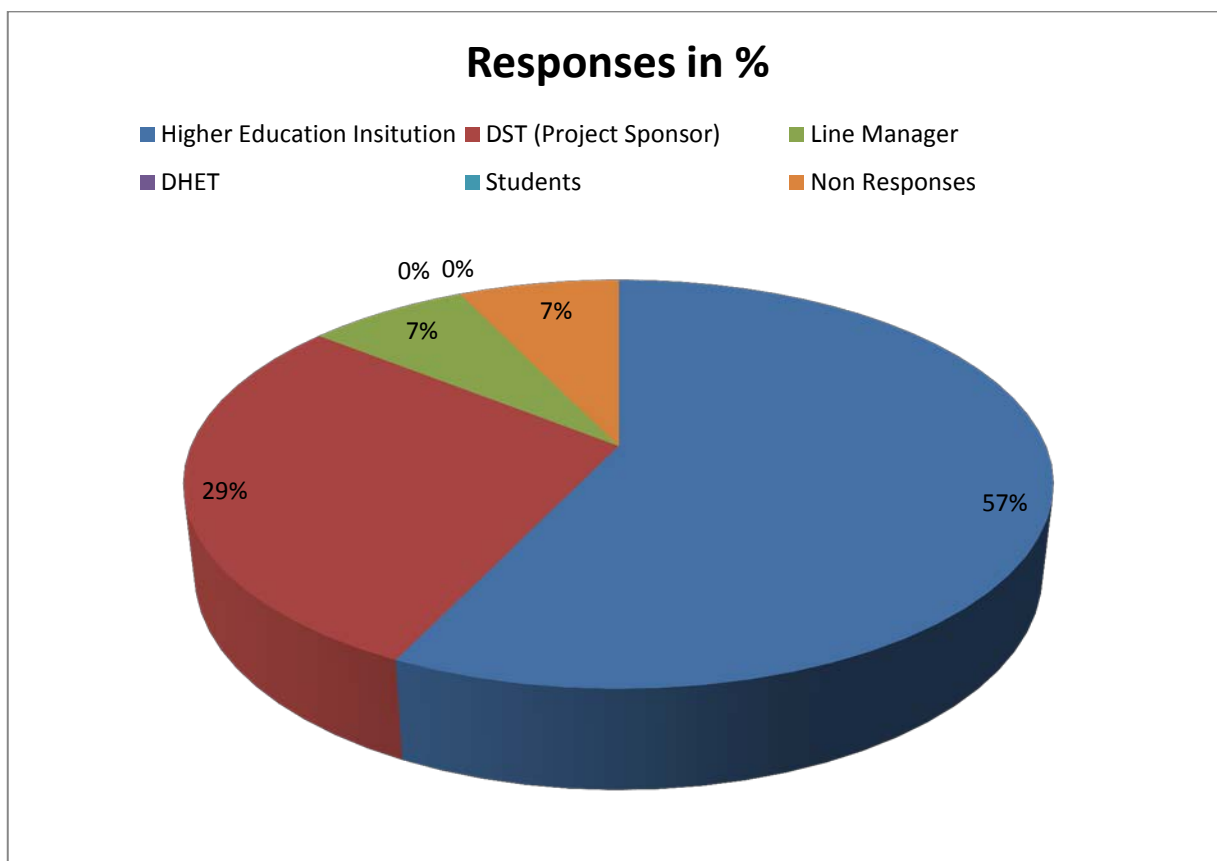
Stakeholder	Role and Responsibility
DST	Provide funding and mandate of the projects
HEI	Implementation
NRF employees	Internal stakeholder (Run the process)
Students and Academics	Grant holders
Project sponsor (Internal stakeholder)	Owner of the project
Project team(Internal stakeholder)	Execution of the project

4.5.4 Respondents perceptions on stakeholder influence

Figure 4.7 indicates the most influence in determining the success of the project and respondents indicating that 57% responses are Higher Education Institutions and 29% responses are project sponsor (DST).7% responses are line managers,7% did not respond and 0% both DHET and students.

Figures 4.7: Stakeholder Influence

Answer Choices	Responses in %	Responses Count
Higher Education Institution	57%	8
DST (Project Sponsor)	29%	4
Line Manager	7%	1
DHET	0%	0
Students	0%	0
Non Responses	7%	1
	100%	14



4.5.5 Respondents perceptions on why 4.5.4. have the most influence

57% of the responses indicated that Higher Education Institution (HEI) is the most influential stakeholder, as without students and academics there will be no project 29% of the responses indicated that the DST is the most influential as without funding HEI will not receive any funds for their research.

4.5.6 Respondents perceptions on monthly/quarterly meetings

All the responses indicated that the NRF meets with stakeholder frequently and they further indicated that as and when new information becomes available, the NRF meets with stakeholders. Annually, the NRF, DST and other stakeholders have a workshop to ensure that all parties involved are in the same page.

4.6. GAPS BETWEEN BEST PRACTICE STAKEHOLDER MANAGEMENT AND APPLICATION AT THE NRF

The third part of the questionnaire consisting of questions 3.1 to 3.10 which measures research question 2: What are the gaps between best practice stakeholder management and application on NRF projects?

4.6.1 Respondents perceptions on critical success factors (CSF)

Respondents were asked to give their opinion on what are the Critical Success Factors (CSF) for project stakeholder management on NRF projects. 79% of the responses indicated that it is when the Universities are happy with NRF services and 21% did not respond. This in retrospect means that this specific question was not relevant and should not be included in the questions for external stakeholders. Below is a response from two of the respondents:

"It is when the universities are happy with the service NRF provide with"

"When funds are allocated to the universities on time and they are happy"

4.6.2 Respondents perceptions on CSF that have influence

Respondents were asked to indicate which internal or external CSF has the highest influence. 79% of the responses indicated that the internal CSF has the highest influence and 21% did not respond. This in retrospect means that this specific question was not relevant and should not be included in the questions for external stakeholders. Below is a response from two of the respondents:

"Internal CSF: providing satisfying services to the universities"

"Internal CSF: Stakeholder consultation"

4.6.3 Respondents perceptions on the NRF stakeholder register

Respondents were asked to give their opinion on whether the NRF has a stakeholder register in place and who manages it. 79% of the responses indicated that the NRF has a

stakeholder register, and it is managed by the support desk and 21% did not respond. This in retrospect means that this specific question was not relevant and should not be included in the questions for external stakeholders. Below is a response from two of the respondents:

“Yes. It is managed through the NRF submission system. NRF is the custodian of the system”

“Yes it has and it’s managed by our support desk”

4.6.4 Respondents perceptions on the NRF’s communication with stakeholders

Respondents were asked to give their opinion on how frequently and how the NRF communicates with project stakeholders. 79% of the responses indicated that the NRF communicates with stakeholders regularly, it can be via, e-mail or telephonically or visiting the stakeholder and 21% did not respond. This in retrospect means that this specific question was not relevant and should not be included in the questions for external stakeholders. Below is a response from two of the respondents:

“Regularly either via e-mail, telephone and even institutional visits”

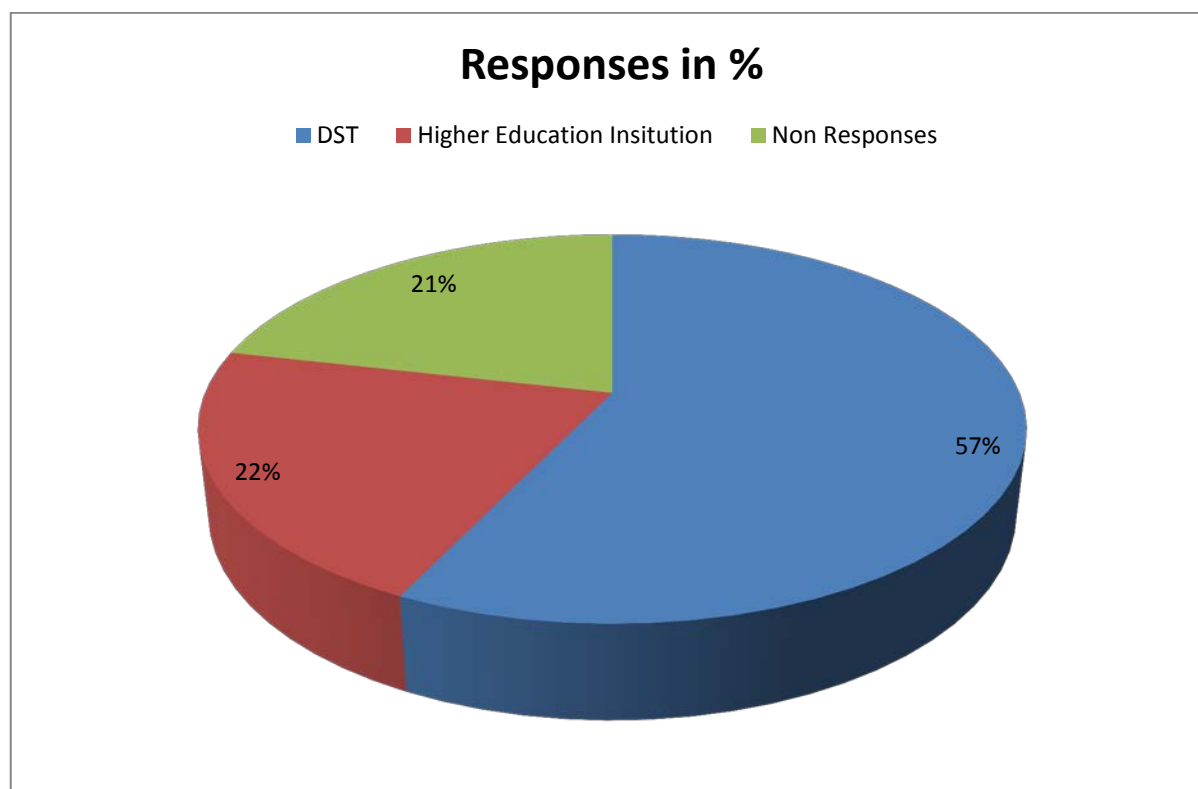
“Yes it has and it’s managed by our support desk”

4.6.5 Respondents perceptions on stakeholders that have control

Respondents were asked to give their opinion on which stakeholders have control over information and resources. Figure 4.8 indicates that DST has control over resources. 58% of the responses indicated that DST has control over resources, 21% of the responses indicated that Higher Education Institution has control over resources and 21% non responses. This in retrospect means that this specific question was not relevant and should not be included in the questions for external stakeholders

Figures 4.8: Stakeholder that have control

Answer Choices	Responses in %	Responses Count
DST	57%	8
Higher Education Institution	21%	3
Non Responses	21%	3
	100%	14



Below is a response from two of the respondents:

“Universities has control over information and DST has control over resources”

“The universities have control over information and over resources it’s DST”

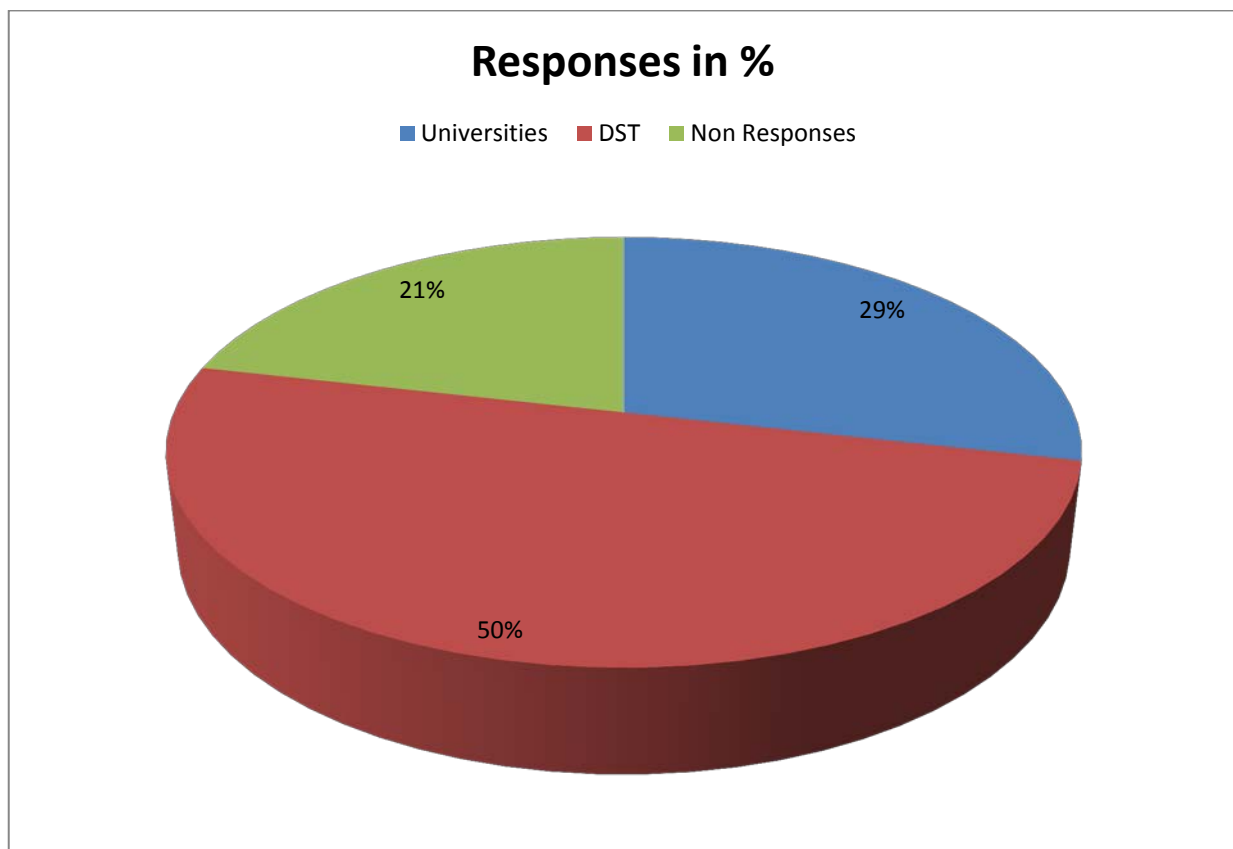
4.6.6 Respondents perceptions on stakeholders cause project stoppage

Respondents were asked to give their opinion on which stakeholders caused stoppages which affected the project scope, schedule and costs. Figure 4.9 indicates that 50% of the responses indicated that DST can cause the stoppage of the project, 29% of the responses indicated universities and 21% external stakeholders did not

respond. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders

Figures 4.9: Stakeholder cause project stoppage

Answer Choices	Responses in %	Responses Count
Universities	29%	4
DST	50%	7
Non Responses	21%	3
	100%	14



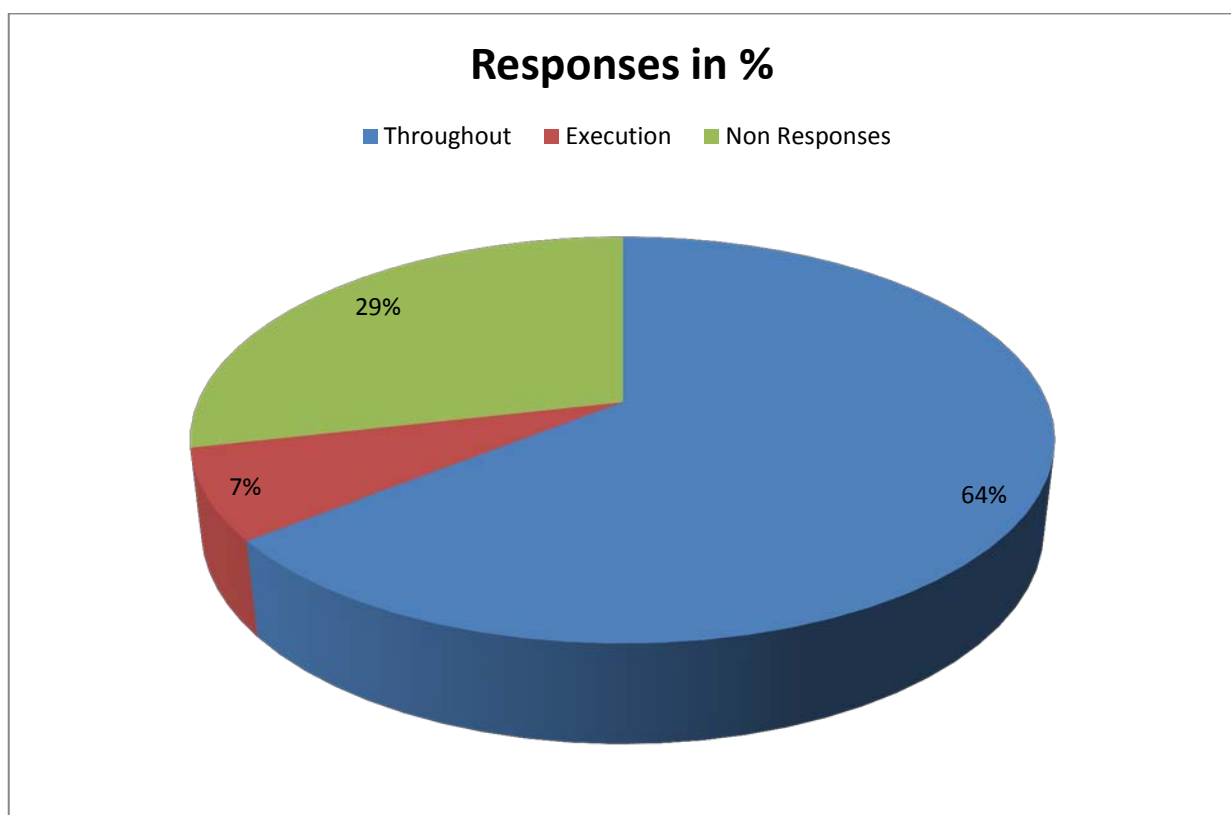
4.6.7 Respondents perceptions on HOW project stakeholders are managed

Respondents were asked give their opinion on how are the projects stakeholders managed throughout the project life cycle. Figure 4.10 indicates that the projects stakeholders managed throughout the project life cycle. 64%responses indicated that project stakeholders are managed from the planning phase of the project until the end

of the project, 7% responses indicated at the execution and 29% did not respond. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders

Figures 4.10: Project Stakeholder Managed within lifecycle

Answer Choices	Responses in %	Responses Count
Throughout	64%	9
Execution	7%	1
Non Responses	29%	4
	100%	14



Below is a response from two of the respondents:

“At the beginning of the project till its end”

“From the beginning until the end”

4.6.8 Respondents perceptions on stakeholders that are managed proactively

Respondents were asked to give their opinion on which stakeholders were managed proactively. 71% of the responses indicated that Higher Education Institution are managed proactively and 29% did not respond. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders. Below is a response from two of the respondents:

“Universities”

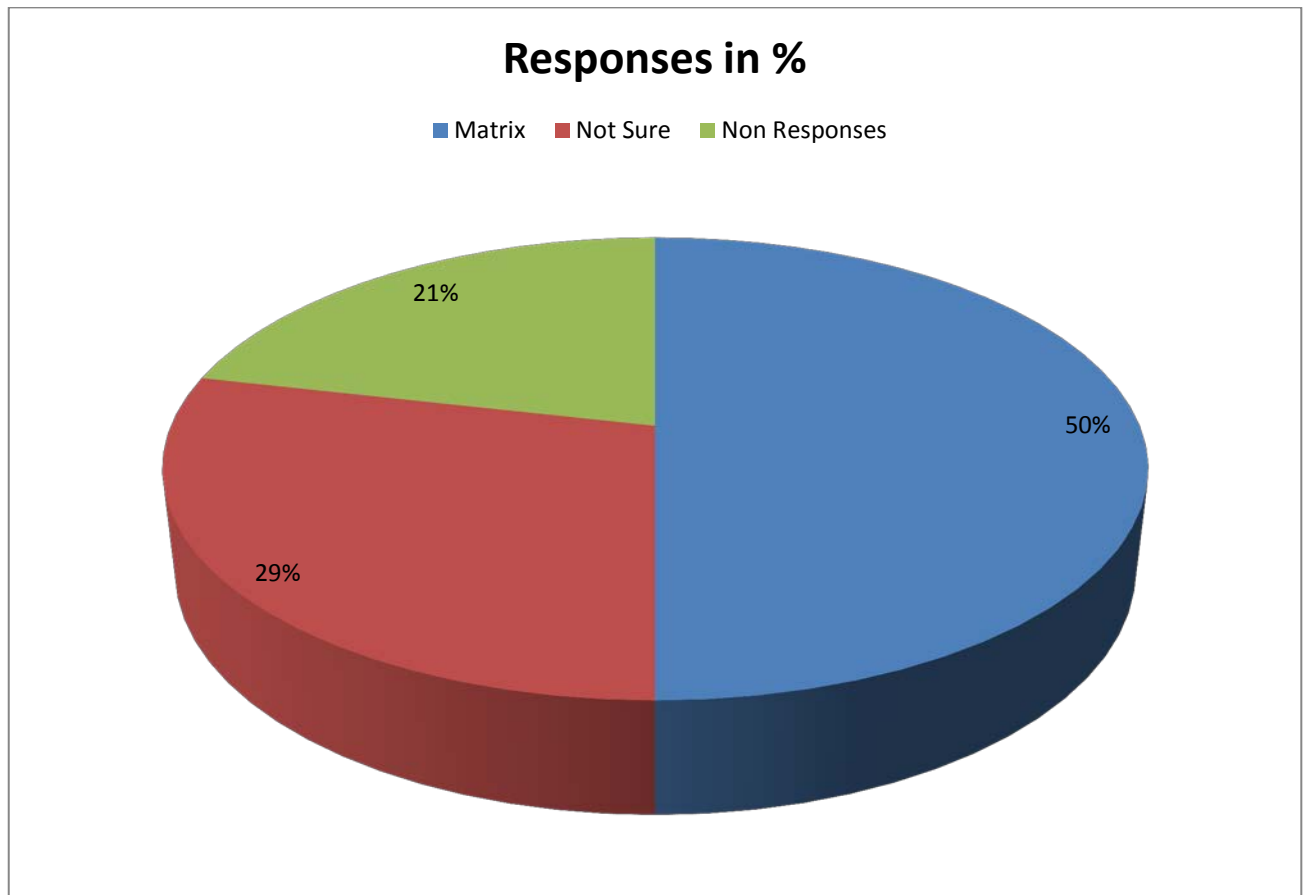
“Universities”

4.6.9 Respondents perceptions on project management stakeholder model

Respondents were asked to indicate if the NRF has a Project Management Stakeholder model in place. Figure 4.11 indicates that 50% responses indicated that Matrix model is used and 29% indicated not sure and 21% did not respond. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders

Figures 4.11: Stakeholder Model

Answer Choices	Responses in	
	%	Responses Count
Matrix	50%	7
Not Sure	29%	4
Non Responses	21%	3
	100%	14



4.6.10 Respondents perceptions on how to improve stakeholder processes

Respondents were asked to give their opinion on how the NRF can improve their project stakeholder management processes. Responses indicated that the NRF needs to develop a stakeholder management guide. Below is a response from two of the respondents:

“By having a stakeholder guide in place to be followed”

“A review process through consultation should take place in order to improve and source out success and failures with the current process. A holistic approach and a comparative study should be looked at with regards to the current and previous process”

4.7. PRESENTATION OF FINDINGS: KEY INFORMAL INTERVIEW

In order to make sound recommendations, interviews were conducted with NRF top management. The same questionnaire on survey monkey was used for the interviews. Biographical data responses are included above. Below are a summary of the key insights drawn from the respondent responses:

- i. What are the critical success factors (CSF) for project stakeholder management in NRF projects?

Based on the outcome of the interviews the following CSF was identified by the respondents:

- a. Institutional visit is important;
- b. Understanding the NRF systems;
- c. Understanding call documents;
- d. Budget earmarked is used;
- e. Research output, publication in peer review journal
- f. Number of student need to be trained over a period of 3 years;
- g. Communication
- h. Planning

- ii. Does the NRF have a stakeholder register in place and who manages it?

Respondents were asked if NRF have stakeholder register in place and who manage it. All three respondents affirm that the NRF has a stakeholder register in place. Below are two responses from the interview:

“Yes. System records all application, successful grant holders, students that receive funding and other stakeholders. List is manage by the system and updated are done by GMSA”

“Yes. PMO has a register of the all NRF projects. Register for project sponsors, team and project leaders are kept by PMO. It gets updated by the office if there are any changes in the team”

- iii. Does the NRF have a project management stakeholder model in place?

Respondents were asked if NRF have project management stakeholder model in place. All three responses indicated that NRF use Matrix projectised model. Below is a response from two of the respondents:

“Matrix- Projectised Model”

“Matrix –Structure, used by the Project management office”

- iv. How can the NRF improve their stakeholder management processes?

Respondents were asked to give their opinion on how the NRF can improve their project stakeholder management processes. Two out of three responses indicated that the PMO must run the projects

Below are the responses from the respondents:

“Recognised / prioritise project office, project leaders and project team. More emphasise on KPI's”

“Matrix can be a strong matrix organisation. All instruments must be run as projects and Domain Directors should be made project sponsors”

- v. Lessons learnt and challenges from the interview

Based on the outcome of the interviews the following main challenges were identified by the respondents:

- a. Domain Directors are not the project sponsors.*
- b. Understanding customer's need.*

- c. All instruments must be run as projects.*
- d. IT system must be user friendly.*
- e. Understanding of the IT system.*
- f. Prioritized project office.*
- g. KPI must include projects and given higher rating for each staff member involved in a project*
- h. Increase awareness of new changes happening at NRF.*
- i. Develop stakeholder guide*

Suggestions on how to improve the NRF stakeholder management processes. Respondents suggested the following as improvements to project stakeholder management:

- a. Recognised / prioritise project office, project leaders and project team. More emphasise on KPI's
- b. Matrix can be a strong matrix organisation. All instruments must be run as projects and Domain Directors should be made project sponsors
- c. Increase awareness of new changes happening at NRF
- d. Increase use of IT
- e. Increase communication flow of information

4.8. CONCLUSION

This chapter presented the results of “Project Stakeholder Management at the NRF” obtained through the interviewing and self-assessment survey questionnaire. The results were separated into three parts:

- a. Profiling.
- b. RQ 1: Project stakeholders that play the most important role in determining of project outcomes.
- c. RQ 2: Gaps between best practice stakeholder management and application on NRF projects.

It is clear from the result that respondents have a clear understanding of the project stakeholder management concept. The next chapter will provide discussions of the findings.

5. RESEARCH ANALYSIS AND SYNTHESIS

5.1. INTRODUCTION

This chapter provides the analysis and synthesis of the findings of the study. The results presented in Chapter 4 are analysed, discussed and compared to other studies and theory. Further, the research questions stated in Chapter 01 are answered. The analysis is divided into the followings sections:

Section A: represent the biographical data of the respondents.

Section B represents Research Question (RQ) 1: Project stakeholders that play the most important role in the determination of project outcomes.

Section C represents Research Question (RQ) 2: The gaps between best practice stakeholder management and application on NRF projects.

Based on the research findings, the researcher was able to analyse and synthesize the results and make recommendations to improve project stakeholder management processes at NRF.

5.2. RESEARCH OBJECTIVE

The overall objectives of the research are to:

Objective 1: To identify project stakeholders that plays the most important role in the determination of project outcomes

Objective 2: To the gaps between the best practice stakeholder management and to provide a clear process of improving stakeholder management at NRF

5.3. DEMOGRAPHIC BIOGRAPHICAL OF THE RESPONDENTS

The biographical of the respondents discussed in this section is limited to gender, age and ethnic group. The result shows that the respondents were 50% female and 50% male. As for the ethnic group, 79% respondents were black, 7% respondents were white, no responses were received from coloured and indian, and 14% did not respond to the question.

The results also show the age of respondents, indicating that 21% of the responses are between 26 and 35 years, 57% of the responses are between 36 and 45 years ,7% of the respondents are 46 years and above, and 14% did not respond to the question.

The majority of the respondents are internal stakeholders represented by 57% and 43% of the respondents are external stakeholders.

5.4. RQ 1: WHICH PROJECT STAKEHOLDERS PLAYS THE MOST IMPORTANT ROLE IN PROJECT OUTCOMES?

Questions in this section will discuss the findings in respect of project stakeholder that play the most important role in the determination of project outcomes. To strengthen the discussion around the survey and interview results, the theory and practice stated in Chapter 2 will form part of the discussions.

5.4.1. Stakeholder Management

Stakeholder theory provides a solid basis for identifying, classifying and categorizing stakeholders. Respondents were asked to provide a brief description of their

background relating to project management and especially on stakeholder management which is a sub-set of project management .The analysis of the survey results outlined in Chapter 4, Figure 4.5 indicates that 79% of the respondents have a project management background, and 21% did not respond. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders.

The above resonates with the Project Management Body of Knowledge Guide (PMI, 2013) that indicates that stakeholder management is “the process of identifying all people or organisations impacted by the project and documenting relevant information regarding their interest, involvement and impact on project success”.

The analysis of the survey results outlined in Chapter 4, Figure 4.6 indicates that 71% involvement in stakeholder management during project implementation and 29% did not respond. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders.

The analysis of the survey results outlined in Chapter 4 indicated that the descriptive stakeholder theory is applied at the NRF. The aim of descriptive is to understand how managers deal with stakeholders and how they represent their interest. (Carroll and Buchholtz, 2014).

In every project the key stakeholders must be identified, and then use different areas of the classification model to determine an approach for managing stakeholder relationships. Stakeholders are classified based on power, legitimacy and urgency (Sign, 2017).From the analysis of the survey results it is clear that the DST and Universities are they key stakeholders and have the stakeholder power, legitimacy and urgency.

Applying the theory outlined in Chapter 2, Figure 2.3,means that the DST should be regarded as a definitive Stakeholder that possesses power and legitimacy .The analysis of the survey results outlined in Chapter 4,Figure 4.8 indicates that 58% of the

responses stated that the DST has control over the resources. The DST provides funding to the NRF to be distributed to the South African Universities for students and academics. It is clear that without funding from the DST there would not be a project. Therefore, the DST will demand the utmost attention from the project manager and need to be attended to in a timely manner (Sign, 2017).

Application of the theory outlined in Chapter 2, Figure 2.3 also means that the South African Universities should be regarded as dependent stakeholders, as they possess both urgency and legitimacy. The analysis of the survey results outlined in Chapter 4, Figure 4.7 indicate that 57% of the responses stated that the South African Universities have influence over the project outcomes. The NRF may pay more attention to stakeholders that are legitimate (Sign, 2017).

The analysis of the survey results outlined in Chapter 4, Figure 4.11 indicates that 50% of the responses stated that the NRF uses a Project Management Stakeholder Model to identify and manage stakeholders.

5.4.2. Type of Stakeholders

The analysis of the survey results outlined in Chapter 4 (4.5.2) indicates that when the NRF obtain funds from the DST (external stakeholder), there will be memorandum of understanding (MOU) stating who the stakeholders of the funding are. In this regard the stakeholders are involved from planning of the project to the end of the project. From the above analysis it is clear that the NRF identifies both internal and external stakeholders at the beginning of the project. Fageha & Aibinu (2014) identify two types of stakeholders, namely internal stakeholder and external stakeholder, in this regard the NRF is in alignment with the theory presented.

It is clear from the responses received that the key stakeholders for the NRF are the DST which provides the funding, and Universities that are the beneficiaries of the funds. The role of the universities is to implement the research projects and the role of the DST is to fund the Universities via programs managed by the NRF.

The Answer to RQ1 is as follows:

The DST and Universities have influence in determining the success of the project, Figure 4.7 in Chapter 4 indicates that the most influence in determining the success of the project and respondents indicating that 57% responses are Higher Education Institutions, followed by the project sponsor (DST) at 29%. Only 7% respondents felt that line managers are the most influential, and 7% did not respond.

5.4.3. Project Management Office (PMO)

The analysis of the survey results outlined in Chapter 4 indicates that the NRF manages its projects through a PMO. The NRF uses a PMO to achieve their strategic objectives. The Project Management Institute (PMI, 2013) describes the PMO as a strategic driver for organizational excellence, which seeks to enhance the practices of execution management, organizational governance, and strategic change leadership”.

The findings indicate that once the funds are received from the DST, the PMO sets up a project team. The team will include the project sponsor, domain director, project leader and project team.

The NRF PMO is a departmental PMO. The findings indicate that the NRF PMO is a small group that manages specific projects within the Research and Innovation Support and Advancement (RISA) and with resources specifically allocated (ring-fenced) to the specific programs managed within the PMO. The benefit of ring-fenced resources is that projects are completed as planned as all resources work toward achieving the project goal.

5.5. RQ 2: WHAT ARE THE GAPS BETWEEN BEST PRACTICE STAKEHOLDER MANAGEMENT AND APPLICATION AT THE NRF?

Questions in this section will discuss the findings in respect of the gaps between best practice stakeholder management and application within the NRF.

5.5.1. Stakeholder Management and The Project Management Office (PMO)

The analysis of the survey results show that the critical success factor is when the external stakeholder, especially the Universities are happy with NRF services. The Universities as an external stakeholders have the highest influence. The analysis shows that the NRF has a stakeholder register in place. All stakeholders are registered in the database and it is managed by IT support. The PMO has a project register that is managed by the PMO Director. The analysis indicates that all NRF projects are registered in the project register. This is in alignment with best practice.

The findings of the survey results show that the NRF communicates with stakeholders regularly, it can be via, e-mail or telephonically or visiting the stakeholder. When there are new developments the NRF communicates the information with stakeholders. From the survey results the PMO does not have a formal documented communication strategy and communication plan in place, this is not aligned to best practice. The analysis indicates that external stakeholders have strong influence over projects, with the DST influencing the funding, and universities strongly influencing the success of the research projects.

The analysis of the survey results outlined that external stakeholders can cause stoppages within projects. Figure 4.9 in Chapter 4 indicates that 29% of the responses indicated universities, 50% the DST and 21% did not respond. It is clear that the DST and Universities have the power and legitimacy.

Theory indicates different types of stakeholder models such as the stage stakeholder model, stakeholder matrix, salience model. The analysis results outlined that the NRF uses Matrix Organisation Structure.

The findings of the survey results Figure 4.11 in Chapter 4 indicates that 50% of the responses indicated Matrix, 29% indicated not sure and 21% did not respond. This in retrospect means that this specific question was not relevant and should not included in the questions for external stakeholders.

Eyiah-Botwe, Aigbavboa, & Thwala, (2016) indicate that an effective and formal stakeholder management process is critical in achieving stakeholder needs and satisfaction, which is an important project success factor. PMI, (2013) describes the Project Management Stakeholder process as presented in Chapter 2 Figure 2.4. Below is **Table 5.1** showing the stakeholder model best practice:

Table 5.1 Stakeholder Model Best Practice

#	Stakeholder Model Best Practice Variables	NRF Best Practice Application	Improvement Areas Identified
1	Identify Stakeholders: The best approach is a priority list that defines the preference and set limits on the number of stakeholder, based on the resources available.	Applied	NRF should document the stakeholder expectations.
2	Plan Stakeholder Management: Identify potential users of the information and devise a plan for using the information. The sponsor or initiator of the stakeholder should lead the issues.	Applied	NRF should devise a plan for using the information.
3	Manage Stakeholder Engagement: Engage and manage stakeholder by understanding each stakeholder attitude and develop targeted communication.	Gap Identified	NRF should develop a targeted communication strategy and plan.
4	Control Stakeholder Engagement: Monitor and manage stakeholder relationships.	Applied	Communication strategy and plan will help NRF to monitor and manage stakeholders.
5	Analysis Stakeholder. Technique used to identify and assess the influence and importance of key people, groups of people, or organisations that may significantly impact the success of your activity or project. (Friedman and Miles 2006).	Gap Identified	NRF should do the following: -Prioritise stakeholders -Map the current stakeholder community, showing each stakeholder's relative importance, power and

#	Stakeholder Model Best Practice Variables	NRF Best Practice Application	Improvement Areas Identified
			influence -Engage through understanding each stakeholder's attitude to the activity and develop targeted communication -Monitor the effectiveness of this communication.

A PMO ensures that projects are executed as planned and there are five project lifecycle phases used as presented in Chapter 2 Table 2.2. Below is **Table 5.2** showing five project lifecycle phases used as the best practice:

Table 5.2 Project Lifecycle Phases Best Practice

#	Phase	NRF Best Practice Application	Improvement Areas Identified
a.	Initiate: Processes in this group are used to recognize that a project of phase should begin and gathers the commitment required to get it started.	Applied	None. The PMO handles this phase very well
b.	Plan: Part of the project is to devise and maintain a schedule of task and resources that are required to fulfil the business need the project is about to address. The processes in this group are used to identify the plan and resources for that schedule	Applied	None. The PMO handles this phase very well.
c.	Executing: After creating a workable plan, the next set of processes provide the method for coordinating the people and resources to execute the project task	Applied	None. The PMO handles this phase very well
d.	Controlling: Handling unexpected hurdles and keeping promises are two factors involved	Gap Identified	The NRF should review the PMO structure, and it

#	Phase	NRF Best Practice Application	Improvement Areas Identified
	in ensuring the project is success		should be equipped with adequate resources.
e.	Closure: When deliverable of the project are complete, the last set of processes formalize the acknowledgment that the project is complete and bring it to an orderly end.	Applied	None. PMO Director handle this phase very well

Table 5.1 and 5.2: Established gaps where G= Gaps, A = Applied

The Answer to RQ2 is as follows:

The gaps identified were as follows:

Gap 01 –No Communication strategy and plan kept by PMO.

Gap 02 –No stakeholder Analysis is done. No mapping of the current stakeholders, and their expectations, importance, power and influence.

Gap 03 –The NRF has a departmental PMO and only the Director is based in the project office without project administrator or project coordinator.

Gap 04 – No stakeholder management guide in place.

Based on the outcome of the assessment it is clear that the NRF has to train internal stakeholders of the importance of the Matrix structure and use of the PMO to execute the project according to the stakeholder requirements.

5.6. CONCLUSION

In conclusion, Universities and the DST are the important project stakeholder of the NRF. There are four gaps identified. Recommendations will be outlined in Chapter 6.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. CONCLUSIONS

This Chapter presents conclusions based on the findings as they were presented in Chapter 5. The following conclusions were drawn from this research study:

6.1.1. Stakeholder Management

The results of this study show that 79% of the respondents have adequate background relating to project management especially on stakeholder management. It was clear that the NRF identifies all their stakeholders at the planning phase of the project. In this regard both external and internal stakeholders are identified and are involved in the project life cycle. From the gaps identified, it is clear that the NRF needs to address stakeholder analysis and mapping the current stakeholders to be aware of their importance, power and influence.

6.1.2. Project Management Office

The NRF has a departmental PMO in place. The PMO was established to achieve the NRF strategic objectives. The results of this study show that the NRF PMO is managed by the Director, and a project register exists with a record of all the projects; the project team allocated to the project; and project sponsor. There are different types of stakeholder models and from the results it is clear that NRF applies the project management stakeholder model, within a Matrix Organisational Structure.

In conclusion, the PMO's function is to manage NRF projects and ensure that project outcomes are delivered as per agreement. It was noted that the PMO is managed by the Director with no dedicated staff. As a departmental PMO the project team members are drawn from other departments. Further, there is no formal documented communication strategy and communication plan applied by the PMO.

In conclusion, and based on the research findings it is clear that the NRF needs to train internal stakeholders of the importance of the adopted stakeholder model. Further, the matrix organizational structure needs to be reviewed so as to use the PMO more strategically to execute projects according to the stakeholder requirement and in alignment with the NRF's strategy.

6.2. RECOMMENDATIONS

The following recommendations are made to the NRF:

- a. The PMO must develop a formal documented communication strategy and communication plan.
- b. The NRF should conduct a stakeholder mapping of the current stakeholders and their importance, power and influence.
- c. Equip the PMO with adequate staff to help the Director.
- d. Develop a stakeholder guide and offer awareness to internal and external stakeholder

6.2.1. Recommendations Based on Stakeholder Management

Firstly, the NRF should develop a stakeholder analysis and map of all the current stakeholders and document their expectations. Prioritise important stakeholders such as the DST and HEI, understanding each stakeholder's attitude to the activity and develop targeted communication, and monitor the effectiveness of this communication. Secondly, NRF should develop a stakeholder guideline and ensure that awareness of the guideline is made to both internal and external stakeholders.

6.2.2. Recommendations Based on the Project Management Office

Firstly, the NRF should use the PMO strategically by linking the company's strategy to projects. Further, the PMO should be adequately equipped with professionally trained and certified project staff, and applying methodology based project management.

Secondly, domain directors should be project sponsors all the time, and understand the responsibilities entailed in project sponsorship.

Thirdly, the PMO needs to develop a formal documented Communication strategy and communication plan to be used by internal and external stakeholders.

Lastly, the NRF uses the project management stakeholder model, within a Matrix Organisational Structure, they need to review the organizational structure to strengthen the Matrix and equip the PMO with the adequate staff. All the internal stakeholders must be made aware of the model and workshop to the entire internal stockholder is very important

6.3. RECOMMENDATIONS FOR FUTURE STUDIES

This study focused on project stakeholder management at NRF, there is an opportunity for further research in the domain to explore whether a Matrix Organisation Structure is best given the NRF's mandate, and whether a Project Based Organization structure is a better organization structure for the NRF. Further, and an assessment could be conducted to determine the maturity level of the NRF PMO.

REFERENCE

Aaltonen, K. (2008), Stakeholders Saliency in Global Projects International journal of project management, 2008

Abdulkareem,A.Y. ,Fasasi, Y. A., and Akinubi,O.P.,(2011). Human Resource unitization and internal efficiency in state-owned universities in Nigeria. International Journal of Academic Research in Business and Social Science,1(1) pp26-34

Bako,S. (2005)."Universities, research and development in Nigeria: time for paradigmatic shift", paper prepared for the 11th General Assembly of CODESRIA on Rethinking African Development Beyond Impasse: Towards Alternatives, Maputo

Beringer, C. ,Jonas, D. , Kock, A. ,(2013). Behavior of internal stakeholder in project portfolio management and its impact on success. Int. J. Proj. Manag. 31:830-846. <http://dx.doi.org/10.1016/j.ijproman.2012.11.006>

Blumberg, B.F. ,Cooper, D. R. and Schindler, P.S. (2014),"Business Research Methods",4thed, Published by McGraw-Hill Education(UK) Limited

Bourne, L. (2011), Stakeholder Relationship Management and the Stakeholder Circle, LAP-Lambert Academic Publishing, Saarbru"cken

Carroll, A. and Buchholtz, A. 2014. Business and Society: Ethics, Sustainability, and Stakeholder Management 9th Revised edition edition. South-Western College Publishing

Charmaz, K. (2006). Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis. Sage Publications, London.

Chinyio, E. and Olomolaiye, P. (2010), "Introducing stakeholder management", in Chinyio, E and Olomolaiye, P. (Eds), Construction Stakeholder Management, 1st ed., John Wiley & Sons Ltd,Chichester,pp1-12

Cooper, D. R and Schindler, P. S. (2008).Business Research Methods (10thed). McGraw Hill, New York.

Cooper, D.R and Schindler, P.S (2011). Business Research Methods, Eleventh Edition, McGraw-Hill, Singapore

Creswell, J.W. and Plano Clark, V.L. (2011). Designing and conducting mixed methods research (2nd ed.). Thousand Oaks, CA:Sage

Darling, E.J and Whitty,S.J. (2015)" The project management office: it's just not what it used to be". International Journal of Managing Projects in Business, Emerald Publising. 9(2)

Donaldson, T. and Preston, L., 1995. The Stakeholder Theory of the Corporation: Concepts, Evidence and Implications. The Academy of Management Review, Vol. 20, No. 1. (Jan., 1995), pp. 65-69

Eyiah-Botwe, E.; Aigbavboa, C.O.; Thwala, D.W. (2016), Stakeholder management, A Literature review of historical development and current trends, *University of Johannesburg, Johannesburg, Gauteng, South Africa*

Elming,S and Abrahamsson,K. (2010), National Research Fund (NRF) as a tool for Research Capacity in Mozambique

Eskerod, P, Huemann, M. and Savage G. (2016),Project Stakeholder Management, Project Management Journal, Vol. 46, No. 6, 6–14

Eskerod, P andHuemann, M (2013) Sustainable development and project stakeholder management: what standards say, International Journal of Managing Projects in Business

Fageha, M.K and Aibinu, A.A. (2014),Prioritising project scope definition elements in public building projects,Australasian Journal of Contruction Economic and Building,Vol.14 No4

Friedman, A.L. and Miles, S. (2006). *Stakeholders: theory and practice*. Oxford: Oxford University Press.

Freeman,E (2004). Stakeholder Theory and "The corporate objective" Oxford: Oxford University Press.

Greenaway, F. (2006) Science International: A History of the International Council of Scientific Unions Cambridge University Press ISBN 9780521028103

Green, J and Thorogood, N. (2009). Qualitative Methods for Health Research. Sage Publications, London

Guest, G., Bunce, A and Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18 (1): 59–82.

Hut, P. M. (2012).The project management.Hut :[www://vproz.ca/books/how to document_a_project_plan](http://www.vproz.ca/books/how_to_document_a_project_plan)

Jensen, T. &Sandström, J. (2011) Stakeholder Theory and globalization: the challenges of power and responsibility, *Organization Studies*, 32 (4): 473-488

Jogulu,U.D. and Pansiri,J.(2011). Mixed methods: a research design for management. *Management Research Review*,Vol.34 Issue: 6 pp687-701

Kumar, R. (2005). *Research Mathodology*.2nd edition. SAGE.

Leahey, E. (2007).Convergence and confidentiality? Limits to the implementation of mixed methodology, *Social Science Reserach*,36(1),149-158.Google Scholar

Leedy, P.D. and Ormrod,J.E. (2015). *Practical Research, Planning and Design*,11th Edition

Meredith, J.R and Mantel,S.J. (2012), “Project Management” A Managerial Approach for International Student Version. 8th Edition

Mitchel,R.K , Agle,B. R and Wood,D.J, (1997),Toward a theory of stakeholder identification & salience. *The Academy of Management Review*. Vol 22, pp853-886

Nayab, N.(2011),”Stakeholder Analysis.

[http://ais.msu.edu/internal/projectmgt/documents/Stakeholder_Analysis_Quality](http://ais.msu.edu/internal/projectmgt/documents/Stakeholder_Analysis_Quality_Guide) Guide. Issued 17 March 2011

National Research Foundation (NRF), Annual Report (2015/16)

Phan, J. (2015), Using the project management office to connect the dots between projects and strategy. Vol 28(2), pp65-68

PMI (2013). *Project Management Body of Knowledge Guide (PMBOK® Guide)*,5th,Project Management Institute ,PA

PriceWaterhouseCoopers. (2013), *The third global survey on the current states of project management*

Rwelamila, P. D. (2007b).*Project Management Knowledge base in South Africa*

Saunders, M.N.K. and Lewis, P. (2012). *Doing Research in Business and Management: An Essential Guide to planning Your project*. Trans-Atlantic Publications, Philadelphia.

Standish Group's (2015). <https://www.infog.com/articles/Standish-2015>

Singh. (2017). *The Salience Model for Stakeholder Classification*

Taylor, P. (2011) *Leading Successful PMOs: How to Build the Best Project Management Office for Your Business*. Gower Publishing

The International Council for Science (ICSU), Annual Report (2012)

The National Research Foundation (NRF), Annual Performance Plan (APP), (2015/16)

The Standish Report (2015), Accessed only on 05 September 2016. <https://www.infog.com/articles/Standish-chaos-2015>

Vos, J.F.J and Achterkamp, M.C, (2006), Stakeholder identification in innovation projects *European Journal of Innovation Management*, Vol.9, Iss 2 pp161-178

ANNEXURE A: NRF QUESTIONNAIRE

ANNEXURE B: ETHICAL APPROVAL

ANNEXURE C: SUPERVISOR LETTER

ANNEXURE D: TURNITIN REPORT
