Cape Peninsula University of Technology

A FRAMEWORK FOR IMPROVING KNOWLEDGE MANAGEMENT AND SERVICE DELIVERY IN THE SOUTH AFRICAN GOVERNMENT

by

LANCE BARBIER

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Supervisor: Professor Robertson K Tengeh

District Six campus

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DECLARATION

I, **Lance Barbier, student number 198080352,** declare that the contents of this thesis represent my own unassisted work and that this thesis has not been submitted previously for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

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Signed   **Date**

ABSTRACT

The purpose of this study is to investigate the relationship between Public Administration, Knowledge Management and Service Delivery, as well as to determine if improved Knowledge Management in the South African government could improve public sector service delivery. A framework to improve Knowledge Management in the South African government to ensure improved service delivery is proposed. The research study was designed using a quantitative and qualitative research approach, that is, the mixed method of research was used. To collect data, a survey questionnaire was used for quantitative purposes and a personal Internet-based interview was used for qualitative purposes. Overall, the six layers of Saunder's Research Onion were used as the framework to develop a reliable and credible research methodology and approach. The target population was 221 government officials doing Knowledge Management practitioner work in the South African government. The Taro Yamane formula was applied to yield a representative sample of 139 government officials. The respondents participating in the study were treated respectfully and with courtesy. The anonymity of respondents and confidentiality of input was guaranteed. The responses were analysed statistically using a web-based statistics software called DATAtab. Since the response rate was only 47% (n=65), the margin of error was reduced from 5% to 7% but the level of confidence was maintained at 95%. This was done to ensure that the study's findings were still considered trustworthy, valid and reliable and that the findings correctly reflect the entire target population. The research questions were answered, the research objectives were achieved and the proposed framework to improve Knowledge Management in the South African government to ensure improved service delivery was developed. Ultimately, the study proved that improved Knowledge Management would result in improved service delivery. From a Public Administration standpoint, none of the literature analysed explains how to successfully integrate Knowledge Management in the South African government to improve service delivery. More research on this subject is necessary, especially, to determine the impact of Knowledge Management on investor confidence and the inflow of Foreign Direct Investment (FDI). The research will benefit governments of developing countries, particularly South Africa, Public Administration scholars and Knowledge Management professionals.

Keywords: Foreign direct investment, knowledge management, Public Administration, service delivery, South African government

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DEDICATION

Abra, Eden and Levi

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ABBREVIATIONS AND ACRONYMS

ANC   African National Congress

APM   Association for Project Management

CKO   Chief Knowledge Officer

CM   Change Management

CMC   Core Management Competency

CSFs   Critical Success Factors

DPME   Department of Planning, Monitoring and Evaluation

DPSA   Department of Public Service and Administration

DTPW   Department of Transport and Public Works

ECM   Enterprise Content Management

FDI   Foreign Direct Investment

HARP   Heightening Awareness of Research Philosophy

ICT   Information, Communication and Technology

IJSR   International Journal of Science and Research

KM   Knowledge Management

KMIF   Knowledge Management Implementation Framework

KPI   Key Performance Indicator

M&E   Monitoring and Evaluation

MOG   Machinery of Government

MTSF   Medium-Term Strategic Framework

NDP   National Development Plan

NPG	New Public Governance
NPM	New Public Management
OECD	Organisation for Economic Co-operation and Development
PA	Public Administration
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
POSDCORB	Planning, Organising, Staffing, Directing, Coordinating, Reporting and Budgeting
PRINCE2	PRojects IN Controlled Environments
PSP	Provincial Strategic Plan
PwC	PricewaterhouseCoopers
RBM&E	Results-Based Monitoring and Evaluation
SAIIA	South African Institute of International Affairs
SDIPs	Sustainable Development Investment Partnership
SOE	State-owned Enterprise
SWOT	Strengths, Weaknesses, Opportunities and Threats
TPA	Traditional Public Administration
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
USA	United States of America
VMOSA	Vision, Mission, Objectives, Strategies and Action Plans
VUCA	Volatility, Uncertainty, Complexity and Ambiguity

WCG   Western Cape Government

WEF   World Economic Forum

GLOSSARY

Terms in Public Administration are often used vaguely, ambiguously and interchangeably. To prevent misunderstanding and for the sake of consistency, the following definitions are provided:

Implementation

The Cambridge Dictionary defines implementation as putting a plan into action (Cambridge, 2020).

Institutionalisation

The action of establishing something as a convention or norm in an organisation or culture (Oxford, 2020).

Knowledge management

The Gartner Group defines knowledge management as:

> …a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedures and previously uncaptured expertise and experience in individual workers (Koenig, 2018:1).

New public management

An approach that draws practices from the private sector and uses them in the public sector of management. While cost containment is a key driver in the adoption of New Public Management, private sector practices lie at the heart of this approach (Boyle & MacCarthaigh, 2011).

New public governance

New public governance is defined by Xu et al. (2015) as a mode of administration in which a pluralistic governance body comprising the government, private sector, non-profit organisations and various social groups consults to respond to changing social affairs.

Public Administration

Public Administration is defined as "the machinery and the integral processes through which the government performs its functions" (Lamidi, 2015:7).

Public Administration reform

Reform is the tool the government uses to improve its efficiencies or to amend what it deems substandard (Merriam-Webster, 2014b).

Public management

Public management is defined as "a set of tactics and strategies aimed at improving the efficiency of the public sector" (Denkova et al., 2018:1202).

Public service charter

A social contract and a commitment between the government, public employees and the public. It is a written and signed contract based on a social partnership that spells out the roles and responsibilities of the various stakeholders to improve public sector service delivery (South Africa, 2013).

Research paradigm

A collection of shared beliefs and agreements among scientists about how problems should be understood and solved (Rehman & Alharthi, 2016; Perera, 2018).

Service delivery

Service delivery is defined as a product or service provided by a government to its citizens in fulfilment of a promise made (Crous, 2002).

CHAPTER 1
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1   Introduction

Despite having the most developed and sophisticated economy in Africa, South Africa, a multiracial nation with a population of 60.6 million people in total, of which the majority (49.1 million) who are Black African, has suffered for decades with inadequate development and severe social inequality. According to Gini coefficients of consumption (or income) per capita, South Africa is the most unequal country in the world. In the World Bank's database on world poverty, it is rated first out of 164 countries (Daily Maverick, 2022). This means that if you are black and you live in South Africa, you are more likely to live in poverty, be unemployed and have less access to public services than white people (Cook, 2020). As a result, such relative deprivation frequently results in violent and angry outbursts expressed through service delivery protests, validating Breakfast and Nomarwayi's (2019) assertion that unmet expectations and service delivery protests are associated. According to Crous (2002), service delivery is defined as a product or service provided by a government to its citizens in fulfilment of a promise made.

Cyril Ramaphosa is the President of South Africa. When he took office as President on February 15, 2018, he inherited an administration riddled with corruption and mismanagement allegations, stemming from his predecessor, Jacob Zuma's term of office (Cook, 2020; Dassah, 2018). President Ramaphosa promised South Africans that his administration will work relentlessly to address the triple challenge of poverty, inequality and unemployment, including the issues, discussed further below on corruption, state capture and political instability that are impeding South Africa's path to a unified and thriving country (PricewaterhouseCoopers [PwC], 2018a).

President Ramaphosa said significant financial backing, notably from foreign investors, i.e., Foreign Direct Investment (FDI), is necessary for success (OECD, 2002; PwC, 2018). Because South Africa has a low savings rate, FDI is crucial and whatever money South Africa has will never be enough. That is why regular inflows of foreign money are crucial, and why FDI will always be an important component of South Africa's economic policy (Sunday Times, 2018; South African Institute of International Affairs [SAIIA], 2020; PwC, 2018b).

At the start of his five-year term in 2018, President Cyril Ramaphosa set a high goal of $100 billion in new investments (Daily Maverick, 2021a) and has received promises totalling more than $55 billion since taking office (Cook, 2020). However, the upward trend was short-lived in 2020, when FDI inflows into South Africa fell by 15% or half of what they were in 2019. The inflow of FDI dropped from $4.6 billion in 2019 to $2.5 billion in 2020 (Daily Maverick, 2021b; United Nations

Conference on Trade and Development [UNCTAD], 2022).

According to UNCTAD 2022), the significant reduction can be attributed to the Covid-19 outbreak. In 2021, South Africa had around 2.5 million confirmed coronavirus cases and over 70,000 deaths, making it the African country with the highest number of coronavirus infections (Daily Maverick, 2021c).

However, investor confidence in South Africa was already shaky due to the following governance factors and Covid-19, according to the researcher, was just the icing on the cake:

(i) **Corruption allegations**: Corruption allegations stemming from President Jacob Zuma's term in office, e.g., allegations of the illegal awarding of contracts and tenders (Cook, 2020; PwC, 2018b);

(ii) **State capture**: State capture became a heated topic in South Africa when the then-Minister of Finance, Nhlanhla Nene, was dismissed on 9 December 2015 (Dassah, 2018);

(iii) **Political instability**: South African presidents, since 1994, have not been able to serve more than two terms in office. For example, President Mandela served only one term in office, from 1994 to 1999. The ruling party, the African National Congress (ANC) recalled Presidents Mbeki and Zuma to resign after just one term and President Mothlanthe had to step in and take charge as head of state from September 2008 until September 2009 (The Presidency, 2018). While the peaceful nature of the transfers may be taken as a sign of growing democracy, it is interpreted as an indication that people have lost trust in elected Presidents over time. These changes had an impact on South Africa's financial strength (The Presidency, 2018);

(iv) **Energy crises**: ESKOM, South Africa's electricity utility, is one of the world's largest power companies but due to poor governance, it is unable to keep the lights on in the country (Daily Maverick, 2021c). For instance, the demand for power supply has grown but Eskom's capacity to deliver a steady supply to fulfil household and industrial demands has deteriorated. This consequently led to the implementation of energy and demand control measures, termed load shedding (Fortuin, 2022). South Africa had the worst year of load shedding on record in 2019 (Trace, 2020);

(v) **Service delivery unrest**: South Africa has one of the world's highest rates of public protest. Because of this, South Africa is known globally as the world's riotous protest capital (Lodge & Mottiar, 2015; Public Servants Association of South Africa [PSA], 2015; Breakfast & Nomarwayi, 2019; SAIIA, 2020; Daily Maverick, 2021c). Citizens know that the only way to get a quick response from the government is to protest, often violently.

According to Susan Booysen in Lodge and Mottiar (2015), South Africans frequently turn to riotous tactics to obtain prompt responses from the government. She adds that riotous protests are more common in places with a very poor track record of public sector service delivery (Lodge & Mottiar, 2015; PSA, 2015; Breakfast & Nomarwayi, 2019).

According to President Ramaphosa, most of South Africa's issues stem from the government's inability to provide excellent services, which is a result of weak governance. He said that if you address this, you would be able to solve not only the triple challenge but a lot of South Africa's problems, including those listed above (Daily Maverick, 2021c; SABC News, 2022; PwC, 2018a). Good governance is a critical component of this process.

The SAIIA (2020) endorses this assertion, stating that the government must prioritise strengthening its capacity first and foremost, especially since poor service delivery reflects adversely on international investors. Investors are paying close attention to the way this country is governed. Their yardstick is service delivery. (Sunday Times, 2018; SAIIA, 2020; PwC, 2018b; Cook, 2020). Hence if the president wants to attract large sums of money from foreign investors, he must take decisive steps to rebuild investor confidence by prioritising service delivery (PwC, 2018). Consequently, to accelerate the government's capabilities and increase the government's potential to provide exceptional service delivery is to leverage knowledge management (KM), especially when financial resources are limited.

Over the years, KM has gained significant momentum as a critical component of private-sector success (Davenport & Prusak, 2000; Ming Yu, 2002; Rowland & Syed-Ikhsan, 2004; Zack et al., 2009; Jayasingam et al., 2020).

In a speech, World Bank President, Jim Yong Kim said that the foundation of success in service delivery is the unspoken knowledge of implementers, referring to KM as the bold action that will address the magnitude of current global service delivery challenges (World Bank, 2012).

According to various scholars, KM will, among other things:

(i)   Speed up an organisation's ability to make them work smarter (Wiig, 2002);
(ii)   Enable organisations to do more with less (Wiig, 2002);
(iii) Address the skills gap by creating a knowledge-based workforce that is competitive and empowers employees to grow and innovate (Sawe & Rotich, 2016);
(iv)   Facilitate organisations to be faster and more efficient (Theriou et al., 2011);

(v) Enable informed decision-making within the public service and reduces knowledge duplication i.e., it addresses time, money and resource wastage (Ondari-Okemwa & Smith, 2009; Koenig, 2018);

(vi) Prevent mistakes or malpractice (Department of Public Service and Administration [DPSA], 2019);

(vii) Improve processes and work methods (DPSA, 2019); and

(viii) Reduce dependency on consultants (DPSA, 2019).

The following is how KM made its way into the public sector.

All governments will face pressure from their citizens to implement reforms to enhance the way how services are delivered. As society progresses and individuals' expectations change, such pressures are more likely to emerge. That is why, as society changes, so too must the way services be delivered. Hence, it would be misleading to assume that public sector service delivery must stay stagnant as society evolves. Government deals with these pressures through the instrument of Public Administration (Boyle & MacCarthaigh, 2011). Lamidi (2015) defines Public Administration as "The machinery and integral processes through which the government performs its functions". Thus, as the world evolves, so must Public Administration (Fatemi & Behmanesh, 2012; Stefanescu, 2012; Lamidi, 2015; Robinson, 2015).

Between 1890 and 1980, Public Administration evolved from Traditional Public Administration (TPA) to New Public Management (NPM). In several respects, Traditional Public Administration was founded on Max Weber's formulation of bureaucracy's essence and is distinguished by the fact that it is a formal administration ruled by political leaders. Whereas New Public Administration is a modern type of public administration that seeks to address the hierarchical, bureaucratic, and rigid structure of Traditional Public Administration (Denkova, Lazarevski and Denkova 2018; Robinson 2015; Chipkin and Lipietz 2012). According to Boyle and MacCarthaigh (2011), an additional Public Administration model that appeared in the year 2000 is called New Public Governance (NPG). Governments worldwide either embrace NPM or Public Governance as their standard for modernisation and reform (Hope, 2001; Lapuente & Van de Walle, 2020).

Although these models introduced new concepts to Public Administration, they share certain features with the previous model. An example is the adoption of private-sector practices, like KM, which was initially implemented during the NPM era and has since remained (Boyle & MacCarthaigh, 2011).

1.2   Research problem

Due to the complexity and diversity of KM, there is no universally accepted definition of the term. KM is best understood by considering what it entails, which is collecting knowledge, storing knowledge and using knowledge. When good KM happens, knowledge can be easily found, stored and made accessible to the wider workforce, offering several tangible business benefits as previously mentioned. When poor KM happens, knowledge will not be easily found, stored, or made accessible to the wider workforce, causing uninformed decision-making and poor governance overall. Hence, the lack of good KM results in a poorly managed, unorganised and under-capacitated organisation (Ondari-Okemwa & Smith, 2009; Theriou et al., 2011; Igbinovia & Ikenwe, 2017; Hajric, 2018; Koenig, 2018).

Th South African government is currently under immense pressure to repair a failing public service that provides inadequate services. Several authors argue that the South African government's quandary is the consequence of poor governance owing to capability deficits and the best way to address these challenges is to leverage KM (PwC, 2018b; DPSA, 2019; Jayasingam et al., 2020; Page, 2020; Daily Maverick, 2021c).

About 15 years ago, when KM was identified as a key component of growth in the private sector, notably in the consulting community, the South African government adopted it for implementation in their National and Provincial Government Departments (DPSA, 2019). Today KM is a core management competency (CMC) of the South African government's senior management staff, as well as a Key Performance Indicator (KPI) in their performance agreements. Knowledge management also made its way into their long-term plan, the National Development Plan (NDP) 2030, to institutionalise lifelong learning, provide continued professional advancement and develop knowledge and innovation in South Africa (DPSA, 2019). Many would argue that the introduction of KM was prompted by the need to improve service delivery in the South African public service (Mothamaha & Govender, 2011: Dikotla et al., 2014).

However, even though KM was introduced into the South African government approximately 15 years ago and even though KM is included as a KPI in the performance agreements of all senior management staff, the implementation of KM remains extremely slow and disjointed (DPSA, 2019) and it would be correct to argue that it has not translated into improved service delivery in the South African public service.

To underscore the stakes, Kimani (2013) and Sawe and Rotich (2016) note that while KM is not new to the government and has the potential to significantly improve service delivery, many national and provincial government departments remain very sluggish to adopt it.

The central argument of this research study is based on the premise that improved KM could result in improved service delivery. As a result, the researcher wants to explore this and propose a framework that can improve KM and service delivery.

1.3 Research questions

1.3.1 Main question

The main research question is:

- What might a framework that can improve knowledge management in the South African government comprise and will it improve public sector service delivery?

1.3.2 Sub-questions

The sub-questions listed below are derived from the main question above:

- What is knowledge management, its components and how does it improve service delivery?
- What factors contribute to or deter the implementation of knowledge management in the South African government?
- How can the implementation of a knowledge management framework improve service delivery in the South African government?
- To what extent is knowledge management implemented in the South African government?
- What are the South African government's current service delivery frameworks and mechanisms?
- What creative and long-term solutions exist that can improve service delivery in South Africa?

1.4 Aim and objectives of the study

The aim of the thesis is:

- To develop a framework that will assist public officials to implement knowledge management in the South African government; and
- This framework when implemented can ensure improved service delivery.

1.4.1 Main objective

- To develop a framework to improve knowledge management in the South African government to ensure improved service delivery.

1.4.2   Sub-objectives

The sub-objectives that follow are derived from the main objective:

- To explore knowledge management, its components and how it is designed to improve service delivery;
- To identify the factors that contribute to or deter the implementation of knowledge management in the South African government;
- To determine how the implementation of a knowledge management framework can improve service delivery in the South African government;
- To ascertain the extent of the implementation of knowledge management in the South African government;
- To explore and identify the South African government's current service delivery frameworks and mechanisms; and
- To explore and identify creative and long-term solutions that can improve service delivery in South Africa.

1.4.3   Assumptions

Assumptions must always be the first step in developing a theory. Otherwise, data is gathered and analysed to arrive at any conclusion (Lockamy, 1998, cited by Cronje, 2010). As a result, the following assumptions have been formed to facilitate answering the research questions of this study and serve as the study's starting point:

- The core benefit of KM is that it improves service delivery;
- KM implementation in the South African government is slow and disjointed and as a result, the benefit of KM cannot be fully realised. The need for a KM Implementation Framework therefore exists;
- With declining budgets, the South African government is under intense pressure to find creative and long-term solutions to improve service delivery. They may not, however, completely comprehend how KM, which is available to them, can help; and
- The South African government uses the most recent Public Administration Model and as a result, the KMIF, when developed, will be a cutting-edge long-term solution to improved service delivery.

1.5   Identification of the study's theoretical context

The theoretical context, which is the framework that supports the theory of this research study, was developed using De Wet Schutte's Dendrogram Technique as a guide (Schutte, 2020). This

is the same technique used to develop the survey questionnaire and interview schedule. The only distinction is in the question posed. The Dendrogram Technique, when developing a survey questionnaire, repeatedly asks the question "is determined by ......?" after each objective and after each sub-objective (Schutte, 2020). This is explained in more detail in Chapter 5. However, when developing the theoretical context, the question "is reflected in ......?" is repeatedly asked after every research question and research objective (Schutte, 2020). Key concepts (keywords) are identified with the duplicate key concept deleted. For example:

- Research question: What is KM, its components and how does it improve service delivery? "Is reflected in ......?" Research Objective: To explore KM, its components and how it is designed to improve service delivery. "Is reflected in ......?" Research Assumption: The core benefit of KM is that it improves service delivery. "Is reflected in ......?" Key Concept: KM and Service Delivery. "Is reflected in ......?" Outcome: A Framework to improve KM in the South African government to ensure improved service delivery.

According to Figure 1.1 below the theoretical context of the study is underpinned by Public Administration, km, service delivery and the South African government.
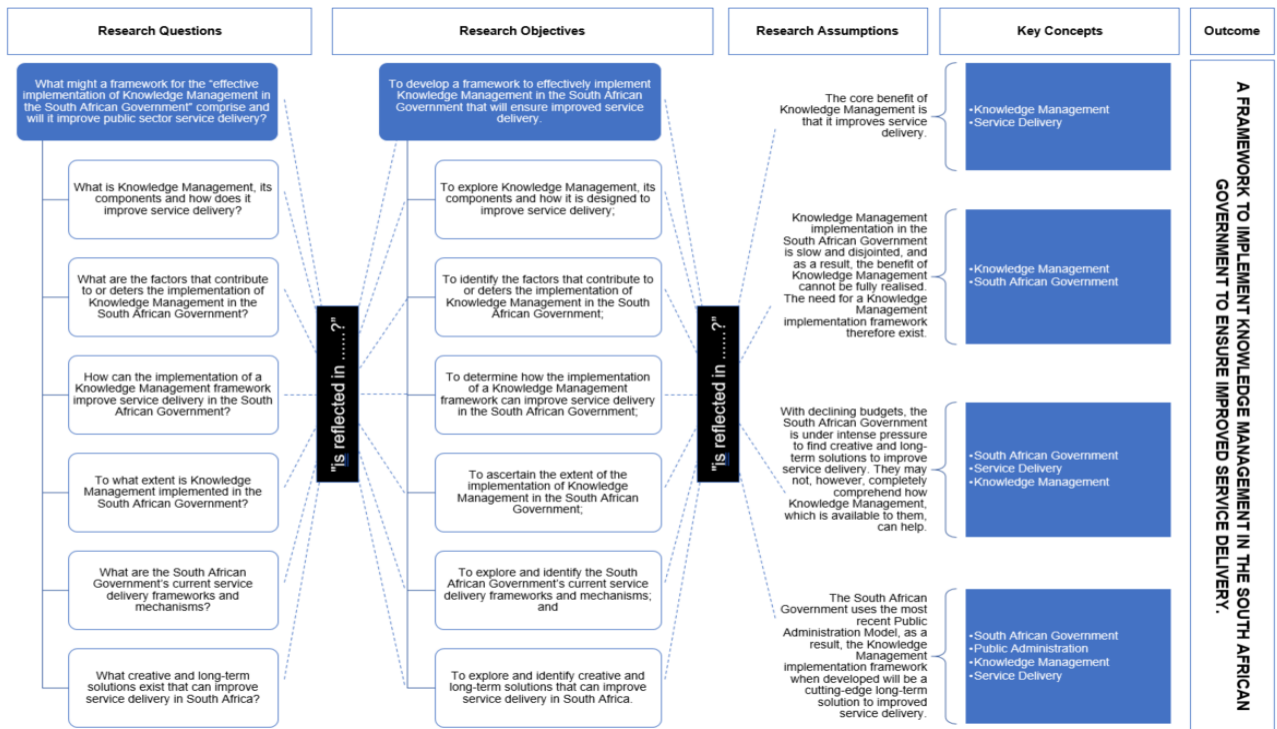
Figure 1.1: Theoretical context identification

1.6   Overview of research gaps

Examples of current literature that addresses various aspects of KM in public sector organisations are:

(i)   "Benchmarking of knowledge management" (Rowland & Syed-Ikhsan, 2004);

(ii)   "The institutionalisation of knowledge management strategies in agricultural research organizations" (Akuku et al., 2020). The aim of this study was the drafting and adoption of knowledge management strategies in the agricultural sector;

(iii)   "The role of knowledge management in enhancing government service delivery in Kenya" (Ondari-Okemwa & Smith, 2009). The study dealt with how civil servants in Kenya and other sub-Saharan African countries are motivated to generate, manage and share knowledge and information;

(iv)   "Knowledge management initiatives and knowledge management practices in decision-making and situation-handling" (Wiig, 2002);

(v)   "Knowledge management in the public sector: its role in facilitating the delivery of health infrastructure" (Kimani, 2013). The aim of this study was on the challenges and ways to manage existing knowledge in the project environment, more effectively;

(vi)   "Public sector knowledge management: Alignment of the policy framework to the departmental knowledge purpose, processes and context" (Chawuke, 2018). This study aimed to provide clear guidelines on the alignment of knowledge management frameworks with strategic knowledge purpose, processes and enabling context;

(vii)   "Institutionalization of knowledge management in the federal government: an exploration of the mechanisms" (Alers-Tealdi, 2015). This study aimed to develop an empirical model around the institutional theory to understand knowledge-sharing in organizations. The author advocates that future research can extend the theoretical model of this study to address organizational performance issues;

(viii) "A model for successful implementation of knowledge management in engineering organizations" (Obaide, 2004). The study was limited to the engineering sector; and

(ix)   "Implementation of knowledge management measures in a pharmaceutical company" (Winkler & Mandl, 2007).

According to Akuku et al. (2020) and Chawuke (2018), KM has not been studied enough and very little empirical research on KM in the South African government exists.

1.7 Rationale and significance of the study

According to Chawuke (2018) and Akuku et al. (2020), KM has received insufficient attention and there is a dearth of empirical research on KM in the South African government. Additionally, there is a dearth of research on whether the public sector's adoption of private-sector methods to better itself is effective. None of the examined literature specifically examines how to successfully integrate KM into the South African government to improve service delivery from a Public Administration perspective. As a result, more research on this subject is necessary. The research may benefit the South African government, the DPSA, the provincial government, Public Administration Academics and KM professionals. This research has several practical implications for the South African government as it will have them to gain competitive advantage. Even so, the study may inform future research projects.

1.8 Research methodology

This section is a summarised version of Chapter 5. It summarises the research methodology and how the methodology endeavours to answer the main research question: "What might a framework that can improve knowledge management in the South African government comprise and will it improve public sector service delivery?"

Figure 1.2 depicts this study's research design framework. This is the approach that was followed and is explained in more detail hereunder.
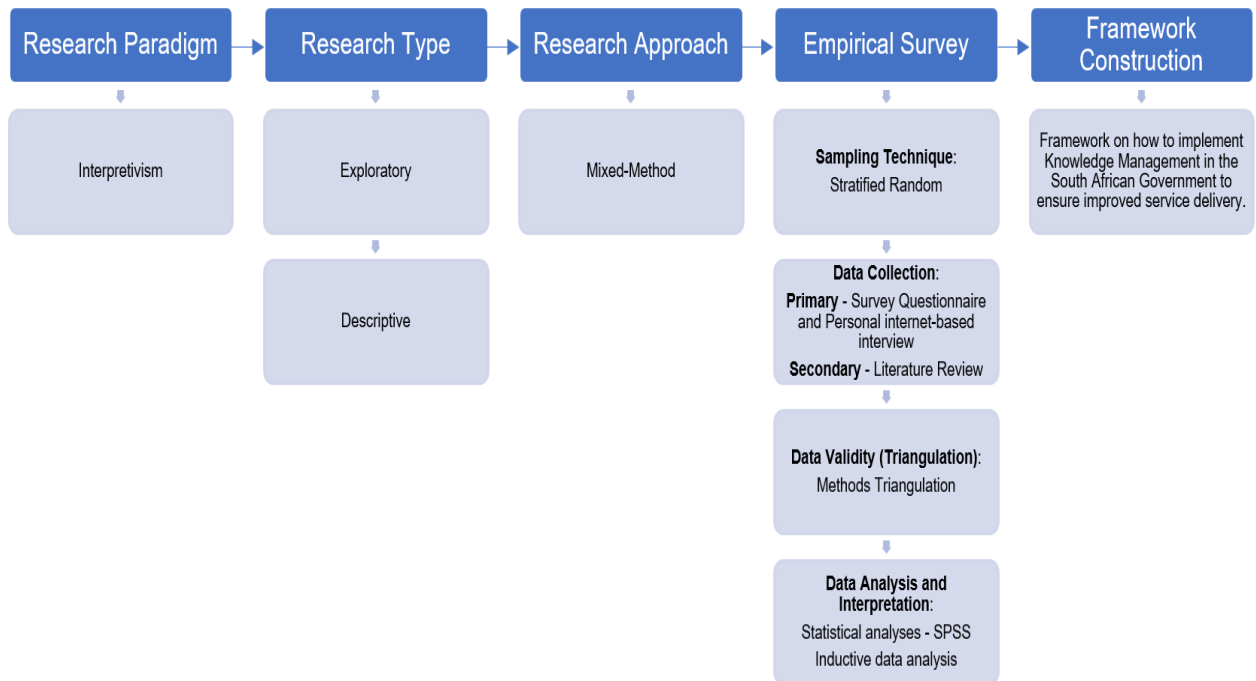
Figure 1.2: Research design framework

1.8.1 Research paradigm

There are three well known philosophical paradigms in research—positivism, interpretivism and critical realism. Interpretivism was chosen as the best philosophical paradigm for this study. The reason for this is that the purpose of this research is to ascertain, through the survey in a subjective manner, the understanding and perspective of the 221 government officials who comprise the research population regarding why a particular situation exists or why things are the way they are, i.e. why the South African government has been slow and disjointed in implementing KM 15 years after its inception and why many national and provincial government departments have yet to fully adopt KM (Ryan, 2018).

1.8.2 Research type and research approach

In light of the research study's objective to answer research questions and to ascertain, subjectively, the understanding and perspective of the 221 government officials, the study is considered both exploratory and descriptive and it adopted the Mixed-Method research approach. It was decided to use both quantitative and qualitative methodologies at the same time to better understand through evaluation the discrepancies between quantitative and qualitative results and to ensure that biases associated with one method cancel out the biases associated with the other method (triangulation). All of this is being done to reinforce the study's conclusions (Creswell, 2003; Creswell, 2009; Tengeh, 2011; Creswell, 2013).

1.8.3 Empirical survey

This research study is supplemented by an empirical survey of a representative sample of a given research population (Veeran, 2012).

1.8.3.1 Sampling

Due to time, money and resource constraints, a representative sample is drawn to reduce the number of cases from the research population. According to Cronje (2010), the research population is divided into two categories: the target population and the sample population (Umsl.edu, 2021). The target population is the group of people who are the subject of this study's investigation. The sample population is the smaller group of individuals drawn from the target population that has the same characteristics as the total research population (Umsl.edu, 2021).

Figure 1.3 illustrates the stages followed when sampling was conducted.
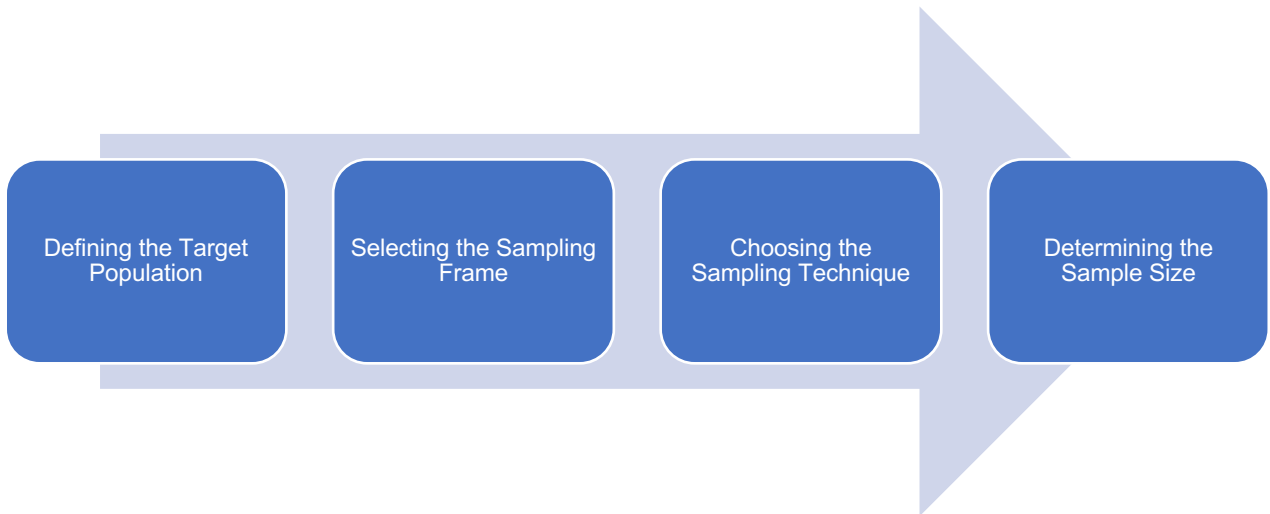
Figure 1.3: Sampling process steps

Source: Adapted from Taherdoost (2016)

a)   *Defining the target population*

The research population, which is the target population are:

- 221 government officials doing KM practitioner work:

    - 220 of these officials represent their respective national or provincial government departments at the DPSA National KM Forum. The 220 government officials are responsible for implementing KM in their respective departments.
    - Even though supported by others, only 1 official is responsible for coordinating the implementation of KM nationally. This official also hosts the DPSA National KM Forum.

Figure 1.4 depicts the touchpoints of the target population.
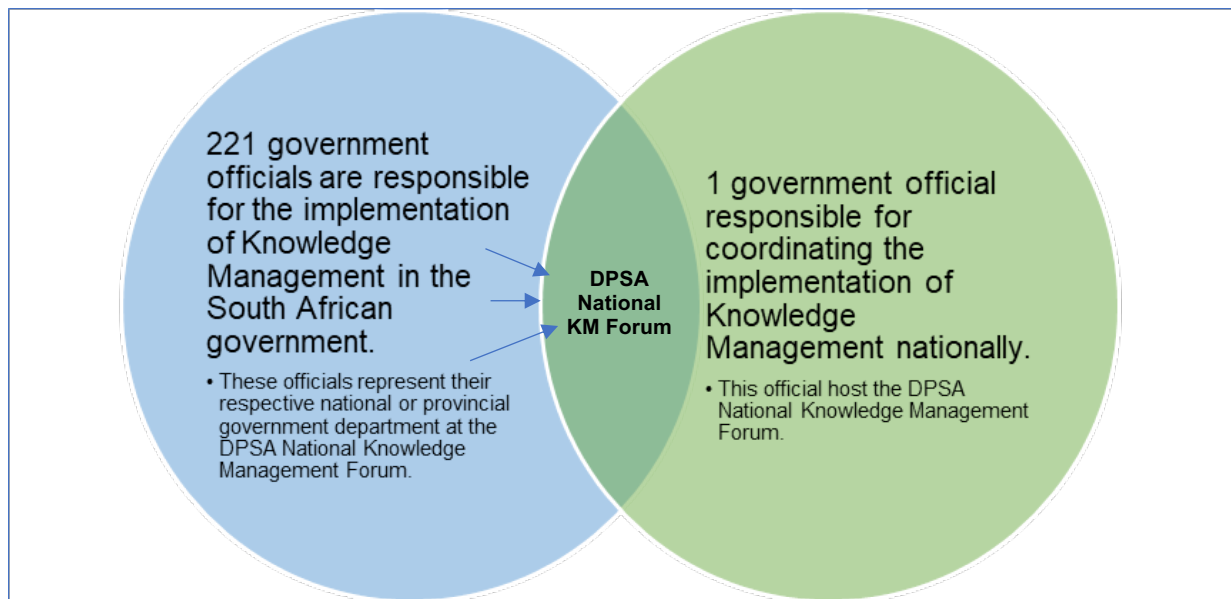
Figure 1.4: Target population touchpoint

b) Selecting the sampling frame

A sampling frame, according to Taherdoost (2016), is defined as the collection of source items from which the sample is selected. An accurate and current sampling frame was drawn from the DPSA National and Provincial Knowledge Management Practitioners database (DPSA, 2022).

According to this database, as of January 2022, a total of 221 government employees are involved in KM practitioner activities. These officials represent their respective national or provincial government departments at the DPSA National Knowledge Management Forum and are responsible for KM implementation in their departments (*see* Table 1.1 and Table 1.2).

Table 1.1: National government list

No.	National government	Knowledge Management Practitioners
1	Agriculture Land Reform and Rural Development	1
2	Arts and Culture	2
3	Civilian Secretariat for the Police Service	2
4	Correctional Services	2
5	Defence	2
6	Economic Development	1
7	Environmental Affairs	1
8	Human Settlement	4
9	Labour	2
10	National Intelligence Agency	1
11	National Prosecuting Authority	1
12	National Treasury	1
13	Presidency	1
14	Public Enterprises	1
15	Public Service and Administration	1
16	Public Service Commission	1
17	Rural Development	1
18	Social Development	3
19	Tourism	1
20	Cooperative Governance and Traditional Affairs	2
21	Agriculture, Forestry and Fisheries	1
22	Basic Education	1
23	Home Affairs	2
24	Higher Education and Training	2
25	Transport	2
26	Mineral Resources and Energy	1
27	Public Works	3
28	Planning, Monitoring and Evaluation	3
29	Rural Development and Land Reform	2
30	Science and Technology	2
31	Trade and Industry	1
32	Telecommunications and Postal Services	1
33	Water and Sanitation	2
34	Government Communications	2
35	Government Pensions Administration Agency	1

No.	National government	Knowledge Management Practitioners
36	Government Technical Advisory Centre	2
37	Government Printing Works	2
38	International Relations and Cooperation	1
39	National School of government	2
40	South African Revenue Service	3
41	Statistics South Africa	3
42	Sport and Recreation	1
43	Communications and Digital Technologies	1
44	Women, Youth and Persons with Disabilities	2
Total		74

Source: Adapted from Department of Public Service and Administration (2021)

Table 1.2: Provincial government list

No.	Provincial government	Knowledge Management Representative
1	Eastern Cape	5
2	Free State	8
3	Gauteng	23
4	KwaZulu-Natal	30
5	Limpopo	16
6	Mpumalanga	9
7	North West	6
8	Northern Cape	8
9	Western Cape Government	42
Total		147

Source: Adapted from Department of Public Service and Administration (2021)

Notably, 67% of officials are from the provincial government and 33% from the national government (*see* Figure 1.5 below).
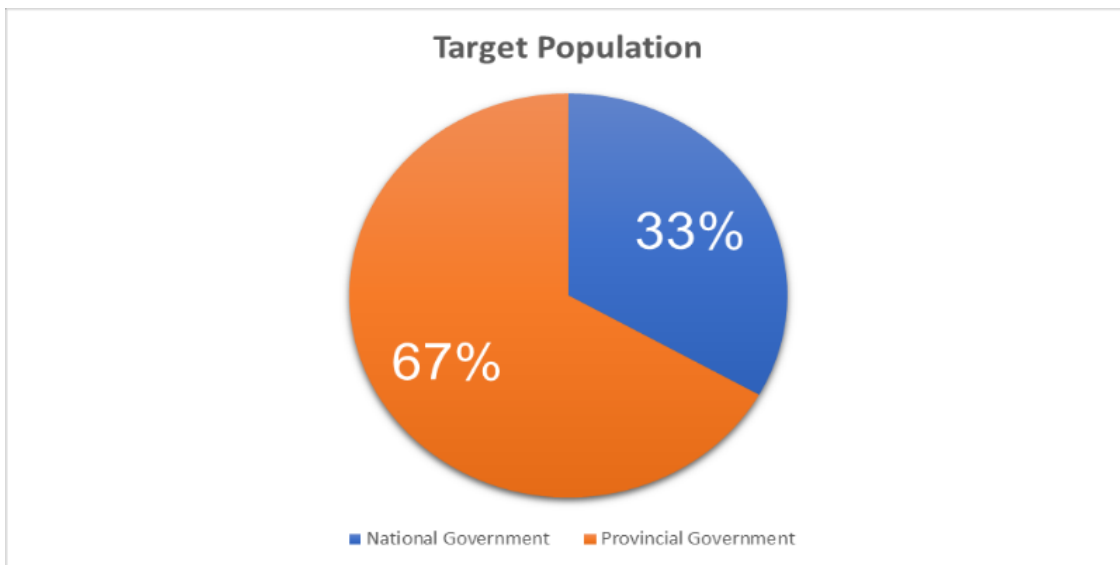
Figure 1.5: Target population - national and provincial government

Source: Adapted from Department of Public Service and Administration (2021)

However, it is unclear how many of the South African government departments have (i) a fully-fledged KM business unit; or (ii) a business unit that treats KM as an add-on activity. This can be addressed in a future study.

c)   Choosing the sampling technique

The nature of the data to be collected and the size of the population at hand necessitated the use of stratified random sampling to establish which respondents would be able to supply the information necessary for the study.

In terms of stratified sampling, the strategy was to divide the target population of 221 government officials, into three subgroups also known as strata, each of which is homogeneous to a given characteristic feature (Taherdoost, 2016), namely:

- National KM practitioners:

    o 73 government officials (excludes national KM coordinator) that represent their respective national government departments at the DPSA National KM Forum. These officials are responsible for implementing KM in their respective national government departments.

- Provincial KM practitioners:

- o 147 government officials that represent their respective provincial government departments at the DPSA National KM Forum. These officials are responsible for implementing KM in their respective provincial government departments.

- National KM coordinator:

  - o Even though supported by others, only 1 government official is responsible for coordinating the implementation of KM nationally and who hosts the DPSA National KM Forum.

The section that follows explains how the sample size was determined.

d)   *Determining the sample size*

The following factors were of concern when the sample size was determined (Taherdoost, 2017):

- Representativeness;
- Time, money and resource constraints;
- Accessibility and availability of respondents;
- Sampling error;
- Biases;
- Response rate; and
- Reliability and validity of survey results.

With several statistical formulas available, the Taro Yamane formula was selected as the best option to address the aforementioned (Adam, 2020; Taherdoost, 2017). The formula is as follows:

- $n = N/K (1) + N (e)^2$

  - o n = sample size;

  - o N = target population;

  - o K = constant (1); and

  - o e = allowable margin of error.

The formula yielded a sample population of 139 government officials, segmented into the following 3 sub-groups also known as strata:

Strata 1: National KM practitioners:

- $N=74/1(K)+74(0.07)^2 = (N = 54)$:
    - 54 government officials that represent their respective national government departments at the DPSA National KM Forum. These officials are responsible for implementing KM in their respective national government departments.

Strata 2: Provincial KM practitioners:

- $N=147/1(K)+147(0.07)^2 = (N = 85)$:
    - 85 government officials that represent their respective provincial government departments at the DPSA National KM Forum. These officials are responsible for implementing KM in their respective provincial government departments.

Strata 3: National KM coordinator:

- Formula not applicable:
    - 1 government official responsible for coordinating the implementation of KM nationally and who hosts the DPSA National KM Forum.

The sampling strategy yielded a sample that is manageable, feasible to complete within the study timeframe, representative of the total research population and provides meaningful information.

1.8.3.2   Data collection

Data will be collected as follows:

a)   *Primary and secondary sources*

Primary and secondary sources of data will be collected:

- **Primary source:** The data will be collected in two ways, a survey interview, in the form of a questionnaire and personal Internet-based interviews. National and provincial government officials will complete a survey questionnaire for quantitative purposes and a personal Internet-based interview for qualitative purposes will be held with the DPSA official who is responsible for coordinating KM implementation nationally and who hosts the DPSA National KM Forum. When performing a mixed analysis, at least one qualitative analysis is required (Combs & Onwuegbuzie, 2010; Bolderston, 2012). The case for using a survey was twofold. For starters, surveys are inexpensive, it is fast and an accurate way of sufficiently examining the research population. Second, surveys are more suitable

when secondary data is limited (Tengeh, 2011). Additionally, the questionnaire will require respondents to identify their level of government employment, i.e., national, or provincial. The goal is to be able to analyse data on three levels: national government, provincial government and both national and provincial government data together. This allows the researcher to comprehend, if necessary, what is occurring in provincial and national departments separately, as well as how the data appears when combined. All of this is done to address issues about data quality and validity, as well as to pinpoint the precise government sphere of concern.

- **Secondary source:** The secondary data will be used for qualitative purposes and will be sourced from recycled and used information collected through a literature review. Sources covered in the review included government publications, submissions, reports, strategic plans (UN, National and Provincial), KM frameworks and strategies and other relevant government records. Academic journal articles and websites relating to the theoretical context of this study are also reviewed. The reference list contains the complete list of the literature reviewed (Creswell, 2009; Bryman, 2012).

b)   *Data collection software tool*

The survey questionnaire will be created using Microsoft Forms, which is one of the Microsoft Office 365 cloud-based Web Applications. Microsoft Forms enables users to create online surveys that display real-time results as surveys are completed. It includes built-in analytics for analysing responses and users may export data to Excel for further analysis (Skendzic & Kovacic, 2012; Rhodes, 2019). Once the survey questionnaire is developed in Microsoft Forms, a link to the form will be emailed to the total target population of national and provincial government officials. Following that, responses received will be uploaded to 'DATAtab' for processing and analysis. DATAtab is a comprehensive web-based statistical analysis tool that runs in a browser window and provides an alternative to statistical software like SPSS and STATA. The researcher used DATAtab because it is web-based, easy to use, inexpensive and has a comprehensive set of statistical tools and tests (American Statistical Association, 2020; Alves, 2021; Hackl, 2021; ComputeMeta, 2022). Since DATAtab requires no installation or download and can be viewed online from any computer and any location, it was considered extremely advantageous, particularly since it mitigates the risk of data loss or computer failure. Furthermore, an added benefit is, that all computations are performed in real-time within a web browser and no data is kept or transmitted to a server. What this means is data is stored only on the currently active computer, ensuring data security and preserving respondents' privacy and confidentiality (DATAtab Team, 2021).

1.8.3.3   Response rate

According to Morton et al. (2012), not all the 139 government employees sampled will complete the survey questionnaire. With this said, the response rate is one of the most significant factors that defines the statistical validity of the research findings (Steinmetz et al., 2020). Hence, low response rates are extremely discouraging, and the researcher did everything to ensure a high response rate. Clearinghouse for Military Family Readiness (2019), also claimed that one of the most important strategies to improve survey response rates is to change the mechanism of distribution. As a result, to boost the response rate of this research study, the survey questionnaire was created using Microsoft Forms with a link emailed to the complete target audience (100%). The response rate formula is:

Response Rate % = total responses received / total sample size x 100.

The response rate is reported as a percentage (Ramshaw, 2019). In general, several scholars agreed that a statistically valid survey has a response rate of more than 30% (Clearinghouse for Military Family Readiness, 2019; Ramshaw, 2019; Chung, 2021).

1.8.3.4   Data validity: Triangulation

One of the difficulties encountered was the need to improve the validity of the research findings (Yeasmin & Rahman, 2012). This was overcome by employing one of the four types of triangulations, known as methods triangulation. Data, investigator and theory triangulation are the other three triangulation techniques available (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2010). Methods triangulation was chosen to reduce the shortcomings and inherent biases of any single method. This type of triangulation is augmented using a mixed-method research approach. Hence, the quantitative study findings were used to support, enhance and clarify the qualitative research findings (UNAIDS, 2010). That is, the survey questionnaire was validated using a personal Internet-based interview and literature review (Tengeh, 2011), which is illustrated in Figure 1.6 below.
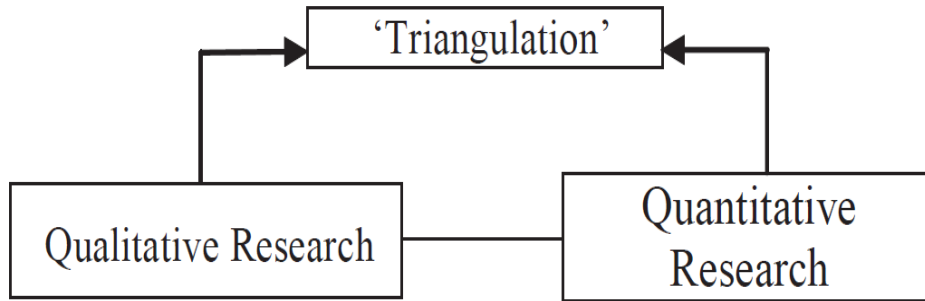
Figure 1.6: Triangulation

Source: Adapted from Yeasmin and Rahman (2012:156)

1.8.3.5   Data analysis and interpretation

The study uses the mixed-method research approach. This approach is known to aid researchers in the analysis and interpretation of data, as it enables researchers to easily identify contradictions between quantitative and qualitative data (Creswell, 2013). Hence, both quantitative and qualitative data were collected.

For quantitative purposes, both national and provincial government officials are asked to complete a survey questionnaire and for qualitative purposes, a personal Internet-based interview will be conducted with the DPSA official who is responsible for coordinating KM implementation nationally and who hosts the DPSA National KM Forum. When performing a mixed analysis, at least one qualitative analysis and one quantitative analysis are required (Combs & Onwuegbuzie, 2010).

Firstly, quantitative data will be collected in real time using an online survey questionnaire created in Microsoft Forms. When respondents finish the online survey form, their data will be immediately recorded in a Microsoft Excel file in the Microsoft Office 365 online cloud, accessible by the researcher. Following that, the data (responses received) will be transferred to the 'DATAtab', a web-based statistical analysis tool that runs in a browser window for processing and analysis (DATAtab Team, 2021). Here, both descriptive and inferential statistics will be applied to present, interpret and draw inferences (conclusions). Researchers can present data in a much more understandable format using descriptive statistics, which enhances data comprehension. Inferential statistics uses the same data to make generalisations about the entire research population.

Secondly, the qualitative data collected from the personal Internet-based interview will be separately analysed as this requires different analysing tools and techniques. Here, induction data

analysis (induction reasoning) will be applied, which is the ideal qualitative method of content analysis for this study. This analysis technique enables researchers to develop new theories and themes through the analysis of texts, recordings and other written and oral sources, i.e., the researcher collects data, analyses patterns in the data and then theorises from the data (Thorpe & Holt, 2008). Overall, for the study to be meaningful, it will incorporate both the respondents' and the researcher's interpretations of their experiences.

Finally, the results of both quantitative and qualitative survey instruments would be carefully merged to (i) understand contradictions between the quantitative and qualitative results; (ii) ensure biases associated with one method cancel out; (iii) strengthen the results of the study. Once this is done, conclusions about the study's outcomes would be drawn and the framework mentioned below will be constructed.

1.8.3.6   Framework construction

The framework on how to implement KM in the South African government to ensure improved service delivery will be constructed. In this case, because of the type of research questions being asked and the lack of empirical data, this framework will not be statistically tested.

1.8.4   Demarcation and delimitation of the study

According to Joppe (2006), it is vital to notify the readership of the study span. Section 40(1) of Chapter 3 of the Constitution of the Republic of South Africa, Act 108 of 1996, hereinafter referred to as the Constitution, mentions three interrelated government spheres distinctive and interdependent – local, provincial and national government (South Africa, 1996). This study will be confined to both the national and provincial government spheres.

The following limitations will also be applied:

- Municipalities, Provincial Legislatures and State-owned enterprises (SOEs) are excluded from this study; and
- The study is limited to developing a framework on how to implement KM in the South African government to ensure improved service delivery. It does not seek to study or develop a framework on how KM must be framed for the public service, as this could easily be confused with the study's original intent.

1.8.5   Ethical considerations

This thesis will be forwarded to the Ethics Committee of the Cape Peninsula University of Technology's Faculty of Business and Management Sciences for a rigorous ethical analysis. To

maintain research integrity, the researcher will adhere to their principles, research integrity and ethical standards throughout the interview process and the handling of interview data. Individuals taking part in the study will be treated respectfully and with courtesy. Informed consent will be applied, and the research objective and methods communicated to all respondents. The anonymity of individuals, as well as confidentiality of inputs, will be guaranteed.

1.9   Outline and plan of the study

The thesis has eight chapters:

Chapter 1: The first chapter outlines the approach to be used to explore the research study in significant detail. The chapter includes an overview of the research problem and several key research questions to identify specific and general research objectives. The chapter also clarifies why this research study is essential, by identifying research gaps.

Chapter 2: Since Public Administration is a body of knowledge that turns government policies into action, there is a need to look at how and why it has changed over time and where it is now. Three Public Administration models are emphasised: NPG, NPM and TPA. The chapter demonstrates that, while these three models brought new concepts to Public Administration, they share certain characteristics with the previous model. Additionally, this chapter explores why the government believes it is important to behave more like the private sector to be effective and efficient.

Chapter 3: This chapter discusses KM, a private sector practice that has been adopted in the public sector in recent years. The chapter discusses KM in terms of Data, Information, Knowledge and Wisdom (DIKW Pyramid) and addresses the components of KM, namely, KM enablers and mechanisms. The purpose of the chapter is to explore why KM became popular as a key to success in the private sector, i.e., how KM accelerates efficiency and effectiveness of private sector service delivery and whether it will do the same in government. Overall, the concept of KM is discussed in much detail.

Chapter 4: The delivery of public services by the South African government is discussed in depth in this chapter. The focus is on why citizens believe public services must be on par with, if not much better than, private-sector services. The chapter explains why the South African government was transformed and what measures were put in place to ensure reliable, available, affordable, convenient, inclusive and whole-of-government services. The skills and key management competencies that a public servant must have to drive excellent public sector service delivery are also discussed in this chapter.

Chapter 5: The research methodology is developed using the six levels of the Saunders Research

Onion. When it comes to building reliable and effective research methodologies, this Research Onion is a well-known framework to use (Saunders et al., 2019). A vast number of academics make use of this tool. This chapter explains the many components of research as well as the reasons why a particular approach is chosen by the researcher. Some of the topics to be covered in this chapter are research philosophy, research assumptions, research paradigms, research designs and research strategies. The descriptive and exploratory approaches to be used in this study are discussed. This chapter provides reasons why mixed method research is the best method in terms of meeting the research objectives of this study. The chapter also discusses why the survey questionnaire is used for quantitative purposes and the personal Internet-based interview for qualitative purposes.

Chapter 6: Descriptive statistics are used to convey the results of the survey questionnaire and personal Internet-based interview in an understandable format. This involves organising, summarising and statistically calculating the results using a comprehensive web-based statistical analysis software tool that runs in a browser window and provides an alternative to statistical software like SPSS and STATA, called DATAtab. The measures of central tendencies, such as mean, median and mode, as well as measures of variability, such as range, variance and standard deviation, are applied to identify data sets, trends and patterns. The emerging data sets, trends and patterns are illustrated using frequency tables, radar charts and clustered column graphs. Additionally, both statistically significant and insignificant findings are presented in this chapter.

Chapter 7: This chapter addresses the research results. The researcher uses inferential statistics to conduct a comprehensive analysis and interpretation of the results. The interpreted results are meticulously synthesised with the literature review and using inductive reasoning, statistically significant and insignificant generalisations and conclusions are made about the research population. Overall, this chapter aims to establish the validity of the research study's assumptions.

Chapter 8: This chapter summarises the research study. It provides an overview of each chapter of the thesis. The key findings and recommendations are presented. It also presents and discusses the proposed framework for implementing KM in the South African government. This chapter concludes the study and makes recommendations for further research.

1.10 Presentation and articulation of findings

Both descriptive and inferential statistics are used to present and interpret the results of the quantitative survey questionnaire and the qualitative personal Internet-based interview. Frequency tables, radar graphs and clustered column graphs are used to present the research findings in an understandable format. The interpreted results are meticulously synthesised with the literature

review and using inductive reasoning, statistically significant and insignificant generalisations and conclusions are made about the research population (DATAtab Team, 2021). After that, the framework for implementing KM in the South African government to ensure improved service delivery is developed. Additionally, a report on the findings of the research will be written and distributed to the DPSA National KM Forum. Several papers on various parts of the study will be submitted to reputable journals for publication.

1.11   Chapter summary

The chapter introduced the research problem. The relationship between KM and service delivery was highlighted in the introduction. When the research problem was addressed, the key argument of this thesis was emphasized, which is that improved KM will lead to improved service delivery in the South African public service. Following this, the main research question, sub-questions, main objective and sub-objectives were established. Once these were determined, the research methodology was discussed to highlight the researcher's approach to answering the research questions and addressing the study objectives.

The research was identified as exploratory and descriptive and adopts a mixed-methods approach to data collection. Data will be collected from both primary and secondary sources, namely, a survey interview in the form of a questionnaire and a personal Internet-based interview, as well as recycled and used information gathered through a literature review. Quantitative data will be collected using an online survey questionnaire prepared in Microsoft Forms. The responses received will be transferred to 'DATAtab,' a browser-based statistical analysis application, for analysis and processing. Descriptive and inferential statistics will be applied to present, interpret and draw inferences. However, data collected from the personal Internet-based interview will be separately analysed. Here induction data analysis (induction reasoning) will be applied, which is the ideal qualitative method of content analysis for this study.

Overall, this chapter justified the need for this research study and set the theoretical groundwork for answering the research questions and addressing the research objectives. The researcher will build on these foundations and based on this, the researcher will proceed with a detailed description of the research to be undertaken. The following chapter discusses the theoretical context of Public Administration .

CHAPTER 2

THEORETICAL CONTEXT OF PUBLIC ADMINISTRATION

2.1   Introduction

The preceding chapter introduced the study and provided a background for why this study is considered important to be researched. Chapter 1 succinctly established the tone of the research to be undertaken. This chapter addresses the theoretical context of Public Administration. Given that Public Administration is a body of knowledge that translates government policy into action, it is necessary to examine how and why it has evolved and where it is currently. The three Public Administration models will be addressed. Additionally, the chapter illustrates that, while these three models introduced novel concepts into Public Administration, they share several similarities with the preceding model. Additionally, this chapter discusses why the government believes it is critical to act more like the private sector to be more effective and efficient.

2.2   Public Administration

According to Suciu and Lazar (2010) and Olla and Aderibigbe (2014), Public Administration is so vast and contentious that it is much easier to describe than to define it. The authors' reason is that the boundaries of Public Administration were never precisely demarcated. This resulted in several definitions being proposed, to try and explain its meaning. However, most scholars of Public Administration agree Public Administration is governmental (Olla & Aderibigbe, 2014). This means Public Administration cannot function in isolation of its political context and it is because of this context that it is public, as opposed to private.

Also, another way to understand Public Administration is to look at the words Public and Administration separately. The word Public refers to government activities and actions. Administration is derived from the Latin word *administrare*, which is to serve, to lead, to govern, to care for, or to look after. The management of public or private affairs is what the word Administration means. As a result, Public Administration refers to the management of public affairs (Thapa, 2020).

For this study, Public Administration as defined by Lamidi (2015) is used: "Public Administration is the machinery and integral processes by which the government conducts its functions." Machinery in this context implies instrument and integral processes imply the key activities of government known as POSDCORB i.e., Planning, Organising, Staffing, Directing, Coordinating, Reporting and Budgeting (Osborne, 2010). POSDCORB are common government activities to turn policies and plans into action (Osborne, 2010; Uchem & Erunke, 2013; Shafritz et al., 2017;

Page, 2020; Thapa, 2020).

Even if a definition of Public Administration is selected, fully comprehending it can be challenging (Uchem & Erunke, 2013). Thus, the next section addresses the nature and scope of Public Administration. A discussion on this should, in theory, produce a better understanding of the extent of Public Administration.

2.2.1   Nature of Public Administration

Perspective, according to the Oxford Dictionary (2021) is defined as "a particular attitude towards something; a point of view". Hence, seeing things from a different perspective can help one understand things a whole lot more and it can open a path for a much better understanding of a particular attitude towards something, especially if a root cause of a problem or a solution is being sought. This is being mentioned to provide context for what follows.

According to Figure 2.1 below, the nature of Public Administration is about implementation in pursuit of and fulfilment of government objectives. With this said, two opposing perspectives exist on the nature of Public Administration and are known as the integral and managerial perspectives (Uchem & Erunke, 2013).
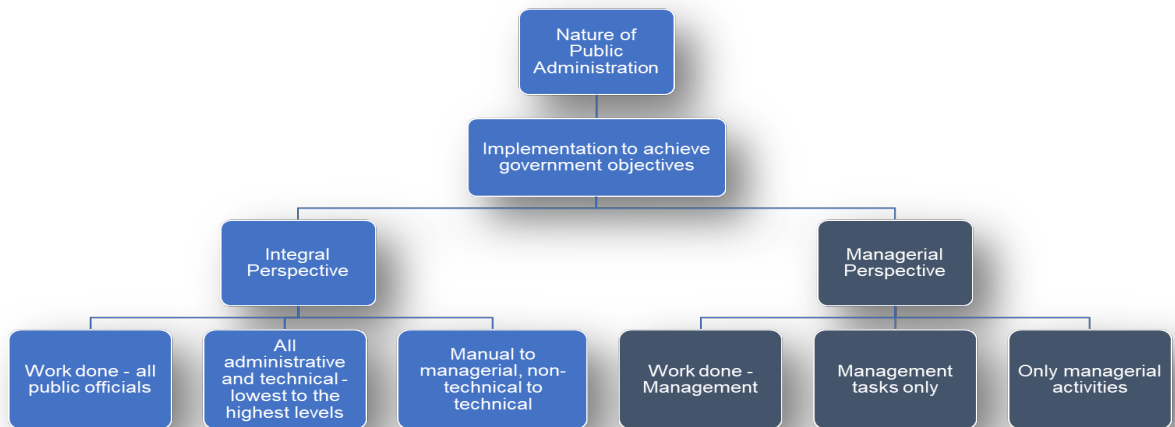
Figure 2.1: Nature of Public Administration

According to the integral perspective, Public Administration is the total of all work done by all public officials in search of and fulfilment of their respective government's objectives. Not only administrative and technical functions but also manual and clerical ones are included, from the lowest to the highest levels (Ramakrishnan & Raimol, 2017). Additionally, the integrated view

encompasses the activities of all three branches of government, namely the judiciary, executive and legislative (Chakravorty et al., 2019).

The managerial perspective views Public Administration as a field that is solely concerned with those individuals who perform managerial roles i.e., have managerial responsibilities (Ramakrishnan & Raimol, 2017). Non-managerial tasks such as manual, clerical and technical activities are excluded. In its narrow sense, the perspective is concerned with the executive branch of the government (Chakravorty et al., 2019).

The two perspectives are diametrically opposite in several respects. The disparity between the two, according to Ramakrishnan and Raimol (2017), is fundamental. The integral perspective encompasses all administrative responsibilities, whereas the managerial perspective concentrates exclusively on the work of a few individuals at the top. The integral perspective encompasses all organisational activities, from manual to managerial, non-technical to technical, whereas the managerial perspective focuses exclusively on management actions. The difference between the two perspectives is related to the distinction between management and service, or, to put it another way, getting things done versus doing things (Ramakrishnan & Raimol, 2017).

Perspective, according to Kelso and Kay (2016), determines action which impacts outcomes. As a result, according to the literature, when it comes to achieving government goals, perspective is crucial. The reason the implementation of KM in the South African government is slow and disjointed is that the wrong perspective is at play. The two conflicting viewpoints on the nature of Public Administration, integral and managerial perspectives, can therefore be regarded as factors that contribute to or deter the implementation of KM in the South African government.

Consequently, the researcher feels that garnering confidence and cooperation from all team members, not just top management, is critical for success and that an integrated approach, such as the integral perspective, may yield better implementation outcomes. Hence, in the case of this research study, the integral perspective is thus a factor that contributes to, and the managerial perspective is a factor that deters the implementation of KM in the South African government.

2.2.2   Scope of Public Administration

Figure 2.2 below refers. The scope of Public Administration deals with the branch of government where Public Administration activity starts.
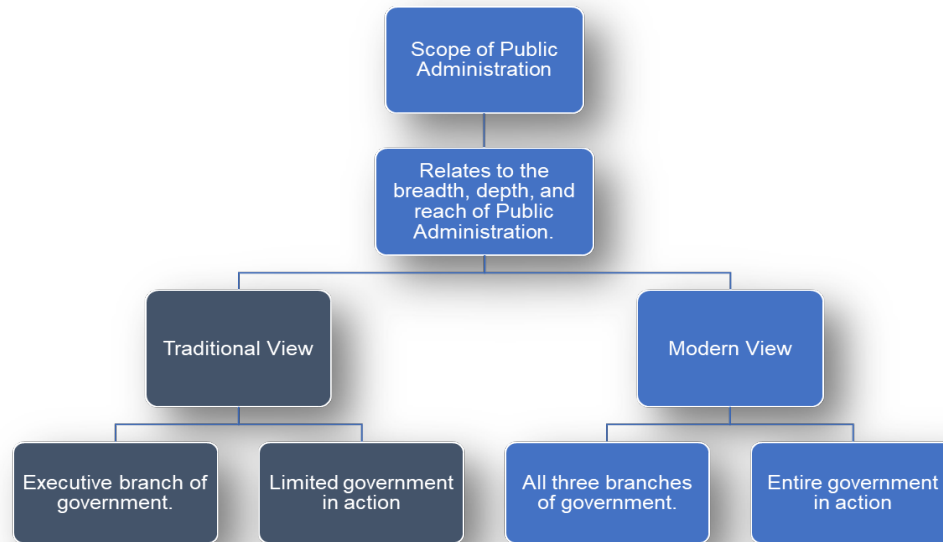
Figure 2.2: Scope of Public Administration

Since Public Administration is an applied social science that is constantly evolving, its scope is a topic of controversy among academics. The controversy relates to the breadth, depth and reach of Public Administration. Consequently, two contrasting views emerged: traditional and modern (Thapa, 2020). The traditional perspective restricts the scope of Public Administration to the executive branch of government, but the modern view broadens the scope of Public Administration to include all three parts of government. According to this viewpoint, Public Administration is the entire government in operation. The common denominator between the two opposing views is that Public Administration is a personal function undertaken for the benefit of other humans (Thapa, 2020), whether it is the executive branch or all three branches of government in action.

2.3 Public Administration reform

Public Administration reform is defined as "the tool government uses to improve its efficiencies or to amend what it deems substandard" (Merriam-Webster Dictionary, 2014b), whereas according to Pollitt and Bouckaert (2011, cited by Ingrams et al., 2020:257), it is defined as "deliberate changes to the structures and processes of public sector organizations to get them (in some sense) to run better".

Hence, Public Administration reform is a powerful concept that attempts to both relieve citizen pressure and ensure good governance (United Nations Development Programme [UNDP], 2015; Ingrams et al., 2020). Citizens, for instance, use protests to lobby governments to correct

inefficiencies and services of poor quality. Apart from corruption, political manipulation, lack of accountability and transparency, inefficiencies and poor services occur, because governments fail to keep up with the rest of the world, by remaining relevant and competitive (Boyle & MacCarthaigh, 2011; Fatemi & Behmanesh, 2012; Robinson, 2015).

Hence, to remain relevant and competitive, Public Administration reform must happen to meet new expectations. That is, the government must go through changes to keep up with the latest technology, comply with ever-changing laws and regulatory prescripts and regulations and protect against fraud and corruption. As a result, Public Administration must evolve in tandem with the changing world (Stefanescu, 2012).

Public Administration reform amends and updates four elements: human capital, policy-making process (Hallsworth & Rutter, 2011), government machinery, as well as revenue and expense management systems (UNDP, 2015). An explanation of each follows.

(i) **Human capital:** People's knowledge, skills and qualifications are referred to as human capital. These are regarded as economic assets. Nothing is more vital to organisations than intelligence. It is the fundamental key to problem solving and wealth generation and it serves as the foundation for the human capital that propels every business and nation ahead (Merriam-Webster Dictionary, 2014a). Hence, the ability of the government to conduct its mission is a key component of Public Administration. With shrinking budgets, Public Administration reform is motivated by the need to find creative ways to lower the cost of human capital and at the same time ensure a government workforce with the right balance of scale and capability (UNDP, 2015; Page, 2020).

(ii) **Policy-making process:** When the government starts talking about Public Administration reform, one of the first topics that come up is the improvement of the policy-making process. The reason for this is that the primary goal of making policy in the first place is to better the lives of citizens and if citizens are complaining about poor and substandard services, it is apparent that their lives are not improving. The policy-making process, also known as policy formulation, involves various stages, from inception to conclusion. This is assessed during the Public Administration reform process (Hallsworth & Rutter, 2011; UNDP, 2015).

(iii) **Government machinery:** The allocation and reallocation of duties between government departments are referred to as 'machinery of government' also known as MOG. This entails modifications to departmental internal structures, work assignments within offices and role assignments to entities other than government departments (UNDP, 2015; Government of South Australia, 2019). Government machinery is also

referred to like all the institutional arrangements adopted by national, provincial, or local governments to provide their legally required services and programmes (Johnson, 2015). According to Johnson (2015), regarding Public Administration reform, most debates revolve around whether to fine-tune government machinery or to completely reform the whole government.

(iv) **Revenue and expense management systems:** Falling government revenues have put pressure on and stretched government finances across the world. Along with rising budget deficits, total global public debt rose by $9.9 trillion in 2020 (United Nations [UN], 2021). This is the greatest growth in government borrowing since World War II (UN, 2021). Recently, governments across the world borrowed from the future to lessen the impact of the Covid 19 pandemic on the current generation. As a result, it is the responsibility of the present generation to ensure that the borrowed money is wisely invested so that the present generation's well-being does not come at the price of future generations' well-being. The current crisis's urgency and immediacy cannot justify denying future generations of their entitlement to prosperity (UN, 2021). As a result, governments are experiencing severe financial difficulties. Therefore, government expenditure has become even more critical. Hence, when it comes to reforming Public Administration, the revenue and expense management system is a critical aspect. Finding ways to tweak this system so that all intended objectives may be met at the lowest feasible cost as governments' budgets shrink even further is a key goal of Public Administration Reform (UNDP, 2015).

As previously stated, Public Administration reform is primarily concerned with making the government function better and be responsible for public resources and finances, among other things. The four elements described above are usually the first to be addressed in this respect (Fatemi & Behmanesh, 2012; Robinson, 2015; UNDP, 2015). Consequently, three Public Administration models have emerged as a result. The next section delves more into these models and centres on how the government came to adopt private-sector practices.

2.4   Public Administration models

Public Administration has been around for over 130 years. It all started in 1887 when Woodrow Wilson published a paper titled "The Study of Administration". This, according to Vignieri (2020) marked the beginning of Public Administration. Several developments have taken place since. That is, Public Administration experienced a paradigm change over the years, according to Cronje (2010) and Stefanescu (2012).

Between 1890 and 1980, Public Administration progressed from TPA to NPM. NPG is a new Public Administration concept that emerged in the year 2000. See Figure 2.3 below.
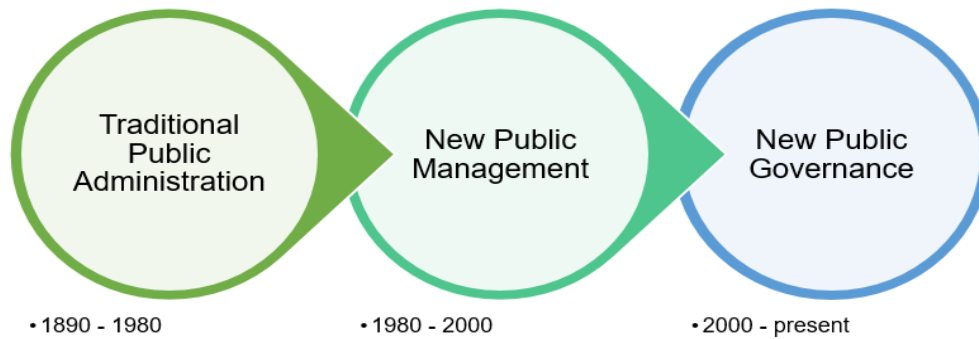
Figure 2.3: The three models of Public Administration

A discussion on the three models of Public Administration follows.

2.4.1   Traditional Public Administration

In several respects, TPA is founded on Max Weber's formulation of bureaucracy's essence. Max Weber, a German sociologist was considered one of the most influential Public Administration academics of the last century. Max Weber defined and theorized "bureaucracy" throughout the 19th and 20th centuries and his work is known as Weberian bureaucracy. Weberian bureaucracy is the cornerstone of TPA (Pfiffner, 2004; Vignieri, 2020). It is distinguished by the fact that it is a formal administration ruled by political leaders. It follows a strict hierarchical administration system. According to this system, public officials are permanent, neutral and anonymous and their motivation is exclusively for the common good. These officials serve all ruling parties equally and they do not set policy but just administer policy that has been set by political leaders (Chipkin & Lipietz, 2012; Robinson, 2015; Denkova et al., 2018).

Although many Public Administration scholars contend that Max Weber was the leading thinker of Public Administration of his day, if not all times, according to Chipkin and Lipietz (2012), beginning in the late 1970s, the Weberian Public Administration system, came under increasing criticism for failure to deliver on its promises (Pfiffner, 2004; Xu et al., 2015). Due to the hierarchical and bureaucratic structure, TPA was seen as a rigid model designed to work only in a safe, probable and systematic manner in a constant environment (Katsamunska, 2012).

However, the world was evolving, and this model was having difficulty adapting to the ever-changing and at times unpredictable environment (Wiig, 2000). Due to its hierarchical, bureaucratic and rigid structure, outcomes and outputs took an extremely long time to be achieved. This model caused significant delays. Hence, the need existed to transition from a slow, rigid and overly bureaucratic public service (Denkova et al., 2018), to one that was more fast-paced and flexible. Traditional Public Administration was no longer feasible and had to change (El-Ghalayini, 2016), particularly one that offers fast, innovative and efficient services (Chipkin & Lipietz, 2012; Robinson, 2015; Denkova et al., 2018; PhDessay.com, 2020).

2.4.2 New public management

In response to the limitations of the TPA model, a modern type of Public Administration known as NPM emerged in the 1980s (Promberger & Rauskala, 2003; Falconer, 2010; Vignieri, 2020). New Public Management seeks to address the hierarchical, bureaucratic and rigid structure of TPA (Bratianu et al., 2018), which, among other things, causes significant delays (Promberger & Rauskala, 2003). While this, along with budgetary constraints on government spending, may be considered the main objective of NPM, Boyle and MacCarthaigh (2011) argue that the model's defining feature is the adoption of private-sector practices. The need to provide fast, innovative and efficient services outweigh all other justifications for this model. Hence, NPM is on efficiency (outcomes or outputs) rather than procedures (inputs) (Fatemi & Behmanesh, 2012; Cameron, 2021).

Consequently, NPM, rather than reforming TPA, is the strategy to alter the structure and activities of government (Bratianu et al., 2018). This is done to make them economically viable and efficient in terms of resource consumption and service delivery, comparable to the private sector (Promberger & Rauskala, 2003; Lapuente & Van de Walle, 2020).

Today, NPM is the most widespread Public Administration model (Kalimullah et al., 2012).

Hood (1991, cited by El-Ghalayini, 2016) introduced seven principles of NPM. These are based on the premise that they will improve service delivery (Promberger & Rauskala, 2003; Kalimullah et al., 2012). See Table 2.1.

Table 2.1: New public management principles

Principles	Meaning	Justification
Exceptional management with a pragmatic approach.	Managers that are noticeable at the top of the organisation, with discretionary authority to control.	Accountability necessitates a simple assignment of responsibility rather than a power shift.
Clearly defined expectations and performance metrics.	Specific, measurable, achievable, relevant and timed goals and established objectives.	Accountability entails explicitly defined targets, while performance necessitates a 'hard look' at goals.
The output controls are the focal point.	Performance is related to resource distribution and incentives.	Results must take precedence over inputs and procedures.
The public sector is divided into units.	Divide government into goods-based groups with decentralised budgets. The units interact with one another from a safe distance.	To make units more manageable, separate procurement and development and use contracts or franchises both within and outside government.
Increased government competitiveness by introducing price control.	Transition to long-term contracts and open tendering procedures.	Competition is a means of lowering prices, raising standards and increasing product innovation.
Concentrate on practices of the private sector.	Change the traditional government ethic in favour of more competitive wages, recruiting and regulations, among other things.	In government, reputable private sector practices must be used.
An increased focus on resource management and discipline.	Reduce direct costs, increase labour productivity and keep compliance costs to a minimum for businesses.	Checking the public sector's resource demands and doing 'more with less' is necessary.

Source: Adapted from El-Ghalayini (2016:18-22)

The following paragraphs provide a summary of the principles (Promberger & Rauskala, 2003; Kalimullah et al., 2012; El-Ghalayini, 2016).

(i)   **Proactive management with a pragmatic approach:** Those in charge of providing government services must be proactive rather than reactive i.e., they must take preventative measures rather than just react to problems. The modern public manager must be able to make decisions within his or her field of responsibility without being

hampered by institutional constraints. While the classic public administrator was a passive figure who simply followed the rules of the day while exercising little to no discretion and providing minimal monitoring, the modern public manager is a far more proactive professional with decision-making authority and accountability. Management is therefore placed at the centre of the government's service delivery function in NPM, and skilled administrators are seen as the gateway to improved service delivery.

(ii) **Clearly defined expectations and performance metrics:** NPM imposes strict efficiency metrics on government departments. This suggests that before providing services, government departments must pay more attention to the objectives and goals they set for themselves. Public officials' performance evaluations offer monitoring and oversight, encouraging officials to work efficiently and accurately on their individual duties. Additionally, the government must be committed to a culture of continuous improvement of both service levels and standards, particularly within the performance evaluation framework.

(iii) **The output controls are the focal point:** The requirement to concentrate on outcomes rather than procedures is linked to successful assessment. In the past, the public sector was often unconcerned with its outputs. The emphasis was on inputs rather than outputs, given that most government debates on public-sector topics centre on finance. Emphasis shifted to results under the NPM. What is most important to conscientious public managers is how much they can accomplish with few resources.

(iv) **The public sector is divided into units:** As previously stated, the NPM model advocates for government disaggregation and decentralization to make government more competitive and responsive. Smaller teams, according to this model, are more beneficial because they allow for the establishment of more specific goals and objectives, allowing the government to react more efficiently. Furthermore, faceless officials are being replaced with transparent, accountable public servants who are directly accountable to the people, promoting openness and accountability.

(v) **Increased government competitiveness through price control:** Countries are under pressure to improve public service delivery while maintaining a low level of spending growth. As a result, the government uses price control (market discipline) to promote quality in service delivery and customer satisfaction. Through competition and competitor rivalry, the government plans to keep prices under control.

(vi) **Concentrate on practices of the private sector:** The government should aim to behave much like a private sector business, according to the NPM model. The premise is that if a government department adopts private business practices, it may become more efficient in its delivery of services. Adopting reward programmes similar to those

found in private businesses, such as performance-based compensation and more flexible working hours, is one example of what governments can do.

(vii) **An increased focus on resource management and discipline:** NPM focuses on reducing the expense of delivering public services while increasing their efficiency, i.e., getting more done with less money. Consequently, how the government uses the financial and human capital at its disposal is a key component.

Overall, NPM is characterised as the approach that adopts private sector practices to be used in the public sector. Cameron (2021) contends that performance management is at the heart of all of this because it is a key component of NPM and that while senior public officials are given greater autonomy, as in the private sector, they must also be held to a higher level of accountability.

The shift from TPA to NPM has sparked academic debate and raised some intriguing concerns about whether NPM is, in fact, a new paradigm (Vyas-Doorgapersad, 2011). Scholars such as Gow and Dufour (2000) argue whether it matters whether NPM is a new paradigm or not. Nonetheless, an additional model was developed and is discussed next.

2.4.3   New public governance

According to Klijn (2012), NPM and NPG have emerged as alternatives to TPA over the last two decades. Although they both learn and adapt from one another, they can be seen as opposites in terms of how governments cope with the increasing complexities of policy processes, implementation and service delivery (Klijn, 2012). Nevertheless, both NPM and NPG reinforce each other, with certain features in each (Klijn, 2012).

It was initially anticipated that NPM would replace TPA as the new form of Public Administration, but recent scholarly literature has raised questions about this approach's intra-organizational orientation and shortcomings (Osborne, 2010). While NPM is concerned with establishing the right objectives and then delegating implementation to various bodies, the NPG is concerned with incorporating different target viewpoints and attempting to improve inter-organisational cooperation (Klijn, 2012; Vignieri, 2020).

NPG is defined by Xu et al. (2015) as a model of administration in which a pluralistic governance body comprised of the government, private sector, non-profit organizations and a variety of social groups consults and negotiates to respond to changing social affairs.

According to Klijn (2012), the characteristics of NPG are:

(i) Strong emphasis on the inter-organisational dimension of policymaking and service delivery, as well as the inter-dependencies of organisations in achieving policy goals and delivering services;

(ii) Horizontal forms of steering (network control, meta-governance and so on) are thought to be more capable of gaining cooperation from social actors. These horizontal forms of steering are intended to ensure that actors use their veto powerless often (enhance support);

(iii) Using society actors' expertise to increase the consistency of governance and public services, as well as making greater use of the information disseminated by different actors (enhancing quality and innovative capacity); and

(iv) Early intervention of social actors, stakeholders and community organisations to increase the credibility of decisions (enhancing democratic legitimacy).

NPG is not meant to be considered as a substitute or the only viable option for either TPA or NPM (Osborne, 2010). Also, while all three models introduced new ideas and concepts to Public Administration, certain features of the previous model can be seen in the subsequent one. An example is the adoption of private-sector practices.

2.5 Public Administration, knowledge management and service delivery

According to Fraser et al. (2021), many governments are good at coming up with plans, policies and strategies but not many of them are good at putting them into action. Because of this, they state that governments waste public funds, fail at service delivery and most importantly, lose investor confidence and decrease their public support (PwC, 2018b; Fraser et al., 2021). In South Africa, such outcomes commonly manifest in public protests. Since South Africa has one of the world's highest rates of public protest and is known globally as the world's riotous protest capital, it may be asserted that the South African government falls into the category of failing at its job (Lodge & Mottiar, 2015; PSA, 2015; Breakfast & Nomarwayi, 2019; SAIIA, 2020; Daily Maverick, 2021a). Booysen (2011, cited by Lodge & Mottiar, 2015) states that South Africans frequently turn to riotous tactics to obtain prompt responses from their government and that riotous protests are more common in places with a very poor track record of public sector service delivery.

Additionally, if voting numbers are any indication of (i) decreased public support; and (ii) the government failing at its job, then it is fair to assert that this is happening. For example, South Africa's two largest political parties, the African National Congress and the Democratic Alliance, which are currently in power, have been on a downward trajectory since 1994 (i.e., votes are decreasing) and if this downward trajectory continues, these two political parties will be voted out

of power in the country's next general elections in 2024 (Nhlapo et al., 2017). Aside from that, the voter turnout in South Africa's Local Government elections in 2021 was the lowest it has been in years (Gounden, 2021).

SAIIA (2020) reports that investor confidence in South Africa is at an all-time low due to its bad image and argue that if the president intends to attract big amounts of FDI, this must be addressed. This explains why President Ramaphosa is on a determined drive to take decisive steps to address public sector service delivery challenges to strengthen his government's capabilities and in turn rebuild investor confidence (Kanyane, 2014; PwC, 2018; Daily Maverick, 2021a; Daily Maverick, 2021b; Daily Maverick, 2021c). If this is not achieved, one could argue that President Ramaphosa's political party can say goodbye to being South Africa's ruling party come the next elections.

Consequently, according to Getachew (cited by Fraser et al., 2021), the South African government is under severe pressure to deliver and save a deteriorating public service.

On a positive note, one of the most significant achievements to date has been the radical reform of the South African public service that has occurred since the dismantling of the apartheid public service in 1994. Before 1994, the apartheid public service was geared toward serving the needs of the white minority group and in the process, all Black people were marginalised (The Presidency, 2015). Since the apartheid Public Administration model was not developmental, the most pressing challenge for the post-apartheid government in the years after 1994 was to build a developmental public service. This means the South African public service had to evolve to keep up with society's changing needs, which included changes in the way services were delivered. All to correct the injustices of the past and bring about equality and fairness. Hence, it would be incorrect to suggest that public sector service delivery must remain static in the face of societal change (Lamidi, 2015). In other words, the new South African government selected a new Public Administration model (Stefanescu, 2012).

Between 1890 and 2000, three distinct Public Administration models emerged, namely TPA, NPM and NPG (Boyle & MacCarthaigh, 2011). Today, governments worldwide either embrace NPM or Public Governance as their standard for modernisation and reform. While all three Public Administration models bring new ideas and concepts to the table, certain characteristics of the preceding model are seen in the subsequent one. A distinguishing feature is notably the adoption of private-sector practices (Hope, 2001; Lapuente & Van de Walle, 2020). A combination of these two models was chosen by the post-apartheid government because they believed that making their Public Service more business-like will result in a wide range of significant improvements,

such as improving the efficiency and quality of existing government functions, decreasing taxes and limiting the size of the government, among other things. They reasoned this would result in cost savings and increased consumer satisfaction (Goodman & Loveman, 1991; Hope, 2001; The Presidency, 2015; Lapuente & Van de Walle, 2020).

Knowledge Management is an example of a private sector practice that was initially implemented during the NPM era and has since remained (Boyle & MacCarthaigh, 2011). Over the years, KM has gained significant momentum as a critical component of private-sector success (Davenport & Prusak, 2000; Ming Yu, 2002; Rowland & Syed-Ikhsan, 2004; Zack et al., 2009; Jayasingam et al., 2020).

World Bank President, Jim Yong Kim, stated that the foundation of success in service delivery is the unspoken knowledge of implementers, referring to KM as the bold action that will address the magnitude of current global service delivery challenges (World Bank, 2012).

Service delivery is crucial in the relationship between government and citizens. Citizens have a right to fast, accessible, excellent quality and affordable services wrapped in friendly treatment from the government. This is a condition for the good image of the government (Sawe & Rotich, 2016:894) and as stated in the introduction of this thesis, something President Ramaphosa needs to see happen in terms of boosting investor confidence so that he can attract FDI.

The following authors advocate KM as the lubricant that will improve service delivery because it:

(i) Speeds up an organisation's ability to make its work smarter because it can enable the organisation to 'do more with less' (Wiig, 2002);
(ii) Addresses the skills gap (Sawe & Rotich, 2016);
(iii) Empowers employees to grow and innovate (Sawe & Rotich, 2016); and
(iv) Facilitates companies to be faster and more efficient (Theriou et al., 2011).

Additionally, Sawe and Rotich (2016:889) and Kimani (2013:8) state that KM is not new to the government and can deliver huge service delivery benefits, but several government departments are slow in its implementation. About 15 years ago, when KM was identified as a key component of growth in the private sector, notably in the consulting community, the post-apartheid government adopted it for implementation in their National and Provincial Government Departments (DPSA, 2019). Today, KM is a CMC of the South African government's senior management staff, as well as a KPI in their performance agreements.

Knowledge management also made its way into their long-term plan, the NDP 2030, to institutionalise lifelong learning, provide continued professional advancement and develop

knowledge and innovation in South Africa (DPSA, 2019). Many would argue that the introduction of KM was prompted by the need to improve service delivery in the south African public service (Mothamaha & Govender, 2011; Dikotla et al., 2014). However, despite the fact that KM was introduced into the South African government approximately 15 years ago and despite the fact that KM is included as a KPI in the Performance Agreements of all senior management staff, the implementation of KM remains extremely slow and disjointed (DPSA, 2019). It would be correct to argue that it has not translated into improved service delivery in the South African public service. To underscore the stakes, Sawe and Rotich (2016) and Kimani (2013) note that while KM is not new to the government and has the potential to significantly improve service delivery, many national and provincial government departments remain very sluggish to adopt it.

Overall, the central argument of this research study is based on the premise that improved KM would result in improved service delivery.

2.6   Chapter summary

The theoretical context of Public Administration was discussed. This chapter showed that one of the main motivations for Public Administration reform was to respond to people's ongoing requests for better service delivery, which is reliant on a well-functioning Public Administration (OECD, 2014). Page (2020) advocates that when Public Administration is being reformed, the following four fundamental elements must be addressed—human capital, policy-making structures, government machinery, as well as revenue and expense management systems.

This chapter centred on how Public Administration has changed over time. It was revealed that Public Administration has gone through three dominant models. From the early 1900s to the 1980s, there was TPA; from the late 1980s to the early 2000s, there was NPM; and most recently, NPG. While these models introduced new ideas to Public Administration, certain features of the previous model can be noted. An example is the adoption of private-sector practices, particularly KM. Today, governments worldwide either embrace NPM or NPG as their preferred method of Public Administration for modernising and reforming themselves (Hope, 2001).

In addition, this chapter revealed the importance of applying the correct Public Administration perspective. Perspective, as stated in the study, leads to action and the wrong perspective can produce the wrong action. Hence, it was revealed that the implementation of KM in the South African government is slow and disjointed probably because the wrong perspective is at play, namely the managerial perspective. An integrated approach, such as the integral perspective, can provide better implementation outcomes and in turn, contribute to the research question on how the implementation of a KM framework can improve service delivery in the South African

government. The next chapter expands on KM in the South African government.

CHAPTER 3

THEORETICAL CONTEXT OF KNOWLEDGE MANAGEMENT

3.1   Introduction

The theoretical context of Public Administration was discussed in the preceding chapter. It explained three key concepts: (i) why the government will always face pressure from their citizens to implement reforms to enhance the way how services are provided; (ii) how the government deals with these pressures through the instrument of Public Administration; and (ii) as the world evolves, so must Public Administration. Chapter 2 stated that between 1890 and 1980, Public Administration evolved from Traditional to NPM, with governments worldwide choosing either NPM or NPG as a model for modernisation and reform. While these models introduced novel concepts to Public Administration, they share several characteristics with the prior model. An example is the adoption of private-sector practices, like KM, which was initially implemented during the NPM era and has since remained. Consequently, this chapter looks at KM, a private sector practice that has been adopted by the public sector in recent years. The purpose of this chapter was to explore why KM became popular as a key to success in the private sector, how KM accelerates efficiency and effectiveness of service delivery in the private sector and whether it will do the same in the South African government.

3.2   Knowledge management

The following discussion provides an overview of the history of KM, a definition of KM, an exploration of the importance of KM and an explanation of KM's core lifecycle.

3.2.1   Historical overview of knowledge management

When the history of KM was explored, the following competing views on its origins emerged (Schutt, 2003; Dalkir, 2005; Koenig & Neveroski, 2008; Mašić et al., 2017; Mohajan, 2017) namely:

(i)   KM can be traced back to the time of Greek philosopher Aristotle, who tried to generate and document knowledge for use by various societies;

(ii)   KM stretches back as far as the Sumerian civilisation in Mesopotamia. One of the earliest ways that knowledge was preserved was through the oral tradition and the use of human memory. At the time the Sumerians recorded and stored their knowledge on clay tablets, which were later sorted to establish the first libraries; and

(iii)   KM is a new field of study, with a short history that dates from the 1960s to the 1990s. During this time, Peter Drucker, Karl-Erik Sveiby, Nonaka and Takeuchi all authored articles that contributed to the development of KM as a discipline (Giorgi, 2021). That

is, it all started when the idea of a 'knowledge company' was first written down. Also, Peter Drucker was said to have invented the term 'knowledge worker' in the 1960s.

Despite their differing perspectives on the history of KM, these scholars agreed that the contemporary notion of KM did not emerge until the late 1980s in the private sector, notably in the consulting community, when two key variables were combined: (a) the start of the Internet and the almost universal recognition of the Internet's value as a resource for sharing information and knowledge, especially for geographically distributed organisations; and (b) the realisation of the value of an organisation's information and knowledge assets (Knowledge Associates, 2002; Koenig & Neveroski, 2008; Mohajan, 2017; Koenig, 2018).

At the time, the consulting community understood that by developing tools and techniques such as dashboards, expertise locators and best practice (lessons learned) databases, they created a unique intellectual capital product that could be sold to other businesses, particularly those that were large, complex and geographically dispersed (Koenig, 2018).

Additionally, according to Prusak (1999, cited by Koenig, 2018:1), the modern concept of KM became public in 1993 during an Ernst & Young-sponsored event in Boston. Ever since, KM has been defined by several writers and researchers in several ways (Igbinovia & Ikenwe, 2017).

3.2.2   Knowledge management defined

In 1994, Tom Davenport coined the phrase "capturing, distributing and using knowledge" to define KM (Davenport, 1994:130). Years later, the Gartner Group came up with a new concept of KM, which is still the most widely used, that "Knowledge management is a collection of approaches that involves identifying, capturing, evaluating, retrieving and sharing all of an enterprise's information assets" (Koenig, 2018:1). Information assets are papers, procedures, strategies, databases and uncaptured experiences and knowledge of employees. In the Western Cape Government (WCG), particularly the Department of Transport and Public Works (DTPW), KM is defined as the "explicit and systematic management of vital knowledge and its associated processes of finding, creating, capturing, organising, storing, sharing and applying knowledge that requires turning personal knowledge into corporate knowledge (intellectual capital) via the inclusion thereof in departmental strategy, policy and practices" (WCG, 2020a:16).

Because of its diverse and complex nature, there is no universally accepted definition of KM (Theriou et al., 2011; Igbinovia & Ikenwe, 2017; Koenig, 2018). Nonetheless, the critical aspect of KM is getting the correct knowledge to the correct person at the right time. Aside from that, it is crucial to remember that KM is not only about accumulating knowledge to accumulate knowledge.

The ultimate purpose of KM is to add value to an organisation so that organisational objectives are achieved (Hajric, 2018).

In stark contrast to all other business fads of the late 20th Century, KM has demonstrated a remarkable capacity for longevity and expansion (Koenig, 2018).

Overall, in this study, the researcher adopts and defines KM as follows: Knowledge Management is not about capturing, storing, or using knowledge for the sake of capturing, storing, or using knowledge but about ensuring the correct knowledge reaches the correct government official at the correct time so that well-informed decisions that provide value to the South African government for it to achieve its objectives outlined in Section 195 of Chapter 10 of the Constitution of the Republic of South Africa, 1996 (this section of the South African constitution is explored later in the research study).

3.2.3   Importance of knowledge management

In today's knowledge-based economy, the competitiveness of organisations is determined by the knowledge and skill of their employees, as opposed to conventional production qualities (Figurska, 2014). Hence, the value of knowledge exceeds that of labour, property and financial wealth. When done right, KM has the potential to make the employee, team and the organisation more efficient and give it a competitive advantage over its competitors (Figurska, 2014), namely:

(i)   **Employee**: Knowledge management helps employees do their jobs well. It helps them make good decisions, solve problems, foster a feeling of community inside the organization and keep current on procedures and technology. It also encourages employees to improve their work techniques and gives opportunities for employees to participate more effectively;

(ii)   **Team**: Knowledge management supports peer-to-peer mentorship, more effective networking and cooperation, the development of a professional code of ethics and shared language; and

(iii) **Organisation**: Knowledge management assists in driving strategy, swiftly resolving problems, disseminating best practices, improving knowledge incorporated in goods and services, developing ideas, increasing prospects for innovation, achieving a better competitive position and building organisational memory.

The following are some of the advantages that efficient KM will provide to the government:

(i)   Well-informed decision-making;

(ii)   Reduction in knowledge duplication, i.e., addresses time, money and resource wastage (Ondari-Okemwa & Smith, 2009; Koenig, 2018);

(iii)   Successful citizen participation in public decision-making;

(iv)   Competitive increase of society's intellectual powers;

(v)   Competitive knowledge-based workforce;

(vi)   Work smarter (Wiig, 2002);

(vii)   Can 'do more with less' (Wiig, 2002);

(viii)   Addresses the skills gap (Sawe & Rotich, 2016);

(ix)   Employees are empowered to grow and innovate (Sawe & Rotich, 2016);

(x)   Faster and more efficient (Theriou et al., 2011);

(xi)   Reduction in effort (DPSA, 2019);

(xii)   Reduction in mistakes and malpractice (DPSA, 2019);

(xiii)   Process and work method improvement (DPSA, 2019); and

(xiv)   Reduction in being dependent on consultants (DPSA, 2019).

Although there are several benefits to KM, the most important is the use of intellectual capital to increase efficiency through improved decision-making (Mohajan, 2017; Chib & Sehgal, 2019).

3.2.4   Knowledge management core lifecycle

Knowledge management consists of at least the following core lifecycle elements: (i) capture knowledge; (ii) store knowledge; and (iii) use knowledge (*see* Figure 3.1 below).
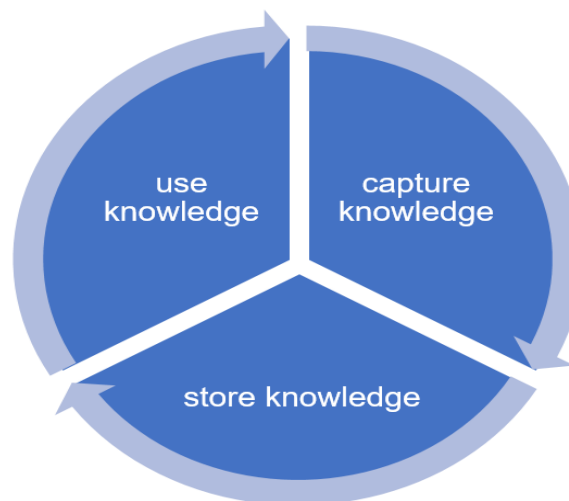
Figure 3.1: Knowledge management core lifecycle elements

3.3   Knowledge management DIKW pyramid

It is important to understand the term 'knowledge', specifically how it differs from 'wisdom', 'information' and 'data'. The DIKW Pyramid, depicted in Figure 3.2 below, has been used for several years to show this difference (Fernanda & Salwa, 2018).
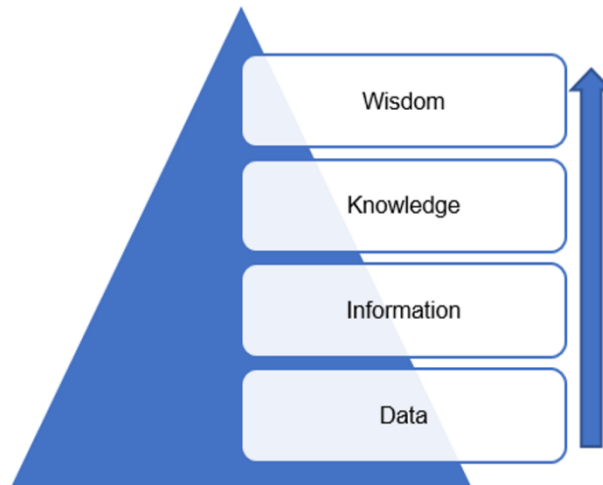
Figure 3.2: DIKW Pyramid
Source: Adapted from Fernanda and Salwa (2018:417)

Fernanda and Salwa (2018) explain the meaning of the terms Data, Information, Knowledge and Wisdom as follows:

(i)   **Data**: A symbol, signal, or sensation associated with something is known as data. Data is the starting point for achieving a concrete outcome in the end. Logging, documents, measurements and so on are all types of data;

(ii)   **Information**: According to Davenport and Prusak (2000, cited by Hajric, 2018:9), data must be contextualized, classified, computed and condensed to become information. Also, the conclusion reached because of the data gathered is referred to as information (Fernanda & Salwa, 2018);

(iii)   **Knowledge**: The sense of information that has been manipulated by humans is known as knowledge. According to Fernanda and Salwa (2018) and Igbinovia and Ikenwe (2017), knowledge is divided into two categories: tacit and explicit knowledge. Tacit knowledge is defined as knowledge acquired via direct observation and experience. It is the knowledge that is most challenging to record, impart, or portray in a tangible way (Igbinovia & Ikenwe, 2017). Explicit knowledge is the knowledge that can be readily

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shared because it has been written down, it can be easily learned and transmitted to others, it is codified and archived for future use (Fernanda & Salwa, 2018); and

(iv) **Wisdom**: The highest level of ability shown by a person's ability to use his or her information efficiently and appropriately is known as wisdom. In this scenario, the individual makes informed and wise decisions.

Although the DIKW Pyramid provides a basic framework on how data evolves into information, knowledge and wisdom, it does not explicitly make a distinction between wisdom and knowledge. That is, having knowledge does not necessarily lead to improved decisions or actions and more crucially, it does not make one wise (Intezari et al., 2016).

Aside from data, information and knowledge, wisdom is reliant on a variety of other characteristics. It takes a mixture of experience, judgment, intellect, cognition, values and beliefs, among other things for an individual to be wise (International Labour Office, 2011). Hence, these characteristics are linked to wisdom (Intezari et al., 2016). It is therefore fair to assert that to implement KM in the South African government, public employees would require more than mere knowledge of how to do this.

Consequently, getting public officials from 'knowing' to 'doing' is one of the most difficult challenges in developing countries, particularly those with a history of structured socioeconomic deprivation (International Labour Office, 2011; DPSA, 2013). Nevertheless, this will be discussed in more detail in the next chapter.

3.4   Knowledge management components

The KM components consist of the KM Critical Success Factors (CSFs) and the KM tools. This is explored in more detail below.

3.4.1   Knowledge management critical success factors

Implementing KM in any organisation is not an easy task (Hai Sin et al., 2009). It is a complex undertaking and to be successful, requires well-thought-out criteria (Winkler & Mandl, 2007). Over the years, criteria considered important for the successful implementation of KM were identified. They are called Critical Success Factors (Theriou et al., 2011). See Table 3.1.

Table 3.1: Knowledge management critical success factors

Author	Year	Knowledge Management Critical Success Factors
Arthur Andersen and APQC	1996	Leadership, organization culture, technology and measurement.
Earl	1997	Information Technology, people and corporate culture.
Skyme and Amidon	1997	A strong link to business imperative, a compelling vision and architecture knowledge leadership, knowledge-creating and sharing culture, continuous learning, well-develop technology infrastructure and systematic organization knowledge processes.
Holsapple and Joshi	1997	Managerial influences, Resource influences and Environment influences.
Davenport et al.	1998	A clear purpose and language, a standard and flexible knowledge structure, multiple channels for knowledge transfer, organization culture, technical and organization infrastructure change in motivational practices and senior management support.
Liebowitz	1999	Strategy with the support of senior management, chief knowledge officer (CKO) or equivalent and a knowledge management infrastructure knowledge ontologies and repositories KM systems and tools, incentives to encourage knowledge-sharing and supportive culture.
Arthur Anderson Business Consulting	1999	Information Technology, people and corporate culture.
APQC	1999	Leadership, organization culture, measurement and technology.
Stankosky and Baldanza	2000	The organization technology, leadership and learning.
Holsapple and Joshi	2000	Culture, leadership, technology, organization adjustments, employee motivation and external factors.
Andrew et al.	2001	Information Technology, organization structure, corporate culture, knowledge obtainers, knowledge, transfer, knowledge application and knowledge protection.
Chourides et al.	2002	Strategy, human resource management (HRM), IT, quality and marketing.
Hasanli	2002	Leadership, organization culture, structure, roles and responsibilities, IT infrastructure and measurement.
Davenport and Probst	2002	Leadership, performance measurement, organization policy, knowledge sharing and acquisition, information systems structure, benchmarking and training.
Bixler	2002	Leadership, organization technology and learning.
Mathi	2004	Culture, KM organization systems and IT infrastructure effective and systematic processes and measures.

Source: Adapted from Theriou et al. (2011:103-104)

As already stated, KM terms are used interchangeably. In some literature, the KM CSFs are also

referred to as Knowledge Management Enablers (UKEssays, 2018). In this study, however, the KM CSFs are three distinct but interrelated components: KM Objectives, KM Pillars and KM Enablers. Collectively, these three factors collaborate to embed a KM culture in the organisation (see Figure 3.3).
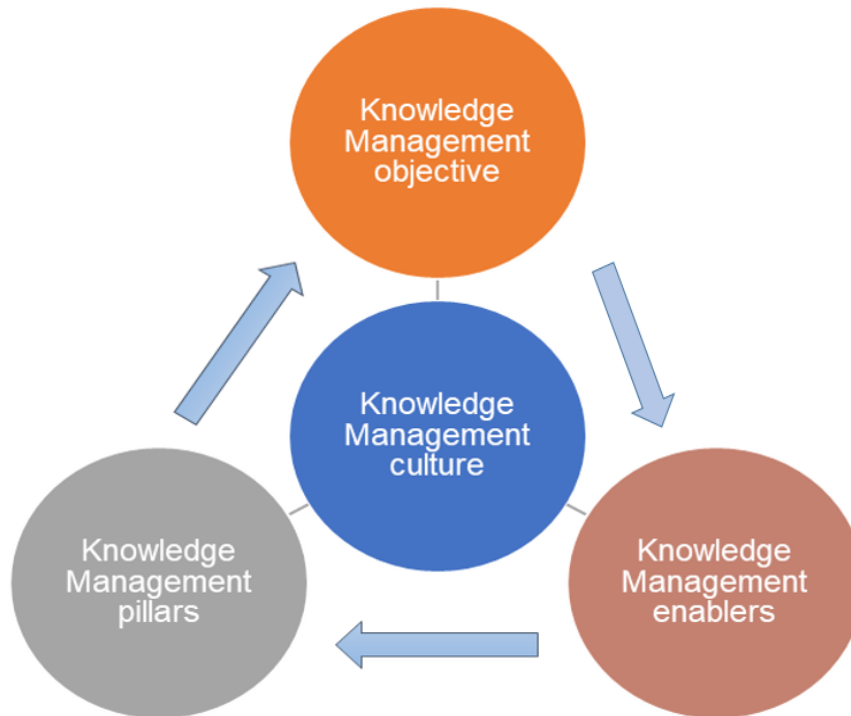
Figure 3.3: Knowledge management critical success factors

The KM CSFs are briefly explained below.

(i) **KM Objective:** The strategic goal to be achieved;

(ii) **KM Pillars**: Supports the achievement of the KM Objective. The three well known KM Pillars are People, Process and Technology (Chan, 2017):

- o **People** at all levels of the organization, from the top to the bottom, are involved in Knowledge Management (Chan & Lau, 2021);
- o Organisations use the intentional KM **Process** Pillar to capture, store and use knowledge (Chan & Lau, 2021); and
- o **Technology** promotes quick knowledge flow and exchange among employees and organisations. Knowledge Management is more successful in organisations that make technology-related services widely available to their employees (Chan & Lau, 2021).

(iii) **KM Enablers:** KM Enablers support the KM Pillars in achieving the KM Objective.

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Ignorance and oversight of the CSFs can deter an organisation's effort to successfully implement KM (UKEssays, 2018). Hence, the crafting of the CSFs is an extremely important activity not to be taken lightly.

3.4.2   Knowledge management tools

The instruments that capture, store and use knowledge are known as KM tools. According to Koenig (2018), the basic tools are:

(i) **Enterprise Content Management (ECM)**: An ECM system is the most visible and immediate aspect of KM and is a document management technology system. These systems aim to help with documents and organisational records publishing, storage, indexing and retrieval. There are several ECM systems available, each with its own set of advantages and disadvantages. A disadvantage to consider when choosing an ECM system is that the more data, information and knowledge stored on it, the more difficult it can be to find things quickly and effectively. Hence, an ECM system must produce results fast (Hajric, 2018);

(ii) **Expertise Locator System**: An expertise locator system is used to categorise and identify employees who have expertise in a particular field. Several software solutions allow employees to find and engage with specialists within their organisations, letting them benefit from combined expertise (Wells, 2016);

(iii) **Lessons Learned**: This is the process of collecting personal experience and making it available for others e.g., video logs. The goal is to gather and use lessons learned to avoid reinventing the wheel or making the same mistakes again. According to Buttler and Lukosch (2013:1), lessons learned may be defined as "knowledge obtained through successful or unsuccessful experience for the goal of enhancing future performance";

(iv) **Communities of Practice**: This is a platform for professionals to share tips and best practices, ask questions about problems and opportunities, explore best practices, review lessons learned and offer each other encouragement (Wenger, 1998; Wenger & Snyder, 1999; Hajric, 2018);

(v) **Knowledge Retention and Retirees**: This entails ways to retain the knowledge of skilled employees and those who are retiring, e.g., Learn from Leavers and brown bag sessions (Lunch and Learn initiative) programme.

Expertise locator systems and lessons learned are the two most widely discussed types of explicit knowledge-sharing tools in the KM literature. The type of implicit knowledge-sharing tool that has received the most attention is communities of practice (Virkus, 2011). It is worth noting that reliance on primitive KM tools has often resulted in unsuccessful KM implementations in the past

(Hajric, 2018). Additionally, according to Snowden (2002), determining if someone is sharing their knowledge is difficult but determining whether they are complying with the systems in place is possible. Consequently, KM tools may be considered a factor that contributes to the implementation of KM. It may also be used collectively as a benchmark to ascertain the extent of the implementation of KM in an organisation.

3.5 Knowledge management in the South African government

South Africa aspires to offer a better life for all (Cook, 2020) and in 2012, the South African government produced the NDP 2030 to reach this goal (National Planning Commission, 2011). The NDP is South Africa's guiding document positioned as a blueprint to eliminate poverty and reduce equality. Overall, to address the well-being of its people. According to the NDP, "South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state and promoting leadership and partnerships throughout society" (National Science and Technology Forum, 2018:2).

But, South Africa, a majority-black, multiracial country with a total population of 60.6 million people, despite the implementation of the NDP, has not only endured low economic development for several years but its socioeconomic divide, instead of narrowing, has become even wider (Cook, 2020). Also, when South Africa was measured together with other OECD nations six years after the NDP was launched, it scored very low in every element of well-being (see Figure 3.4). According to the 2018 OECD Better Life Index, countries were ranked from 1 (best) to 40 (worst) (OECD, 2020). South Africa was a bottom performer on eight indicators, namely education, environment, health, housing, income, jobs, life satisfaction and safety.
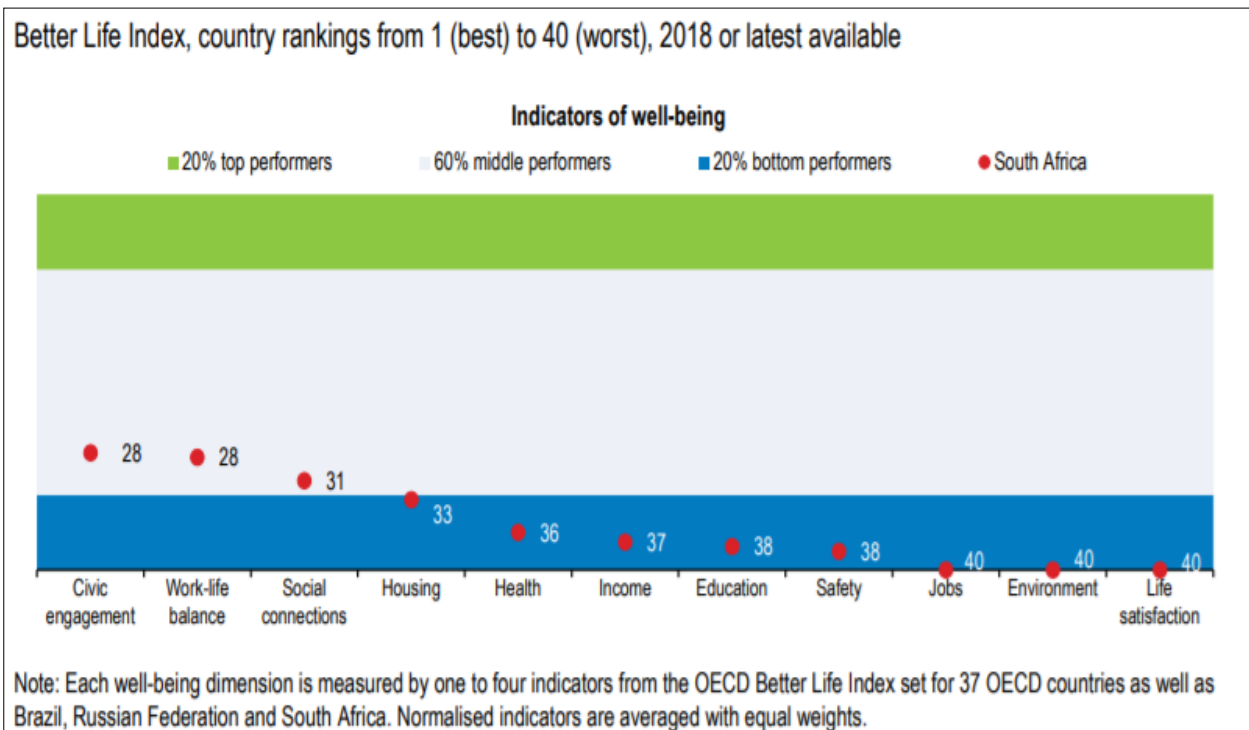
Figure 3.4: South Africa's rank on the OECD Better Life Index
Source: OECD (2020:12)

Because KM has gained traction over the years as a key to success in the private sector, particularly in the consulting community and because of the significant benefits KM was seen to deliver, the South African government included it in its NDP (Davenport & Prusak, 2000; Ming Yu, 2002; Rowland & Syed-Ikhsan, 2004; Zack et al., 2009; Sawe & Rotich, 2016; Adler, 2019; DPSA, 2019; Jayasingam et al., 2020). For instance, the NDP demands that all government employees' skills and knowledge be current and future-oriented. Plus, all government departments had to institutionalise lifelong learning, provide continued professional advancement, as well as develop knowledge and innovation (DPSA, 2019).

However, the 2018 OECD Better Life Index suggests that the aforementioned KM activity is either not happening well or has not happened at all. Either way, if current trends continue, South Africa will fall short of its NDP 2030 service delivery goals. In addition, based on the index, it can also be said that the South African government is not experiencing some of the KM benefits below.

(i)   Speed up the ability to make organisations work smarter (Wiig, 2002);
(ii)   Enable organisations to 'do more with less' (Wiig, 2002);
(iii)   Address the skills gap (Sawe & Rotich, 2016);
(iv)   Empower employees to grow and innovate (Sawe & Rotich, 2016);

(v) Facilitate organisations to be faster and more efficient (Theriou et al., 2011);

(vi) Reduce duplication of effort (DPSA, 2019);

(vii) Prevent mistakes or malpractice (DPSA, 2019);

(viii) Improve processes and work methods (DPSA, 2019); and

(ix) Reduce dependency on consultants (DPSA, 2019).

Consequently, a framework for the implementation of KM is required to improve public sector service delivery in South Africa.

3.5.1 Department of Public Service and Administration knowledge management components

According to DTPW (2019), the South African government is legally mandated to implement KM in their respective government departments, namely:

(i) Constitution of the Republic of South Africa, 1996;

(ii) Public Service Act, 1994;

(iii) Minimum Information Security Standards of 1996;

(iv) National Archives and Records Service of South Africa Act, 1996;

(v) Provincial Archives and Registry Service Act of the Western Cape, 2005;

(vi) Public Finance Management Act, 1999;

(vii) Promotion of Access to Information Act, 2000;

(viii) Protection of Personal Information Act;

(ix) State Information Agency Act, 1998; and

(x) Intergovernmental Relations Framework Act, 2005.

The DPSA is responsible for embedding KM in the South African government. To successfully do this, they developed the National KM Strategy Framework for implementation across the South African government. The objective of this framework is to contribute to the achievement of the NDP 2030, as well as to ensure institutional coherence and standardisation throughout all departments. Consequently, all national and provincial government departments are to align their respective department's Knowledge Management Strategies they already developed to this National KM Strategy Framework. Even though KM was identified as a critical component of the NDP 2030 in 2012, the DPSA only developed the National KM Strategy Framework, i.e., the KM strategy for South African government departments, in March 2019 (National Planning Commission, 2011; DPSA, 2019; Cook, 2020).

The National Knowledge Management Strategy Framework consists of four KM Pillars - culture,

people, content and process, with technology serving as the KM Enabler (DPSA, 2019). See Figure 3.5 below.
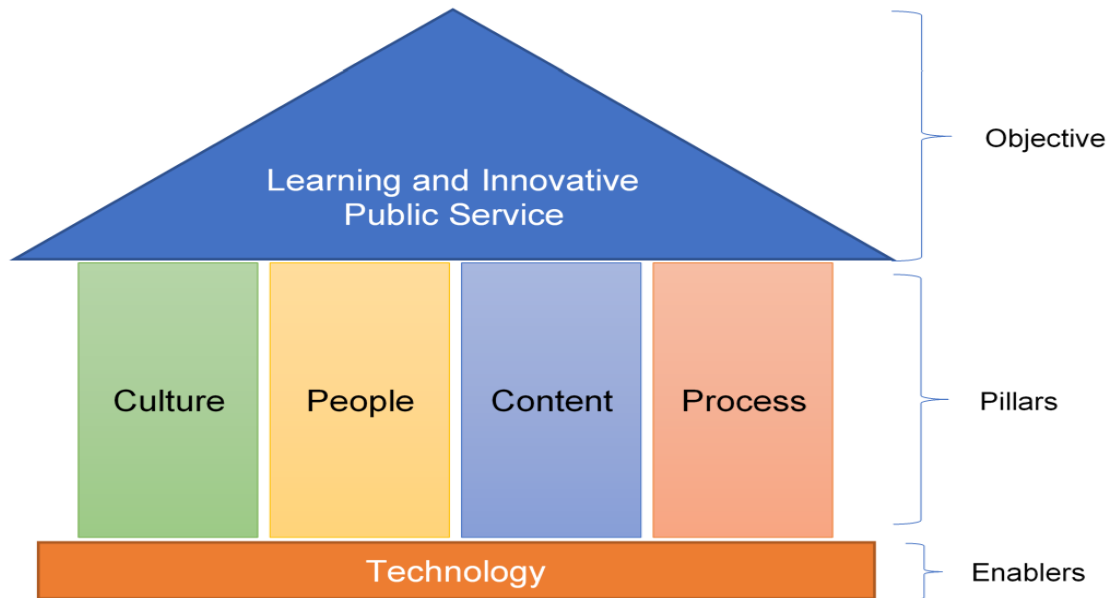
Figure 3.5: DPSA knowledge management critical success factors
Source: Adapted from DPSA (2019:24)

The KM CSFs are three distinct but interrelated components: KM Objectives, KM Pillars and KM Enablers. Collectively, these three factors collaborate to embed KM in the South African government. The next section goes into further detail on why the various elements were chosen:

(i) **Culture**: Both political and administrative leadership are crucial in creating an environment that encourages information flow and, as a result, a successful KM implementation. However, because it deals with issues and practices rooted in organisational business operations, changing culture is one of the most difficult elements of KM (DPSA, 2019). As a result, culture is an important Pillar;

(ii) **People**: The South African government will only be able to successfully implement KM and achieve its goals and objectives if the relevant expertise and competencies are accessible. Hence, developing capacity and competency is vital. This will be done through mentoring, coaching, succession planning and recruitment (DPSA, 2019);

(iii) **Content**: Documents and people both provide content. This content must be managed efficiently and effectively. Consequently, KM processes are driven by good content management systems (DPSA, 2019);

(iv) **Process**: The Process Pillar is concerned with Records and Information Management, such as file planning, registry, records management and so on. The goal of this Process Pillar is to have all records and information processes simplified, quick and with records or information readily available and not lost in the processing system (DPSA, 2019); and

(v) **Technology**: KM is enabled by Information, Communication and Technology (ICT) systems, which provide a platform for creating, capturing, organising, storing, sharing and applying knowledge (DPSA, 2019). Also, technology is both a support and a cross-cutting enabler for each KM Pillar (Igbinovia & Ikenwe, 2017).

Overall, the National Knowledge Management Strategy Framework's CSFs are the structural and functional components that aim to institutionalise KM in the South African government (Hai Sin et al., 2009). It provides structure and direction, and it can be considered as the KM nuts and bolts (Williams, 2015). Hence, the CSFs illustrated in Figure 3.5 above are essential to the South African government's implementation of KM. The lack of either factor can have an impact on service delivery.

3.5.2   Knowledge management and service delivery in South Africa

According to Reddy (2016), the word 'service delivery' is a common term to define the provision of essential public needs, such as housing, water and sanitation, land, energy and infrastructure, as well as the provision of basic public infrastructure. Hence, service delivery is crucial in the relationship between government and citizens. Citizens believe that because they pay taxes (Regional School of Public Administration, 2018), they have a right to fast, accessible, excellent quality and affordable services wrapped in friendly treatment from their government (Sawe & Rotich, 2016). As a result, the government strives to live up to this ideal (Ondari-Okemwa & Smith, 2009). However, living up to this ideal is not always the case. The supply and continuous upkeep of these essential services in South Africa have shown to be inconsistent at times, significantly inconveniencing and threatening people. As a result, there has been an increase in the number of service delivery protests, or rallies calling for improved service delivery, in recent years (Reddy, 2016).

Wiig (2002, cited by Ondari-Okemwa & Smith, 2009:33), believes that KM may assist countries, namely South Africa, to provide better service delivery and points out how KM can help:

(i)   Enabling informed decision-making within the public service and reducing knowledge duplication i.e., addresses time, money and resource wastage (Ondari-Okemwa & Smith, 2009; Koenig, 2018);

(ii)   Assists citizens in successfully participating in public decision-making;

(iii)   Increases the competitiveness of society's intellectual powers; and

(iv)   Creates a knowledge-based workforce that is competitive.

Some academics listed below feel that KM is the lubricant that will improve service delivery, namely:

(i)   Speed up the ability to make organisations work smarter (Wiig, 2002);

(ii)   Enable organisations to 'do more with less' (Wiig, 2002);

(iii)   Address the skills gap (Sawe & Rotich, 2016);

(iv)   Empower employees to grow and innovate (Sawe & Rotich, 2016);

(v)   Facilitate organisations to be faster and more efficient (Theriou et al., 2011);

(vi)   Reduce duplication of effort (DPSA, 2019);

(vii) Prevent mistakes or malpractice (DPSA, 2019);

(viii) Improve processes and work methods (DPSA, 2019); and

(ix)   Reduce dependency on consultants (DPSA, 2019).

Paprika (2001) and Zamir (2019) add that service delivery is directly influenced by KM in several ways. These include employee learning and agility, job performance, process effectiveness and process efficiency. Also, KM influences the development of knowledge-based solutions that offer value (Paprika, 2001; Zamir, 2019).

Furthermore, according to Heck and Rogger (2004), KM, when correctly implemented, in other words, when knowledge is efficiently captured, stored and used in government, the following medium- and long-term benefits may be achieved (Ondari-Okemwa & Smith, 2009):

(i)   Significantly improved efficiency, transparency and quality of service delivery;

(ii)   Improvements in the transparency and agility of information flow;

(iii)   An equitable and more equitable division of tasks;

(iv)   Properly organised government;

(v)   Properly organised internal business operations;

(vi)   Technologically effective internal business operations; and

(vii) Optimised workflow-related skills.

The provision of services, particularly in the context of the South African government, is explored

in more depth in the following chapter.

3.6   Chapter summary

This chapter addressed three of the six sub-questions of the research study: (i) what KM is, its components and how does it improve service delivery; (ii) what is the factor that contributes to or deters the implementation of KM in the South African government; and (iii) to what extent is KM implemented in the South African government. As a result, the following important points emerged:

(i)   There are distinct benefits to implementing KM in the South African government;

(ii)   KM provides new alternatives, skills and activities that have the potential to have a big influence on and aid the South African government to be competitive, function well and achieve the targets of the NDP 2030;

(iii)   It is fair to assert that to implement KM in the South African government, public employees would require more than mere knowledge of how to do this i.e., there is a distinct difference between knowing and doing;

(iv)   Wisdom requires more than just knowledge, it takes a mixture of experience, judgment, intellect, cognition, values and beliefs for an individual to be wise;

(v)   KM CSFs is an essential function for a successful implementation of KM in the South African government;

(vi)   Ignorance of the KM CSFs can deter the South African government's effort to successfully implement KM;

(vii)   KM tools are an important factor that contributes to the implementation of KM in the South African government; and

(viii) The identification of KM tools across South Africa's national and provincial government departments can serve as a benchmark for determining the extent to which KM is implemented in the South African government.

The theoretical context of service delivery is explored in greater depth in the next chapter, with particular emphasis on the South African government. There is a strong focus on why citizens want public services to be on par with, if not better than, those provided by their government.

CHAPTER 4

THEORETICAL CONTEXT OF SERVICE DELIVERY

4.1   Introduction

The preceding chapter investigated the theoretical context of KM, with a focus on establishing why KM became popular as a key to success in the private sector and whether it could help the South African government improve service delivery. Hence, to support Chapter 3, the theoretical context of service delivery in South Africa is explored in this chapter. A strong emphasis is placed on why citizens want public services to be on a level with, if not better than, those provided by the private sector. Further to this, this chapter explains why the South African government was transformed and what measures were put in place to ensure reliable, available, affordable, convenient, inclusive and whole-of-government services. The skills and key management competencies that a public servant must have to drive excellent public sector service delivery are also discussed in this chapter.

4.2   Service delivery

The provision of essential public needs and services, such as housing, water and sanitation, land, electricity and infrastructure, is a term that is frequently used to define public sector service delivery (Reddy, 2016). It covers all aspects of when, how and where a service is given to a client, as well as whether or not it is fair (Martins & Ledimo, 2015; Regional School of Public Administration, 2018; Nel & Masilela, 2020). Consequently, in this study service delivery is defined as a product or service provided by a government to its citizens in fulfilment of a promise made (Crous, 2002).

4.2.1   Private versus public service delivery

According to Gildenhuys (1997, cited by Crous, 2002:53), service delivery is categorised as either private or public sector services and will be considered as public service delivery if they:

(i)   Cannot be provided by the private sector due to their social existence;

(ii)   Are needed to achieve the objectives and goals of a government and are not supplied by the private sector for any reason; and

(iii)   Group work, rather than individual effort, can result in a more cost-effective and superior product.

This study is on public service delivery. From hereon, public service delivery is referred to as service delivery.

4.3   Current state of service delivery in South Africa

The South African government is responsible not just for maintaining law and order but also for ensuring that people have access to services that meet their needs. However, according to Moloto et al. (2020) and Gossel and Koelble (2021), the current state of service delivery in South Africa is not good, as not everyone's basic needs are being met, which is a cause for worry. They also stated that the South African government is failing horribly in its efforts to offer the most basic of services to all residents of the country. Here are a few examples:

(i)   **Water**: In South Africa, at least 54% of homes did not have access to clean running water (Amnesty International, 2021). By 2030, urban water demand is predicted to exceed supply, posing one of the most critical challenges facing cities in South Africa in the next decade (Prins et al., 2022). However, water is carelessly lost because of leakage, unmonitored water usage, urbanisation, insufficient infrastructure management, metering errors, substandard repair and maintenance procedures, budgetary constraints, old infrastructure and water theft. All because of bad water management and governance (Mathye et al., 2021). Consequently, those that need water cannot get water due to runoff;

(ii)   **Housing**: According to Amnesty International (2021), 14% of South Africa's population live in crowded informal settlements;

(iii)   **Electricity**: Demand for power supply has grown but Eskom's capacity to deliver a steady supply to fulfil household and industrial demands has deteriorated. This consequently led to the implementation of energy and demand control measures, termed load shedding (Fortuin, 2022). South Africa had the worst year of load shedding on record in 2019 (Trace, 2020); and

(iv)   **Education Infrastructure**: According to Amnesty International (2021), in 2018, the South African government surveyed the present state of the country's 23,471 public school infrastructure. The results were then communicated through the National Education Infrastructure Management System. Of the 23,471 public schools surveyed, 19% were identified as having illegal pit latrines for sanitation, with 37 schools having no sanitation facilities at all. Additionally, 86% lacked a laboratory, 77% lacked a school library, 72% lacked an Internet connection and 42% lacked sports facilities. Additionally, 239 schools lack electricity. Amnesty International (2021) asserts that several problems contradict not just the government's international human rights obligations but also its own basic norms and standards for educational institutions. Furthermore, when it comes to the Covid-19 epidemic, the schools that suffer the most from deficient infrastructure are also the most likely to have found it difficult to provide continuous education for

children in poorer communities who already had little or no access to the Internet and computers. Only 22% of families in South Africa have a computer and 10% have an Internet connection. As a result, most children have a limited chance of participating in online learning and their parents or carers are rarely able to home school (Amnesty International, 2021).

In addition to the aforementioned, according to the South African government's Finance Minister Tito Mboweni's 2021 Budget speech, 59% of South Africa's 278 municipalities are in deep financial trouble, 14% are unable to provide basic services, 37% adopted budgets that they cannot repay and what's more, 57 of these municipalities are unable to account for their 2020 spending (Gossel & Koelble, 2021).

These are merely a few examples of the current state of service delivery in South Africa i.e., the numerous critical service delivery challenges that South Africa is currently experiencing. Since the South African government has struggled to deal with the provision of services, the number of service delivery protests demanding more, and better services has increased dramatically over the past decade (Campbell, 2014). So much so, that the term 'service delivery protest' has become synonymous with South Africa (Lodge & Mottiar, 2015; PSA, 2015; Breakfast & Nomarwayi, 2019; SAIIA, 2020; Daily Maverick, 2021c). According to Moloto et al. (2020), the police are constantly relied upon to preserve order and enforce the law when protests occur. These authors contend that the solution to the problem does not rest in policing but in addressing the current state of service delivery in South Africa.

4.4   Service delivery transformation in South Africa

Before 1994, South Africa was run by an apartheid government that tried to separate people of different races. In 1994, there was a general election, after which things began to shift dramatically (Moloto et al., 2020). The *Constitution of the Republic of South Africa, 1996*, which is the highest law of the land, was drafted shortly after the 1994 elections by the newly elected Parliament. The constitution was signed into law by President Nelson Mandela on December 18, 1996 and it came into effect on February 4, 1997 (ConstitutionNet, 2016). The Constitution of the Republic of South Africa sets the rules for how government works (Education & Training Unit [ETU], 2020) and according to the Constitution, South Africa is divided into three levels of government, which are National, Provincial and Local government (Moloto et al., 2020). The Constitution says the three levels of government are autonomous and should not be seen as hierarchical (ETU, 2020). Section 40(1) of Chapter 3 of the Constitution mentions these three interrelated government levels as distinctive and interdependent, each with its own legislative and executive authority (South

Africa, 1996; Moloto et al., 2020). At the same time, they all operate according to the Constitution and the various laws and policies made by National Parliament (ETU, 2020).

In 1994, when the new government of South Africa took office, there was a special mandate to provide all citizens of the country with adequate services. However, the public service was not citizen-focused at the time and its Public Administration needed to be reformed (Chandrashekhar, 2020). Human resources, policy-making processes, government machinery and revenue and expenditure management structures were the main areas that were distorted and needed to be redressed to appropriately serve all South Africans, not just a select few (UNDP, 2015). Hence, the people of South Africa were assured that they would be served without discrimination, upholding the integrity of everyone and ensuring efficient and successful fulfilment of the bulk of the population's prior overlooked needs (DPSA, 2013).

As a result, nine ideals were drafted and reflected in Section 195 of Chapter 10 of the Constitution. These were the steps in the public sector's transformation from a regulatory bureaucracy to a service that competes for the public's attention and is focused on delivering meaningful service to its citizens (South Africa, 1996). Everything comes down to the nine ideas listed below, which are the ultimate service delivery goals:

(i)   A high standard of professional ethics must be promoted and maintained.

(ii)   Efficient, economic and effective use of resources must be promoted.

(iii)   Public administration must be development-oriented.

(iv)   Services must be provided impartially, fairly, equitably and without bias.

(v)   People's needs must be responded to, and the public must be encouraged to participate in policy-making.

(vi)   Public administration must be accountable.

(vii)   Transparency must be fostered by providing the public with timely, accessible and accurate information.

(viii) Good human-resource management and career-development practices, to maximise human potential, must be cultivated.

(ix)   Public administration must be broadly representative of the South African people, with employment and personnel management practices based on ability, objectivity, fairness and the need to redress the imbalances of the past to achieve broad representation.

4.4.1   Service delivery framework

A service delivery framework known as the regulatory (legal) framework emerged to assist the South African government in transitioning from an old, hierarchical, rule-bound structure to a

dynamic, results-driven service delivery organisation. This is discussed below.

4.4.1.1   Regulatory framework

The regulatory framework is a broad corpus of enabling laws developed by the South African government in 1994 and guided by the Constitution, which encompasses acts, regulations, white papers and bargaining council judgments (Crous, 2002; DPSA Batho Pele Handbook, 2003; DPSA, 2013):

(i)   The Public Service Commission Act, No 46 of 1997;

(ii)   The Public Service Laws Amendment Acts, Nos 47 and 93 of 1997 And No 86 of 1998);

(iii)   The Public Service Amendment Act, No 5 of 1999;

(iv)   The Promotion of Administrative Justice Act, No 3 of 2000;

(v)   The Public Service Regulations;

(vi)   The White Paper on the Transformation of the Public Service, 1995;

(vii)   The White Paper on Transforming Public Service Delivery (Batho Pele), 1997;

(viii) The White Paper on Human Resource Management in the Public Service, 1997;

(ix)   The White Paper on Affirmative Action in the Public Service, 1998;

(x)   The White Paper on Public Service Training and Education, 1998; and

(xi)   Collective Agreements and Management Guides.

It should be highlighted that the South African Constitution remains the principal piece of legislation that governs the country's public sector and its institutions (DPSA Batho Pele Handbook, 2003).

As a result of the regulatory framework, a variety of service delivery initiatives have surfaced (DPSA Batho Pele Handbook, 2003). However, for the sake of this study, four critical initiatives that are frequently overlooked and form the basis of the KMIF are addressed. These are the Batho Pele initiative, service delivery improvement plans, public service charter and service standards (DPSA Batho Pele Handbook, 2003). Henceforth, these initiatives are called service delivery mechanisms.

4.4.2   Service delivery mechanisms

The previously mentioned service delivery mechanisms are explored further below.

4.4.2.1   Batho Pele initiative

The Batho Pele initiative was initiated by the Mandela administration on October 1, 1997, with the release of the White Paper on Transforming Public Service Delivery (Batho Pele), 1997. Batho

Pele is a strategy that was established to encourage public officials to become more service and citizen-centric, as well as to continue to strive for service delivery excellence and improvement. Batho Pele Initiative is a simple, transparent mechanism that allows people to keep elected officials accountable for the services they offer (DPSA, 2013).

Batho Pele means "People First" in Sotho-Tswana and refers to eight principles: consultation, standards, redress, access, courtesy, information, openness and transparency, as well as value for money (ETU, 2020). To attain these values, every government department in South Africa must adhere to them (Pietersen, 2014):

(i)   **Consultation** - Citizens should be consulted on the extent and quality of public service they will get and should be given a choice of services wherever possible;

(ii)   **Standards** - Citizens should be informed about the extent and quality of public services that they will receive so that they are aware of what to expect;

(iii) **Access** – Citizens must have fair access to the services to which they are entitled;

(iv)   **Courtesy** - Citizens should be managed with respect and courtesy;

(v)   **Information** - Citizens should be provided with complete and correct information about the public services to which they are entitled;

(vi)   **Openness and Transparency** - Citizens should be informed of how national and provincial departments operate, as well as how much they cost and who is in charge;

(vii) **Redress** - Citizens should be given an apology, a complete explanation and a quick and successful solution if the promised level of service is not met. They must also receive a compassionate and constructive response when they file complaints; and

(viii) **Value for Money** - To provide people with the greatest possible value for money, public services should be delivered economically and productively.

According to the DPSA (2013), Batho Pele is not a strategy in the sense that there are strategic, organisational, implementation and human resource plans but rather an outlook that will help transform government (DPSA, 2013). Consequently, Batho Pele is not a yearly compliance exercise but the government's single most important transformation campaign that must be incorporated into all management processes and distributed to the front lines of government delivery (DPSA, 2013).

Although Batho Pele has since become a well-known brand name to represent the goal of transforming government, according to the DPSA (2013) its execution has been disappointing. Hence, the Batho Pele Revitalisation Strategy was developed in 2001 and circulated to the government departments for implementation. The Batho Pele Revitalisation Strategy's primary

goal is to instil Batho Pele culture in government employees while also improving the delivery of public services to the public, unlike the initial Batho Pele initiative (DPSA, 2013).

4.4.2.2   Service delivery improvement plans

As the regulatory framework was in the process of being embedded in the public sector, the South African government discovered that getting public officials from 'knowing' to 'doing' was one of the most difficult challenges (DPSA, 2013; International Labour Office, 2011), meaning that public officials lacked implementation skills. Consequently, Service Delivery Improvement Plan (SDIP) was developed to help with this and in turn respond better to public expectations (DPSA, 2013).

In general, the SDIP seeks to enhance the government's service delivery standards as well as the way the government provides services (DPSA, 2013).

It must be noted that SDIPs are not 'add-ons' to a strategic planning process but a component of the comprehensive planning process that aims to embed the ethos and ideals expressed in Batho Pele's eight principles (DPSA, 2013). Today, both the National and Provincial Government departments of South Africa are required to define and implement SDIPs in accordance with the Public Service Regulations of 2001 (DPSA, 2013).

How SDIPs must be implemented in government departments is depicted in Figure 4.1 below.
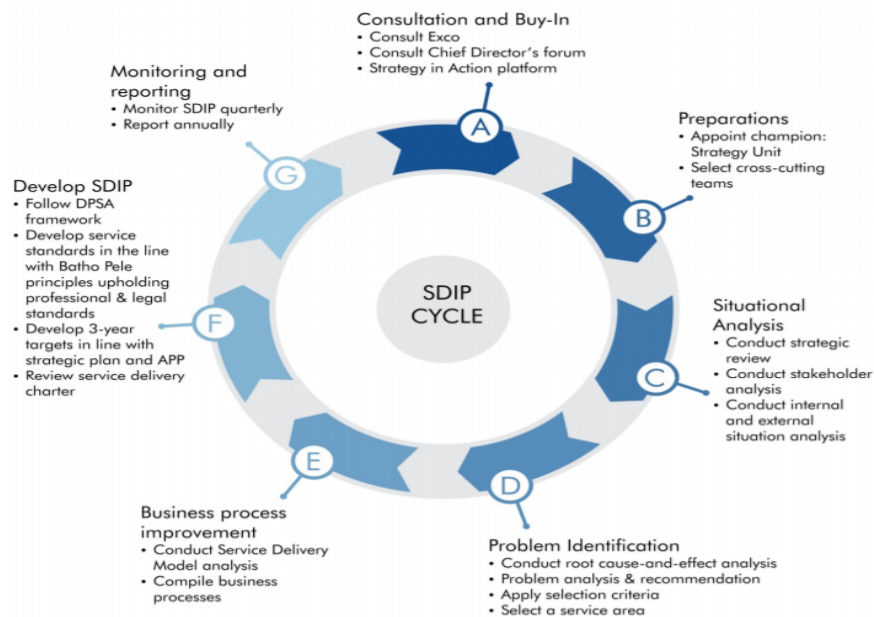
Figure 4.1: Service delivery improvement plan framework
Source: Statistics South Africa (2018:4)

4.4.2.3   Public service charter

Public service charters have become a common tool in many countries' Public Administration reform toolkit in recent years. Although the reasons for adopting public service charters differ by country, the central idea of all is nonetheless to improve the responsiveness and transparency of public services by defining the delivery requirements that users of the services may expect (Clark, 2012).

Public service charters are defined as a social contract and a commitment between the government, public employees and the public. It is a written and signed contract that's based on a social partnership and spells out the duties and obligations of all parties involved in the process of improving the delivery of government services. It is a declaration of intent and a promise that allows service recipients to recognise what they should expect from the government and serves as the foundation for interaction between the government, people and civil society (South Africa, 2013).

South Africa's Public Service Charter was created in South Africa in 2013 to promote and improve the delivery of public services i.e., to transform the South African government. Service standards are imposed by the charter and public officials are expected to meet and surpass them. According to the Public Service Charter (South Africa, 2013), public officials must provide timely services to the public in an unbiased and impartial way, and they must not engage in any transaction that interferes with their official duties, among other things. It also urges public officials to show integrity, competency, excellence, honesty and impartiality and to act against bribery and corruption, nepotism, maladministration and other actions that might damage or adversely affect the public interest (South Africa, 2013).

4.4.2.4   Service standards

The introduction of service standards assists the South African government to evaluate how well they are doing in accomplishing their transformation agenda (DPSA Batho Pele Handbook, 2003). A service standard is a type of indicator, a metric, signal, or benchmark that shows the present state or the level of accomplishment and tells us how far we've progressed (Public Service Commission, 2005). Overall, without service standards, for the South African government to determine if its transformational efforts are successful and consistent would be difficult (DPSA Batho Pele Handbook, 2003).

Today service standards are used to assess how well government departments provide services (Public Service Commission, 2005). Hence, service standards are critical because they clarify what citizens should expect and remind the government of its responsibilities (DPSA Batho Pele

Handbook, 2003).

4.4.3   Public service delivery skills

One major challenge and risk the South African government face is to transform and reform itself in a VUCA environment. A VUCA environment is a fast-paced, constant and unpredictable environment. The term VUCA was coined by the US army more than a decade ago after the Cold War and stands for Volatile, Uncertain, Complex and Ambiguous (Bennett, 2014). According to Adani (2021), these terms mean:

    (i)   Volatile - something that is liable to change rapidly and unpredictably, especially for the worse;

    (ii)   Uncertain - not able to be relied on. Not known or definite. The present is unclear, and the future is uncertain;

    (iii)   Complex - not easy to analyse or understand. Complicated or intricate. Many different, interconnected factors come into play, with the potential to cause chaos and confusion; and

    (iv)   Ambiguous - open to more than one interpretation. Not having one obvious meaning. Not clear or decided. There is a lack of clarity or awareness about situations.

A VUCA environment, according to Adani (2021), has the following repercussions

    (i)   People are agitated and destabilized;

    (ii)   Self-motivation is sapped;

    (iii)   Individuals stop advancing in their careers;

    (iv)   Constant retraining and reshaping are required;

    (v)   Increases the likelihood of leaders making poor choices;

    (vi)   Decision-making processes are hindered;

    (vii)   Long-term programmes and projects are constantly at risk;

    (viii)   Employees are overworked; and

    (ix)   Internal organisational culture suffers.

Conditions in South Africa are typically volatile, uncertain, complex and ambiguous. These are significant hurdles for South Africa to jump over (DPSA Batho Pele Handbook, 2003). Hence, despite being immersed in a VUCA environment, the South African government's challenges are also exacerbated by a dearth of competent labour (Parliamentary Monitoring Group [PMG], 2002; Rasool & Botha, 2011) and more especially, labour that can help the South African government achieve Section 195 of Chapter 10 of the South African Constitution.

Despite several education reforms, like changes to the school and university curricula, the government still face considerable skill shortages in this area (Rasool & Botha, 2011). This is a global risk. Not only is there a shortage of public officials with the necessary critical thinking and problem-solving skills required to implement service delivery programmes and projects but by 2025, about 50% of all jobs would require reskilling as technology usage grows (World Economic Forum [WEF], 2020).

What makes matters worse, is that with declining budgets, the South African government is under more pressure to find creative and long-term solutions to improve service delivery. The South African government, as the country's largest employer, faces an enormous challenge (DPSA Batho Pele Handbook, 2003), hence the increased need for a KMIF.

RBM&E, Strategic Planning, Programme and Project Management and Change Management methodologies and frameworks are explored next to explain why these are important skills for public officials to assist them to implement KM in their respective government departments.

4.4.3.1 Results-based monitoring and evaluation

RBM&E is a powerful coherent service delivery framework widely used since the 1990s that focuses on achieving results and goes beyond standard input-output monitoring and evaluation (Bhattarai, 2020). RBM&E was developed when the NPM reform swept many OECD countries (Bhattarai, 2020). In 2013, RBM&E was still relatively new in developing nations, however, it had progressed in South Africa (Xue et al., 2013). It enables decision-makers to focus on outcomes and impacts i.e., it is an approach that tracks results and performance.

While public spending is very important, RBM&E enables the government to focus its efforts on monitoring performance rather than just spending. It also aids the government with analysing long-term outcomes, instead of just short-term outputs. According to Pazvakavambwa and Steyn (2014), it is impossible to discern between success and failure if outcomes are not monitored and evaluated.

Figure 4.2 below depicts the RBM&E framework.

Long-term results: Achievement of outcomes.	**Impacts**	
Medium-term results: Achievement of outputs.	**Outcomes**	
Product, result or service produced by performing activities.	**Outputs**	
Short-term: Activities performed.	**Activities**	
Human, material and financial resources.	**Inputs**	
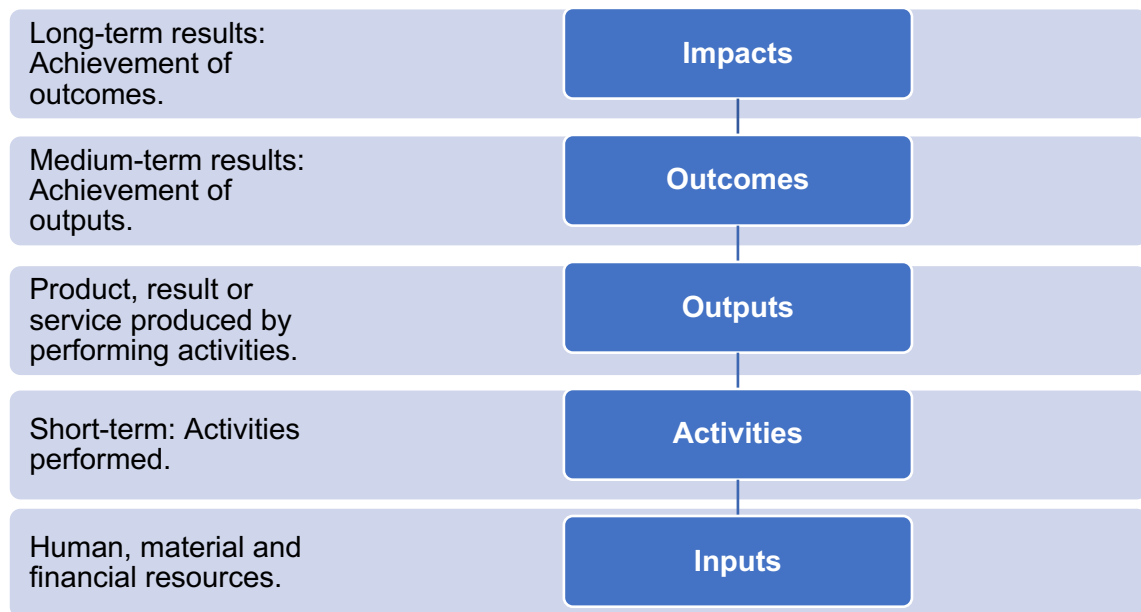
Figure 4.2: RBM&E theoretical framework

Source: Adapted from Kusek and Rist (2004:99)

RBM&E, according to Gebremedhin et al. (2010), cannot function independently of KM, Strategic Planning, Programme and Project Management and Change Management as its core purpose is to:

(i)   Help design programmes and projects;

(ii)   Improve learning and accountability;

(iii)   Increase knowledge through lessons learned;

(iv)   Integrates lessons learned into management decisions;

(v)   Report on the results achieved (performance);

(vi)   Framework aimed at achieving important changes;

(vii) Defines realistic expected results; and

(viii) Monitors progress toward the achievement of expected results.

Overall, RBM&E takes the focus away from activities and places them on results (Gebremedhin et al., 2010).

4.4.3.2 Strategic planning

Since the South African government drafted and approved its long-term strategic plan, the NDP 2030, in 2012, being schooled in strategic planning is important. As a matter of interest, the NDP is to create a capable and developmental state with the requisite capacity to improve service delivery (National Planning Commission, 2011). In 2013, the South African government agreed to introduce the NDP over the course of three five-year Medium-Term Strategic Frameworks (MTSFs). The NDP's first five-year implementation period was MTSF 2014-19 (Department of Planning, Monitoring and Evaluation [DPME], 2013; South Africa, 2020).

The NDP 2030 is strategically aligned to the global strategic plan i.e., the United Nations (UN) 2030 Agenda for Sustainable Development (SDGs). According to Chandrashekhar (2020), governments in developing countries face a common need to meet the UN 2030 Agenda for SDGs. This agenda comprises 17 goals related to economic, environmental and social development activities (Chandrashekhar, 2020). It is also known as the Global Goals and was adopted by all UN Member States, comprising 193 countries, including South Africa. The SDGs aim is to promote sustained economic growth, technological innovation and improved service delivery (UNDP, 2020).

Part of the South African government's initiative to ensure good service delivery was the introduction of a Provincial Strategic Plan (PSP). A PSP is the Provincial Government's strategic plan for its term of office. The strategic priorities of the PSP are sub-divided amongst its departments for implementation. The PSP must be strategically aligned with the NDP 2030 and the UN 2030 Agenda for SDGs (Western Cape Government, 2015). If the provincial government departments cannot deliver on their PSP, the resultant impact will be that both the NDP 2030 and the UN 2030 Agenda for SDGs will be negatively affected.

Figure 4.3 below displays the strategic alignment between the UN, the South African government and Provincial Government.

Figure 4.3: Strategic alignment - UN, South Africa, Western Cape

With that said, according to Abazov (2019), one of the conditions most conducive to positive results is good, effective strategic planning. Bryson and George (2020) assert that, because strategy is ubiquitous in government, strategic planning must be included in the normal toolkit of public officials. If the strategy is excellent and coordinated throughout, the idea maintains that effective service delivery will be the result. Hence, according to Bryson and George (2020), public officials must be able to:

(i)   Analyse the global mandate;

(ii)   Define a mission that is aligned throughout;

(iii)   Conducting SWOT analyses (Strengths, Weaknesses, Opportunities and Threats) of its organisation's internal and external environments;

(iv)   Identify strategic issues to be addressed; and

(v)   Formulate a strategy to address issues, which is articulated in a vision for the future.

An approach to achieve the above is to use the strategic planning framework known as VMOSA (Vision, Mission, Objectives, Strategies, Action plans). It is an all-in-one planning framework that can assist not just the South African government but any organisation in planning by converting objectives into actions. That is, with the VMOSA strategic planning framework, the South African government can concentrate on short-term goals while keeping its long-term vision and mission in mind (CommunityToolBox, 2022). The VMOSA strategic planning framework components are summarised as follows (CommunityToolBox, 2022):

(i)   **Vision** is the dream of the organisation to be understood and shared by all. It is inspiring and easily understood by all;

(ii) **Mission** is the 'what and the why'. It is like a vision statement but is more specific in expressing what will be done and why it will be done;

(iii) **Objectives** focus on achieving the mission. It is the 'how much of what' will be accomplished by when. Objectives refer to specific measurable results and are reflected as outcome and output indicators and targets;

(iv) **Strategies** explain how the objectives will be achieved (informed from the assessment part of the KMIF to be proposed); and

(v) **Action plan** details who do what, when and at what cost and is documented in a Project Management Plan, which, if approved, becomes the Project Implementation Plan.

4.4.3.3   Programme and project management

A consistent and standard programme and project management methodology are necessary to ensure that all public officials have the same knowledge and use the same terminology. Its formalisation will give an organized and consistent approach to programme and project management within the context of RBM&E (Department of the Premier, 2015).

Research indicates that the three programme and project management methodologies dominant in the international and local public sector domains are Project Management Body of Knowledge (PMBOK), PRojects IN Controlled Environments (PRINCE2) and Agile. This is discussed below (Department of the Premier, 2015):

(i) **PMBOK:** The Project Management Institute (PMI) created the PMBOK in 1987. It is extensively used, internationally recognized and the most popular project management certification in the United States of America (USA). Developed in the United States, it has subsequently been widely adopted in the international public sector realm, including Australia, Bahrain, South Africa and Switzerland (Department of the Premier, 2015). PMBOK is a predictive methodology that focuses on analysing and planning the future state in detail to define and cater for any known risks. Many other programme and project management methodologies are based on the PMBOK principles. PMBOK defines the project management lifecycle in five processes, namely initiating, planning, execution, monitoring, control and closing out (Department of the Premier, 2015);

(ii) **PRINCE2:** PRINCE2 was developed by the Office of Government Commerce in 1996 in the United Kingdom (UK) and is used extensively in both the UK public and private sectors. Other countries where public sector institutions have adopted PRINCE2 include Australia, Slovakia, Canada, the Netherlands, Ireland, Bahrain, China, Denmark and Germany. The methodology adopts a conceptual waterfall model of project

management, which implies that the project management processes flow one after the other in sequential order. The PRINCE2 project management lifecycle is broken up into seven processes, namely starting up a project, initiating a project, directing a project, controlling a stage, managing product delivery, managing stage boundaries and closing a project (Department of the Premier, 2015); and

(iii) **Agile:** The Agile Manifesto, which established the phrase in 2001 and laid out the basic ideas of Agile development, was developed in the USA. As a result of its high levels of flexibility throughout the project lifecycle, Agile is immensely popular in the software development and IT implementation industries. Agile has been adopted in this sector in various countries, including Denmark, Greece, Indonesia, Malaysia, India, New Zealand, Slovakia, the Czech Republic, Belgium and the UK. Since software development requires continuous assessments to be perfect, Agile project management is a reactive methodology that employs a repeatable process in which deliverables are submitted in stages and revised throughout the project (Department of the Premier, 2015).

The South African government employs a range of programme and project management approaches and entities, namely PMBOK, PRINCE2, the Association for Project Management (APM), Project Management Methodology (Centre for e-Innovation—PRINCE2-based methodology) and the National Treasury's Technical Assistant Unit (PMBOK-based methodology) (Department of the Premier, 2015).

While each of the aforementioned project management approaches has value and significance, their uneven application leads to silo-management of programmes and projects, which affects overall coherence. This is reflected in the enormous difficulties encountered to date in exerting consistent governance and control over programme and project implementation, as well as the difficulty in getting a 'single version of the truth' (Department of the Premier, 2015).

What the South African government need is for its public employees to be trained in a clear sense of programme and project management methodology, preferably one that is practised in both the international and local public sectors.

4.4.3.4 Change management

Regarding change, this study highlighted the following:

(i) It would be misleading to assume that public sector service delivery must stay stagnant as society evolves. As society changes, so too must the manner, in which services are delivered (Lamidi, 2015);

(ii) To remain relevant and competitive, the government must go through changes to keep up with the latest technology, comply with ever-changing laws and regulatory prescripts and regulations and protect against fraud and corruption;

(iii) As the world changes, so must Public Administration (Stefanescu, 2012);

(iv) Public Administration experienced a paradigm change over the years (Stefanescu, 2012);

(v) Traditional Public Administration was no longer feasible and had to change (El-Ghalayini, 2016); and

(vi) Despite several education reforms, like changes to the school and university curricula, the government still faces considerable skill shortages in this area (Rasool & Botha, 2011).

Overall, since change is unavoidable, it must be managed.

Change Management, according to Hamdo (2021), is a systematic technique that shifts organisations from one state to another by setting new goals, internal processes and shared values. Another way to phrase it is that Change Management is a systematic technique that allows a company to foresee and react to a changing business environment to meet organisational goals quickly and effectively.

Hamdo (2021) further states that since Change Management has been identified as the secret behind the success of many organisations that have become market leaders in numerous industries and achieved long-term sustainable growth, the role of public officials in properly managing change is therefore very critical.

According to Hamdo (2021), the four well known Change Management models are:

(i) **ADKAR Model**: In 2006, Jeffrey Hiatt, a successful entrepreneur and the founder of Prosci Learning Centre launched the ADKAR Change Management Model. Individual resistance to change, according to Hiatt, may be addressed in five stages: Awareness, Desire, Knowledge, Ability and Reinforcement;

(ii) **Kurt Lewin's Change Management Model**: Kurt Lewin, a social psychologist, developed his three-stage model of the change process in 1947: unfreeze, change and refreeze i.e., change starts first in unfreezing the status quo;

(iii) **Kotter's 8-Step Change Management Model**: Harvard University Emeritus Professor John Kotter developed this model. It includes creating urgency, forming a strong guiding coalition, developing a clear vision for change, communicating the vision, empowering actions, achieving short-term wins, building on the change base reached and making change stable; and

(iv) **McKinsey 7s Model**: Waterman, Peters and Phillips introduced the McKinsey 7s model in 1980. It looks at companies from seven different angles: strategy, structure, system, skills, personnel, style and shared values. The McKinsey 7s model is a powerful analysis tool that enables managers to determine the degree of consistency among an organisation's major dimensions and explain the necessary improvements.

The Western Cape Government uses the ADKAR Model.

4.5 Chapter summary

The theoretical context of service delivery in South Africa was explored. The focus of the exploration was on understanding service delivery, the distinction between private and public sector service delivery and why South Africa needs to transition from old to new. It was made clear that the goal in terms of service delivery is for the South African government to achieve Section 195 of Chapter 10 of the South African Constitution. This section states that the South African government must transition from a regulatory bureaucratic structure to a competitive and results-oriented public sector geared to providing meaningful service to its citizens.

However, based on what was emphasized in this chapter, South Africa operates in a VUCA environment, which is exacerbated by the country's lack of sufficient skills to achieve the goal. Recognising that KM has the potential to significantly improve service delivery in South Africa, while simultaneously noting that the country's government has been unable to implement it, highlights the significance of a KMIF. Finally, this chapter confirmed what the main components of the KMIF must be and how these components, when integrated, can ensure that the South African government transitions into a competitive and results-oriented public sector geared toward providing meaningful service to its citizens (*see* Figure 4.4).
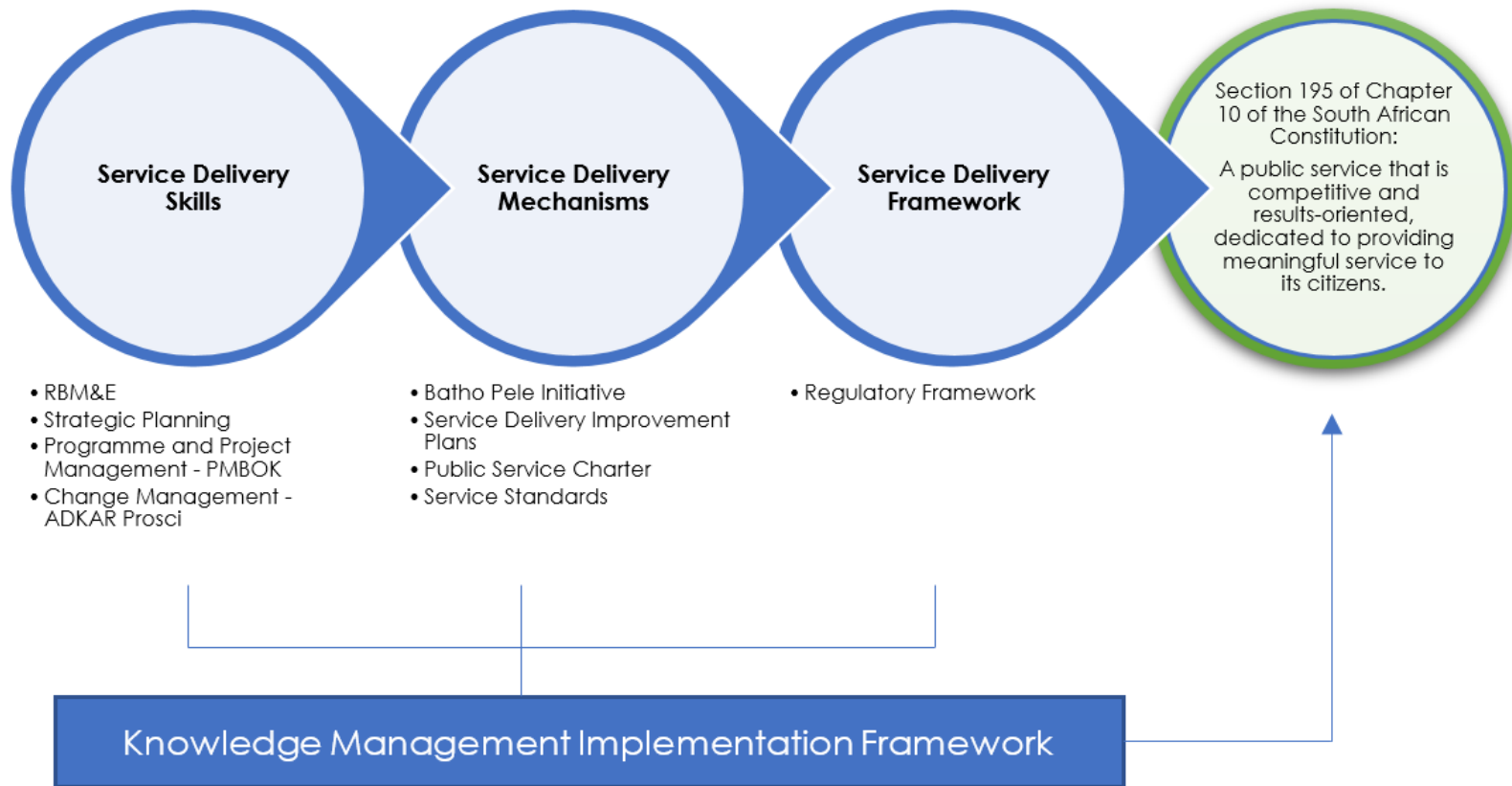
Figure 4.4: Knowledge management implementation framework components

CHAPTER 5

RESEARCH METHODOLOGY AND APPROACH

5.1   Introduction

The preceding chapters established the theoretical context. It stated clearly why the research problem under study occurs and what key variables impact the research question and objectives. This chapter delves into the research design and methodology employed to explore the research question. It explains why using a mixed-method research approach is a good idea. It explores the various research designs and presents reasons for the methodology followed.

As a point of departure, the six layers of Saunder's Research Onion were used as the framework to develop this chapter. Saunder's Research Onion is a well-known framework that many academics employ when developing a reliable and credible research methodology. Some of the topics to be covered in this chapter are research philosophy, research assumptions, research paradigms, research designs, research strategies and so forth.

5.2   Research methodology: Saunder's Research Onion

The Research Onion of Saunders et al. (2019) is depicted in Figure 5.1. The Research Onion is a well-known and useful framework that was adopted by the researcher to construct this research methodology chapter.
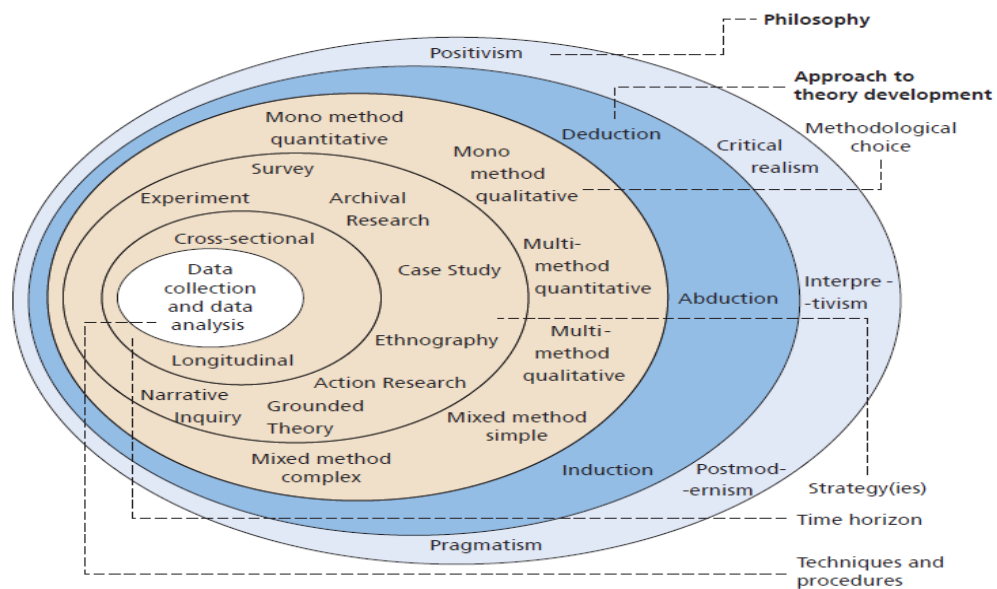
Figure 5.1: Saunder's Research Onion

Source: Saunders et al. (2019:130)

The Saunders Research Onion consists of six layers, each with several options. This Onion was used to determine how data in the thesis is collected and analysed to answer the research question. Considering that data collection and analysis constitute the sixth layer of the Saunders Research Onion, the researcher worked from the outside in, making decisions on his preferred option layer by layer, which is further discussed below (Saunders et al., 2009; Phair & Warren, 2021). The result was a viable research methodology and approach aimed at answering the following research question:

- What would a framework that can improve Knowledge Management in the South African government comprise and will it improve public sector service delivery?

5.2.1   Layer 1: Research philosophy

The Saunders Research Onion is composed of several layers, the outermost of which is known as 'Research Philosophy.' This layer served as the foundation of this study. It described the philosophical assumptions and research paradigms on which the research is based and how data about a phenomenon was collected, analysed and used (Phair & Warren, 2021).

According to Saunders (2020), because research philosophy is a set of beliefs and generalisations about everything, it must not be neglected when conducting research. Researchers may have a research philosophy, but the real question is whether they know their beliefs and assumptions impacts their research study.

5.2.1.1   Philosophical assumptions

Whether the researcher is aware of it or not, assumptions are formed at every level of the study. People are instilled with assumptions throughout their lives. Saunders (2020) argued that researchers must always consider their research philosophy as a reflexive process, which means they must consider the impact their upbringing, education and work experience may have on the outcome of their research study (Saunders, 2020).

Assumptions invariably shape research questions, research methodology and interpretation of findings (Saunders et al., 2009; AllassignmenthelpUK, 2019; Saunders et al., 2019).

The three common assumptions made by Public Administration researchers are:

(i)   **Ontological**: Researchers make assumptions implicitly about the world and the nature of reality. That is, how does the researcher see their research objects and what is the reality that the researcher wishes to explore and understand (Rehman & Alharthi, 2016; Saunders, 2020). For example, the researcher's assumptions and views about the

nature of reality of this study will differ from others. This is because the researcher has first-hand knowledge of how KM is implemented in the South African government. As of the time of this study, the researcher had 26 years of work experience, which included four years working in the private sector and 22 years working in the public sector. The researcher was the Director of KM at the WCG Department of Transportation and Public Works. His job is to implement KM in the department. Since the ontological assumptions and views of the researcher could impact the outcome of the research findings, the data collection instrument was developed with this in mind;

(ii) **Epistemological**: According to Rehman and Alharthi (2016), epistemology assumptions are about what is considered legitimate, valid and acceptable human knowledge (the ontology) and if it can be learned and transmitted to each other (Saunders et al., 2009; Saunders, 2020). To address the researcher's epistemology assumption, measurable facts, as well as individual opinions, were used in this study. Furthermore, the researcher only shared findings that he deemed acceptable, valid and legitimate; and

(iii) **Axiological**: Researchers make assumptions based on their values and ethics, which influences the research process (Saunders et al., 2009; Saunders, 2020). The researcher's axiology assumptions have no bearing on the research study.

Public Administration researchers make all these assumptions whether they are aware of them (Saunders, 2020). Also, Saunders (2020) states that readers must understand that it is not only the researcher who makes these assumptions but also the researcher's supervisor, second marker, module tutors, authors of the literature and previous studies reviewed. They all have their research philosophies.

Nevertheless, while the research that was undertaken may not be as exciting as developing something new on how to motivate people, addressing the assumptions and research questions certainly resulted in the development of new knowledge, particularly in Public Administration and KM (Saunders et al., 2009).

Furthermore, there is no one best research philosophy. Different philosophies bring different perspectives. It is the researcher's choice to choose the research philosophy they feel comfortable with.

5.2.1.2 Different research paradigms

A researcher's task is to comprehend and express thoughts about the nature of reality, what can be learned about it and how this information may be achieved. These are the essential traits of a

research paradigm. Hence, a research paradigm is a theoretical framework that contains ontology, epistemology and axiology assumptions, which serve as the starting point for the development of new knowledge (Rehman & Alharthi, 2016). Of the five research paradigms depicted in Figure 5.1, the three most common research paradigms in Public Administration research are:

(i) **Positivism**: Positivism is a school of thought of the natural scientist and maintains that only factual data gathered by observation, like estimation, is credible (Saunders et al., 2019). Hence, positivism is heavily reliant on experimentation. The researcher's function in positivism studies is limited to data collection and empirical analysis (Saunders et al., 2019). The results of such studies are usually measurable and observable. Positivists seek to comprehend the collective world in the same manner as they do the natural world. Natural phenomena have a cause-and-effect relationship and once established, the future may be predicted with confidence (Rehman & Alharthi, 2016). Quantitative research, according to Terrell (2012), is a positivist approach that has become the foundation of social science research.

(ii) **Critical Realism**: Any study that questions traditional knowledge bases and methodologies, whether quantitative or qualitative and claims empirical objectivity is referred to as critical realism. Critical realism is prescriptive, explanatory, practical and normative, all at the same time. This theory holds that scientific research should be done with the explicit intention of bringing about social change. The critical paradigm not only studies but also attempts to shift power imbalances. Most data produced by critical research is qualitative (Rehman & Alharthi, 2016).

(iii) **Interpretivism**: According to Rehman and Alharthi (2016), interpretivism is the answer to positivism's supremacy. The notion that there is a single, verifiable reality that lies outside of our senses is opposed by interpretivism. According to interpretive academics, language, consciousness, shared interpretations and instruments are the only ways to approach reality (Terrell, 2012). Interpretivism emphasizes that people are separate from physical occurrences in that they make meaning, which interpretivists study (Saunders et al., 2019). The researcher uses induction reasoning, in which they attempt to find trends in the data that can be collapsed into prominent themes to understand a phenomenon better and generate theory. The interpretive approach employs data gathering methods such as interviews, questionnaires and analyses. As a result, the interpretivism theory favours secondary data analysis. Meaning appears at the end of the experimental cycle of this method of study (Rehman & Alharthi, 2016).

(iv) **Postmodernism**: Farhan (2019) asserts that postmodern people are at ease with the idea that different people reach different conclusions about the same subject and that

they have all uncovered the truth, even if such truths contradict one another. Hence, most postmodern people do not believe in absolute truth but in a more individualised understanding of truth that varies from person to person (Farhan, 2019).

(v) **Pragmatism**: The word pragmatism derives from a Greek word that means work. The truth or meaning of an idea or argument, according to pragmatism, consists in its visible practical effects rather than anything metaphysical. It can be summed up with the expression 'whatever works' is true (Beniwa, 2018). Also, according to Saunders et al. (2019), pragmatism maintains that theories are only significant when they motivate action.

Table 5.1 depicts the researcher's reflexive research philosophy, i.e., it shows the researcher's heightened awareness of their research philosophy. When this is established, the researcher is provided with choices on how to design their research methodology and how to collect, analyse and interpret data (Bristow & Saunders, 2014).

Each element of the Heightening Awareness of Research Philosophy (HARP) examines a different facet of philosophical ideas (ontology, epistemology, axiology, research goal, data meaningfulness and structure/agency). Consequently, included in this table is the researcher's justification for selecting interpretivism as the preferable research philosophy for this given study (see Table 5.1).

Table 5.1: Researcher's reflexive research philosophy

Philosophical Assumptions	Research Paradigm		
	Positivism	**Critical Realism**	**Interpretivism**
Ontology (Nature of reality or being)	As physical objects, organisations are real. Structured and considers only one true reality.	Deeper, underlying mechanisms cause events in organisations.	According to the researcher, the social reality in which we exist is a world of various interpretations, meanings and realities.
Epistemology (What constitutes acceptable knowledge)	The study would focus on uncovering visible and quantitative facts and patterns. Only observable and quantifiable occurrences would result in the development of reliable and useful data. The researcher would look for causal correlations in the data to establish law-like conclusions comparable to those developed by scientists. These universal principles and rules would be used by the researcher to help explain and predict organisation performance and outcomes.	While theories and concepts can never be perfectly precise, researchers can use logical reasoning to determine which theories and points of view are preferable.	According to the researcher, ideas and theories are simplistic in their capacity to cover all of reality. New insights and understandings are presented as a contribution.
Axiology (Role of values)	The values and beliefs of the researchers must be isolated from the research process. The researcher must be neutral and objective.	The researcher must make every effort to be objective and realistic. The researcher acknowledges that global ideas, cultural experiences and upbringing have impacted them. The researcher works hard to eliminate bias and errors and makes every effort possible to be impartial.	The researcher believes that values and beliefs, such as objectivity, honesty, openness, justice, responsibility and so on, are crucial to interpretations of the social environment. The researcher is also a part of the research and cannot be separated and was subjective.
	↓	↓	↓

Philosophical Assumptions	Research Paradigm		
	Positivism	Critical Realism	Interpretivism
Purpose of research	The purpose of research is to discover facts and regularities and predict future events.	The purpose of research is to explain how and why organisation and societies are structured.	The purpose of research is to generate fresh insights that allow people to see the world in new ways. In other words, the purpose of this thesis was to generate new insights that will allow the South African government to understand why the implementation of KM is slow and disjointed, why many of their government departments are sluggish to adopt KM and developing a KM framework that when implemented can ensure improved service delivery.
Meaningfulness of data	Things that cannot be measured have no meaning for research.	The purpose of organisation research is to explain how and why organisation and societies are structured.	To be meaningful, the thesis included respondents' own interpretation of their experiences, as well as the researcher's interpretation. The data collected addressed the premise of this thesis which is that little is known about KM in the South African government, including whether the public sector's adoption of private-sect methods to improve itself is effective.
Typical methods	Typically, deduction reasoning, very structured, huge samples, measurement and quantitative methods of analysis are used. However, a wide range of data can be analysed.	A variety of methodologies and data formats are available to meet the subject matter.	Induction reasoning. Small sample sizes, in-depth investigation and qualitative data analysis methodologies are used. However, a wide range of data can be analysed.

Source: Adapted from Bristow and Saunders (2014); Dudovskiy (2015); Saunders et al. (2019); Saunders (2020)

As depicted in Table 5.1 above, the researcher chose interpretivism because this study relates to the social reality in which we exist which consists of various interpretations, meanings and realities. For the simple reason that everyone who participates in the central argument of this research study, which is based on the premise that improved KM will ultimately result in improved service delivery, may have a different interpretation of, meaning for, or reality of the subject. As a result, the researcher was confident that all interpretations, meanings and realities on the subject at hand, including the researcher's own, would positively contribute to the development of a framework to improve KM in the South African government to ensure improved service delivery.

5.2.2   Layer 2: Approach to theory development

Because theory development is an important objective of this thesis, the design of this research study is critical. The theory may not be evident in the research design but will be evident when the findings are presented and conclusions are formed (Ito et al., 2019; Saunders et al., 2019).

According to Streefkerk (2019), researchers frequently use one of three reasoning processes which are known as induction, deduction and abduction reasoning. This depends on whether a theory is being tested or a new theory is being generated.

Induction reasoning aims to come up with a new theory, whereas the aim of deduction reasoning, on the other hand, is to test a theory that already exists (Streefkerk, 2019). Deduction reasoning typically starts with a hypothesis and to narrow the study, an induction approach will use research questions (Streefkerk, 2019). It is common to do induction research when no literature on a research problem exists and no theory to test (Streefkerk, 2019). When doing deduction reasoning, researchers always begin with a theory. Reasoning deductively implies theories will be tested. If no theory exists, researchers will not be able to do deduction reasoning (McCombes, 2019). Rather than moving from theory to facts (as is the case with deduction or induction), an abductive technique bounces back and forth between the two (as is the case with deduction and induction reasoning) (Saunders et al., 2019).

This study is premised on the notion that little is known about KM in the South African government, particularly if the public sector's adoption of private-sector methods to improve itself is working. As a result, to develop new theories and insights, while also addressing the dearth of empirical research in this area, the researcher employs inductive reasoning but does not attempt to statistically test the assumptions.

5.2.3   Layer 3: Methodological choice

The methodological choice is the third layer of Saunders' Research Onion. This layer included the categories of types, characteristics, purposes and quality of research designs defined by Saunders et al. (2019) in their work. A discussion on these follows.

5.2.3.1   Types of research designs

Three well known research designs are addressed below—quantitative, qualitative and mixed-method research.

(i) **Qualitative Research Design**: When it comes to qualitative research, it includes any data collection technique (such as interviews) or data analysis approach (such as data classification) that produces or uses non-numerical data. Rather than numbers, meaning is formed from words and visuals (Saunders et al., 2019). Because in-depth interviews are one of the methods used to collect qualitative data, the researcher can become a part of the research instrument. This is done so that the researcher can make sense of the information gathered. Overall, the goal of this method is to explore, interpret, as well as to describe a specific event (Techo, 2016). Qualitative research is frequently associated with interpretivism in terms of philosophical assumptions and typically begins with induction reasoning to construct theory. In addition, a qualitative study, which is used to build a conceptual framework and make a theoretical contribution, investigates the meanings and relationships of the people who took part in the study through several data collection and analysis methods (Saunders et al., 2019).

(ii) **Quantitative Research Design**: Quantitative research is used by the researcher to examine relationships between variables to develop predictions and test hypotheses. The term quantitative research refers to any method of gathering or analysing data that results in or uses numerical data (Saunders et al., 2019). The researcher is not part of the research instrument in quantitative research and closed-ended questions are used (Techo, 2016). Furthermore, in terms of philosophical assumptions, quantitative research designs are often linked to positivism, especially when they are used with predefined and well-organized data gathering methods. Quantitative research is frequently associated with deduction reasoning, in which data is gathered and analysed to test a theory but it may also include induction reasoning, in which data are used to develop a theory. Survey strategies are often used in quantitative research, and they are implemented using questionnaires, personal interviews and in some circumstances, structured observation (Saunders et al., 2019).

(iii) **Mixed-Method Research Design**: Mixed-**method** research, according to Graff (2017), is when the researcher uses both qualitative and quantitative research approaches. Mixed method research has become more popular and has come a long way since the paradigm wars when it was said that qualitative and quantitative research could not and should not be combined (Muskat et al., 2012). However, researchers use both quantitative and qualitative research more so now, to understand contradictions between quantitative results and qualitative findings, to ensure biases related to one method cancel each other out and to strengthen the results of their study (triangulation) (Tengeh, 2011; Creswell, 2013; Creswell, 2003). Bias is defined as any inclination that prevents an issue from being addressed fairly. In research, bias occurs when a researcher commits a systematic error by favouring one outcome or response over another (Pannucci & Wilkins, 2010). Mixed-method research, according to Saunders et al. (2019), can employ deduction, induction, or abduction reasoning to generate theories.

5.2.3.2 Characteristics of the research designs

Table 5.2 below shows the characteristics of the three research designs mentioned above.

Table 5.2: Quantitative, qualitative and mixed method research

Quantitative	Qualitative	Mixed-Method
The researcher is not part of the research instrument.	The researcher is part of the research instrument.	
Those taking part are called respondents.	Those taking part are called participants or informants.	
Examine relationships between variables to develop predictions and test hypotheses.	Participants' attributed meanings and associated relationships are studied.	
To ensure generalisation, probability sampling techniques are used.	Non-probability sampling techniques are used.	Mixed methods research draws from the characteristics of both quantitative and qualitative research.
Philosophical assumptions are usually positivism.	Philosophical assumptions are usually interpretivism.	
Numerical data.	Words – spoken, textual and images.	
The data collection method(s) are strictly specified and well organised.	The data collection method(s) are unstructured or semi-structured.	

Quantitative	Qualitative	Mixed-Method
Deduction reasoning to test the theory but can include induction reasoning to develop the theory.	Typically begins with induction reasoning to develop a theory.	
Statistics and graphics are used in the analysis.	The analysis is conducted using conceptualisation.	
The meanings that result is drawn from the numbers.	The meanings that emerge are derived from words (spoken or written) and visuals.	

Source: Adapted from Saunders et al. (2019:175-185)

As shown in Table 5.2 above, the researcher used a mixed-method approach that incorporates quantitative and qualitative components. A survey questionnaire is used for quantitative purposes and a personal Internet-based interview for qualitative purposes. The researcher selected the mixed-method for the following reasons (Tengeh, 2011; Creswell, 2013):

(i) To understand if, how and why qualitative and quantitative results diverged;

(ii) To identify anomalies or inconsistencies between the survey questionnaire and the personal Internet-based interview and record them as part of the research findings;

(iii) To ensure questions are asked to cover all areas of the research phenomenon;

(iv) To obtain a more complete view of the research endeavour than a single quantitative or qualitative study can provide;

(v) To ensure biases related to one method cancel each other out; and

(vi) To strengthen the results of the study, the findings of one method support the findings of the other.

All of this is done to determine how the study should be published as well as to identify intriguing and challenging issues for future research.

5.2.3.3   Purpose of research designs

Before the start of the study, its design had to be defined and the researcher was responsible for this. The objective of the research design is to produce a study plan that enables the proper analysis of causal links between independent and dependent variables (De Vaus, 2006 Saunders et al., 2019). Thus, the major goal of a study design is to guarantee that the data acquired enables the researcher to address the research topic efficiently and unambiguously, as well as to respond to the following research questions (De Vaus, 2006):

Main research question:

What might a framework that can improve Knowledge Management in the South African government comprise and will it improve public sector service delivery?

Sub-questions:

The sub-questions are derived from the main question above:

- What is KM, its components and how does it improve service delivery?
- What factors contribute to or deter the implementation of KM in the South African government?
- How can the implementation of a KM framework improve service delivery in the South African government?
- To what extent is KM implemented in the South African government?
- What are the South African government's current service delivery frameworks and mechanisms?
- What creative and long-term solutions exist that can improve service delivery in South Africa?

As a result, the nature of this research study is defined by the formulation of the research questions. This refers to whether the research is exploratory, descriptive, explanatory, or a combination of the three (Saunders et al., 2019). The concepts are explained below.

(i)   **Descriptive research**, according to Saunders et al. (2019), is to gain an exact description of situations, people or events by asking survey questions that begin with, or include, either 'Who', 'What', 'Where', 'When' or 'How', which are asked during data collection (Hesse-Biber & Leavy, 2011; Saunders et al., 2019). Descriptive research also focuses on experiences, situations, or conditions and may be an extension of an exploratory study (Hesse-Biber & Leavy, 2011; Saunders et al., 2019).

(ii) **Explanatory research** usually deals with studies of cause-and-effect relationships i.e., explaining what cause produces what effect. It also deals with questions of why and how (Hesse-Biber & Leavy, 2011); and

(iii) **Exploratory research**: Exploratory research is a study of an unknown phenomenon and unfamiliar areas of which little is known to develop an initial understanding (Hesse-Biber & Leavy, 2011). Exploratory research is a valuable method for asking open-ended questions, which are likely to start with 'how' or 'what', to ascertain what is occurring and to obtain insight into a subject of interest (Saunders et al., 2019). This sort of study

is especially beneficial when the researcher wishes to elucidate their knowledge of an issue, problem, or phenomena, for example, if you are unclear of its precise nature. There are several methods for conducting exploratory research, the most common of which are interviews. Additionally, exploratory research may begin with a broad emphasis but as the study proceeds, the focus narrows (Saunders et al., 2019).

5.2.3.4   Quality of research designs

The reliability and validity of research are critical in determining its quality. The two aspects of reliability are replication and consistency. If a researcher can repeat a previous research design and receive the same findings, the study is deemed credible. Validity is demonstrated by the suitability of the measurements applied, the correctness of the results analysed and the generalisability of the findings (Saunders et al., 2019). Ensuring reliability is not necessarily easy and several risks exist (see Table 5.3):

Table 5.3: Risks to reliability

Risk	Meaning
Participant error	Elements that could adversely affect a respondent's performance. For example, asking a respondent to rush the completion of a questionnaire.
Participant bias	Elements that lead to an incorrect answer. For example, respondents may give falsely positive answers if they are afraid someone will hear them.
Researcher error	Anything that changes how the researcher sees things. As an example, if a researcher is tired or not well-prepared, they might not be able to understand some of the more subtle meanings the interviewees are trying to get across in their words.
Researcher bias	Anything that has an impact on the researcher's response recording. As an example, a researcher might let their own bias or disposition get in the way of recording and interpreting the answers of people who took part in the study fairly and accurately.

Source: Adapted from Saunders et al. (2019:214)

Not only is the reliability of research important but so is its validity.

Risks to validity are listed in Table 5.4 below.

Table 5.4: Risks to validity

Risk	Meaning
Past or recent events	Elements that change the respondents' perceptions.
Testing	The impact of testing on respondents' attitudes or behaviours. Telling respondents about a study endeavour, for example, may cause people to modify how they work or respond throughout the research if they believe it will have long-term consequences for them.
Instrumentation	Changes in a research tool between stages of a project can make it hard to compare the results.
Mortality	The effect of respondents dropping out of studies. Usually, during a study, respondents leave their jobs or advance in their careers.
Maturation	The effect of a change (attitudes, behaviours) in respondents is not caused by the research. For example, management training might make people change their answers at a later stage of the study.
Ambiguity about the causal direction	Lack of clarity about what happened and why. A study, for example, was hard to figure out if poor performance ratings were caused by people having bad attitudes about how they did.

Source: Adapted from Saunders et al. (2019:215)

All concerns concerning the research design's quality were taken seriously by the researcher, who made certain that the risks of reliability and validity were managed throughout the study. Specifically, the Saunders Research Onion was used to do this, which, as previously stated, is a useful resource meant to help researchers through the many phases of creating a successful research methodology. Overall, the thesis's findings can be regarded as credible and trustworthy when presented.

5.2.4   Layer 4: Research strategy

The researcher's methodological choice was guided by a specific research strategy. This research strategy provided direction, ensured coordination and made clear the method to be used to conduct the research study. This contributed to answering the research questions and achieving the research objectives listed in Chapter 1 (Saunders et al., 2019). A research strategy, in summary, is a plan that directs the researcher on how to answer research questions and achieve

research objectives.

Having said that, different research strategies exist for quantitative, qualitative and mixed methods research studies. A research strategy in a quantitative study, for example, researchers would primarily use experimental and survey research methods, whereas, in qualitative research, questionnaires, and structured interviews, and in some cases structured observation, are used. Research strategies are not mutually exclusive. It is acceptable to use the survey strategy in a case study or merge a variety of different strategies in a mixed-methods study (Saunders et al., 2019).

According to Saunders et al. (2019), the research strategies are:

(i) **Experiment**: This type of research is commonly conducted by those who study the natural world, but it also plays an important part in psychology and social science research. For example, an experiment is designed to determine the likelihood that a change in one independent variable would affect another, dependent variable.

(ii) **Survey**: The survey strategy is linked with deduction reasoning. However, induction reasoning may be applied. This research approach is commonly used in business and management research to address questions beginning with 'what,' 'who,' 'where,' 'how much,' and 'how many.' Surveys, particularly questionnaire survey methods, are used for exploratory and descriptive research because they can collect standardised data from a large sample size at a low cost, allowing for easy comparison.

(iii) **Documentary and archival research**: Academics now have more options to do archival or documentary research thanks to digital data, Internet archives and open data. Since these sources are now available via the Internet, they may now be accessed from everywhere on earth. This permits academics to construct research that contains a substantial amount of secondary data.

(iv) **Case study research**: The term 'case' can refer to an individual, a group of people, an organization, an event, or any other case topic. Case study research is done when academics want to understand more about a subject in its natural environment, which is the real world.

(v) **Action research**: Action research is a set of research approaches used to assess, explore and analyse organizational challenges. Various strategies are used to generate practical solutions to these challenges fast and easily (O'Byrne, 2016).

(vi) **Ethnography**: In ethnography, scholars look at a group's culture or the world of people and learn about them. An ethnography is a written account of a person or group of people from their point of view.

(vii) **Grounded theory**: Grounded theory is about making sure that the theory scholars come up with is based on data that is collected and analysed systematically. Grounded theory is used to find out about social relationships and how groups behave (Noble & Mitchell, 2016).

(viii) **Narrative inquiry**: A narrative is a personal story that interprets an event or set of events. The goal of Narrative Inquiry is to retain chronological links. This involves the order of events as described by the narrator, who is also a participant, to enhance understanding and facilitate analysis.

Table 5.5 lists the different types of variables.

Table 5.5: Variable types

Variable	Description
Independent Variable (IV)	To determine the impact of a variable on a dependent variable, it is necessary to manipulate or modify the independent variable.
Dependent Variable (DV)	The value of one variable can change in response to changes in another variable. The observable consequence or impact of changing another variable is called a dependent variable.
Mediating Variable (MV	A variable that exists between the independent and dependent variables and serves as a conduit for the transmission of the effect between them (IV → MV → DV).
Moderator Variable	The addition of a new variable will alter the nature of the relationship between the IV and the DV.
Control Variable	To prevent affecting the IV's influence on the DV, other observable and quantifiable factors must be kept constant.
Confounding Variable	Confounding variables are extraneous elements that are difficult to perceive or measure but can influence the inferences formed between the IV and DV. It is critical to keep these issues in mind while presenting findings to avoid forming inaccurate conclusions.

Source: Saunders et al. (2019:191)

In summary, the survey strategy is applied in this thesis. For quantitative purposes, the data collection instrument is a survey questionnaire, with a personal Internet-based interview serving as the qualitative component. The survey questionnaire was created using Microsoft Forms and

then distributed to both the national government and provincial government officials via the Microsoft Office 365 online platform to collect data. When performing a mixed analysis, at least one qualitative analysis and at least one quantitative analysis are required (Combs & Onwuegbuzie, 2010). These two methodologies would be complementary to one another, would cancel out biases and would validate the findings of the study, respectively. The survey strategy makes it possible to acquire standardised data from a large sample size at a low cost. This makes data analysis much easier. As a result, the scope of this research is exploratory and descriptive.

5.2.5   Layer 5: Time horizon

According to Saunders et al. (2019), the researcher, when planning how to do the research study, must determine if their study is a snapshot taken at a certain point in time, or should if it is more akin to a journal or a series of snapshots representing occurrences over a set period. This assessment was influenced by the research topic. To put it simply, the time horizon of a snapshot taken at a specific point in time is called cross-sectional, whereas the time horizon of a journal or a series of snapshots representing occurrences over a set period is called longitudinal (Saunders et al., 2019):

(i)   **Cross-sectional research**: The term cross-sectional research refers to an observational study in which data is collected from a group of people at one given point in time. Cross-sectional studies, unlike other types of observational studies, do not track people over time. It is described as taking a picture of a group of individuals. Additionally, cross-sectional designs are commonly used in population-based surveys, which are typically conducted in a relatively short period and at a low cost (Wang & Cheng, 2020).

(ii)   **Longitudinal research**: If Ployhart and Vandenberg (2010) are correct, most theories in management science are longitudinal, either explicitly or implicitly, as according to them it is very hard to purposefully develop a theory to explain an event within a particular set time. Consequently, longitudinal studies observe and monitor people over a long period, using ongoing or repetitive data collection tools (Caruana et al., 2015). As a result, one of the core strengths of this sort of study is its ability to evaluate change and development (Saunders et al., 2019). Longitudinal studies may be classified into numerous categories. The three common ones are cohort, representative and record linkage studies (Caruana et al., 2015).

In summary, this research study was cross-sectional as the research population was not monitored over time, which was appropriate because cross-sectional studies frequently employ

the survey strategy to gather data (Saunders et al., 2019).

5.2.6   Layer 6: Research techniques and procedures

According to Phair and Warren (2021), the sixth and final layer of Saunders' Research Onion deals with research techniques and procedures. This layer aided the researcher in reaching decisions regarding the following:

(i)   **Sampling technique:** Will a sample be drawn (sample population) and if so, how so (sample design)?

(ii)   **Data collection**: What primary and secondary data will be obtained, how will it be obtained and from whom will it be obtained (research population)?

(iii)   **Data validity (triangulation)**: How will the data be corroborated?

(iv)   **Data analysis and interpretation**: How will the data be analysed, what software will be used to do the analysis and how will the results be recorded?

Figure 5.2 illustrates the position of the research techniques and procedures within the study's research design framework and is addressed further below.
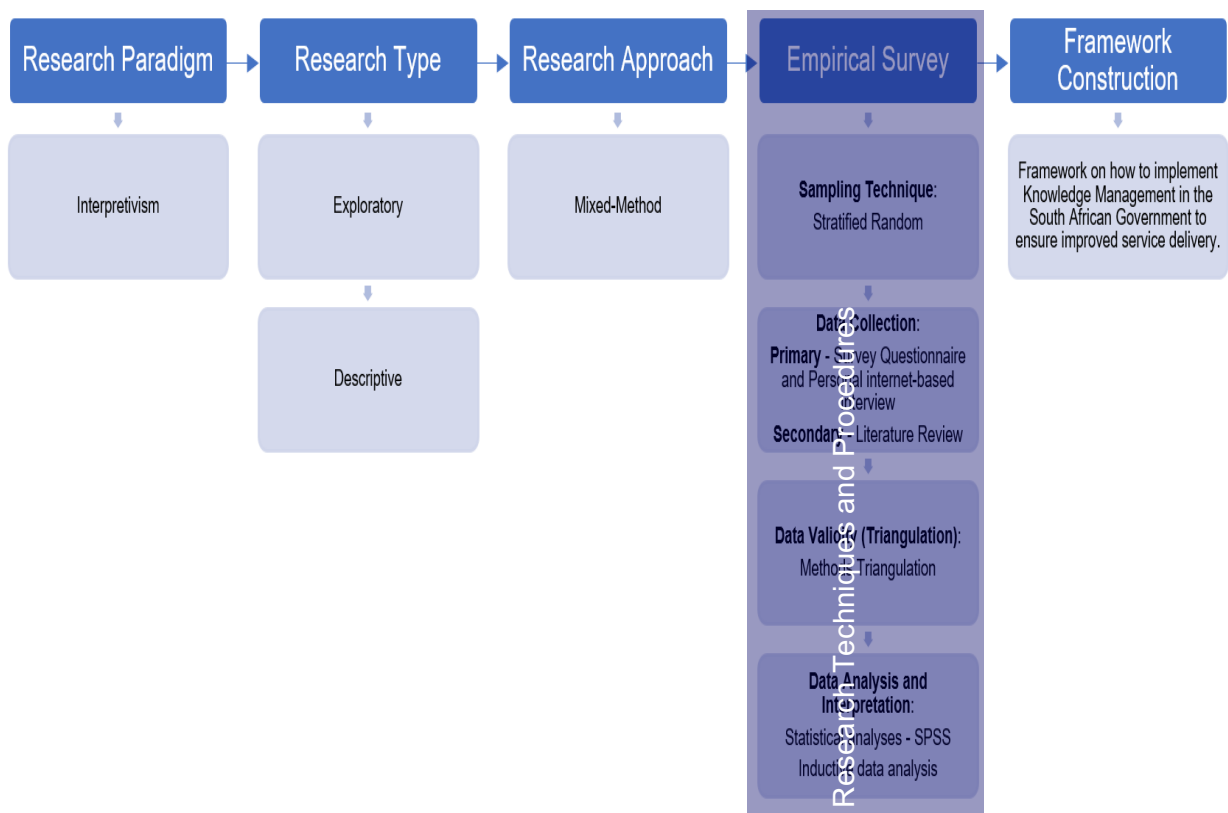
Figure 5.2: Position of research techniques and procedures in the research design framework

5.2.6.1   Sampling technique

According to Saunders et al. (2019), how a researcher plans their study affects the sort of data they need, the sources from which they must obtain it and the subjects from whom they must collect it. Hence, the first step is to supplement the empirical survey with a representative sample of a given research population (Veeran, 2012). In other words, determining the 'who, where and nature of the research population'. In Chapter 1, this was identified as:

(i)   **Who**: 221 government officials employed by the South African government;

(ii)   **Where**: National and the provincial government of South Africa; and

(iii)   **Nature of the research population**: Officials that represent their respective departments at the DPSA National Knowledge Management Forum and who are responsible for the implementation of KM in their departments (i.e., officials doing KM practitioner work). Additionally, these include the officials responsible for coordinating the implementation of KM in both the national and provincial government departments of the South African government.

Due to time, money and resource constraints, it was necessary to generate a representative sample to reduce the number of cases in the research population (Umsl.edu, 2021). The research population was whittled down to 139 officials, who served as the sample population. Hence, it can be seen that the sample population is the smaller group of government officials (139 government officials) drawn from the research population (221 government officials) that has the same characteristics as the total research population (Wisdom & Creswell, 2013; Radhakrishnan, 2014; Umsl.edu, 2021).

According to Radhakrishnan (2014), there are different advantages and disadvantages of reducing the number of cases in the research population. For example, an advantage is, that since the sample size is less than the entire research population, time and money are saved, and results are provided faster. A major disadvantage of doing this is the possibility of being biased (Radhakrishnan, 2014). This disadvantage, however, can be mitigated by combining quantitative and qualitative research methods at the same time, because the data obtained from one method can be used to verify the data obtained from the other method, cancelling out biases (Creswell, 2003; Creswell, 2009; Creswell, 2013). This study adopted the mixed-method research approach.

Taherdoost (2016) points out that probability sampling and non-probability sampling are the two types of sampling techniques that are used in the research world. This is depicted in Figure 5.3 below.
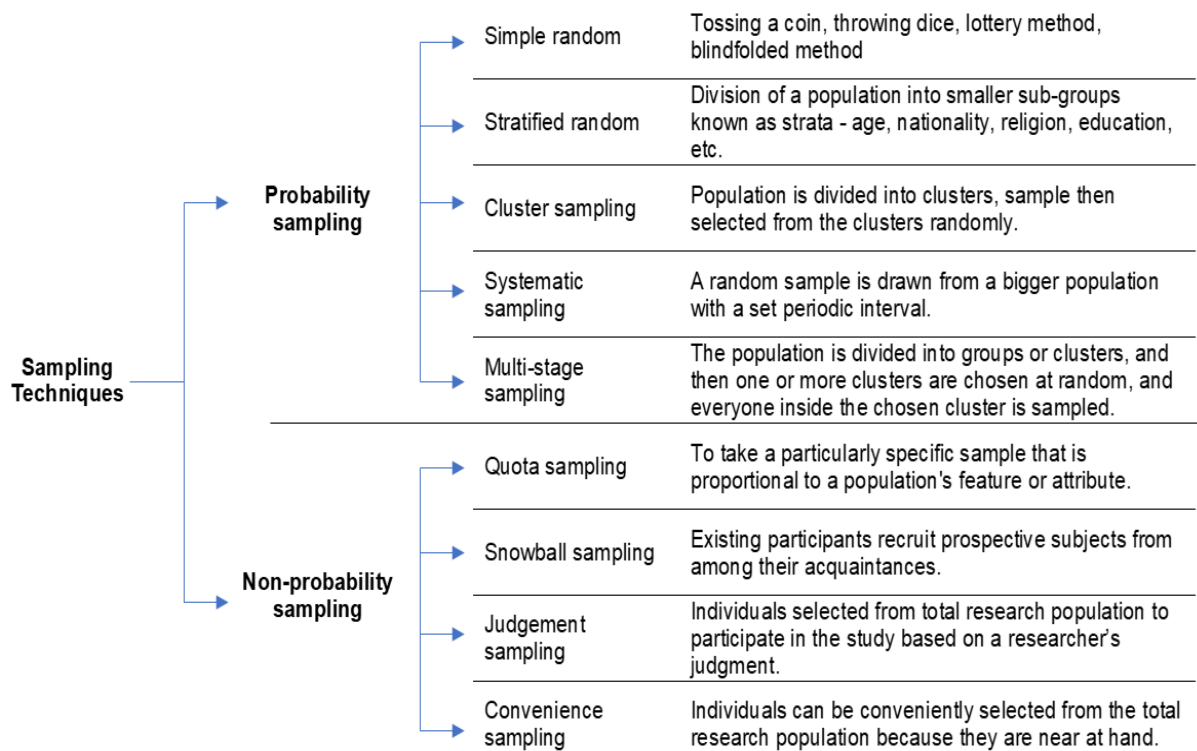
Figure 5.3: Sampling techniques

Source: Adapted from Taherdoost (2016:20-23) and Showkat and Parveen (2017:3-9)

Probability sampling, also known as random sampling, is a method of selecting items from a population in which each item has an equal chance of being included in the sample (Taherdoost, 2016). In contrast to probability sampling, non-probability sampling selects a sample using non-random techniques. Non-probability sampling relies significantly on the use of judgment. Individuals are picked because they are conveniently available rather than at random (Showkat & Parveen, 2017).

When it comes to sampling, there is a difference between qualitative and quantitative research. For instance, sample sizes in qualitative studies are small (Creswell, 2013; Kimaro, 2018) but large enough to establish representativeness (Graff, 2017). The purpose of producing samples in quantitative research is to create samples that are representative of the research population. When developing samples for qualitative research, however, the emphasis is on producing samples that will produce meaningful information (Graff, 2017).

Figure 5.4 depicts a workflow that can be used to determine the best sampling technique for a probability study. Based on the researcher's choice (flagged by red circles), the stratified random sampling method was found to be the most acceptable sample strategy for this research study. Also, the researcher chose the probability sampling technique because this technique allowed the researcher to generate a sample that is truly representative of the population of interest in real life. In other words, it gave all government officials that form the research population the option to be selected to form the sample population. This enhances the likelihood that the findings accurately represent the entire research population, which is not the case with non-probability sampling (Saunders et al., 2019).
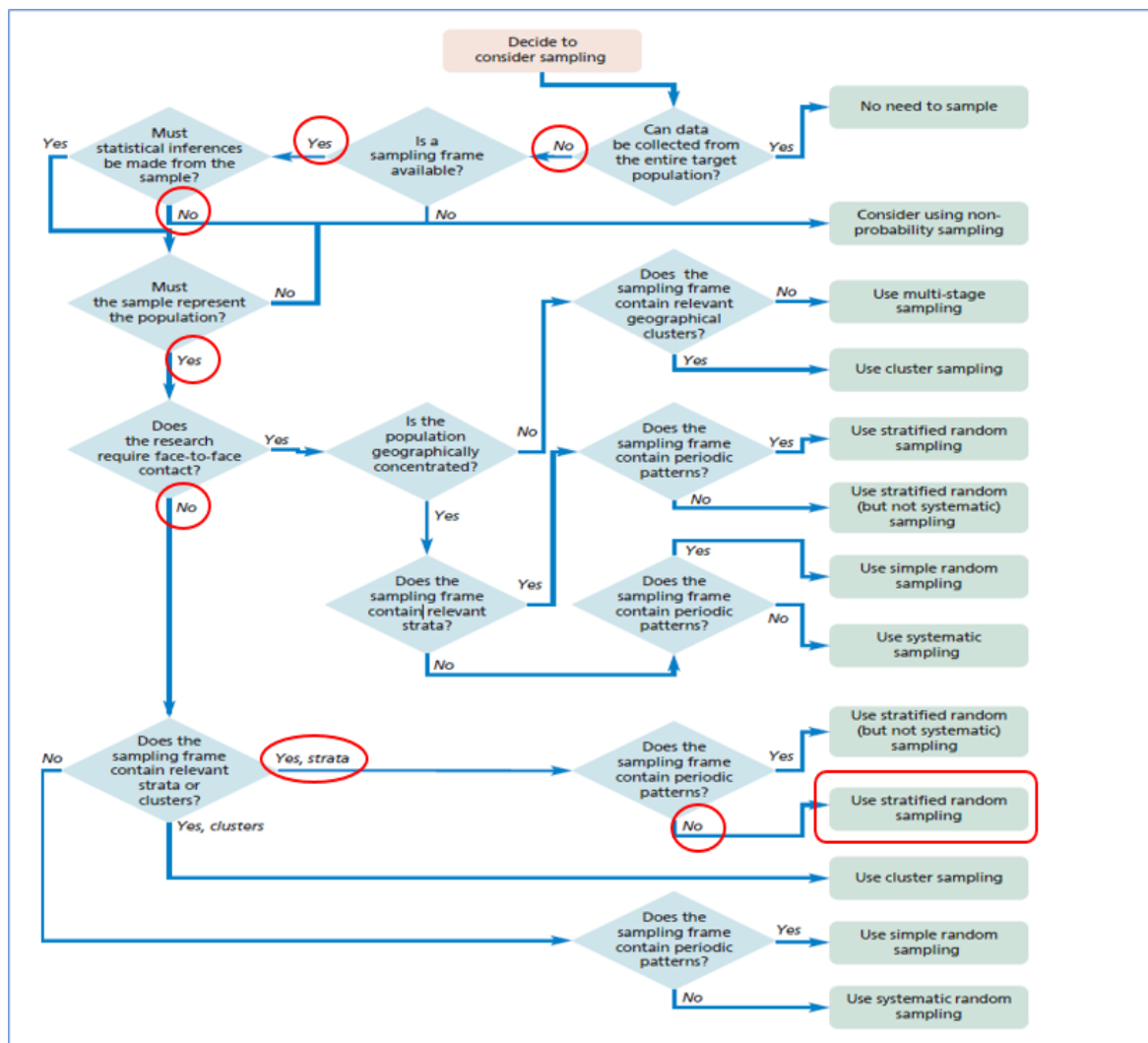
Figure 5.4: Choosing a probability sampling technique

Source: Adapted from Saunders et al. (2019:306)

Stratified random sampling is a sampling strategy that includes randomly picking a sample from the study population and segmenting it into smaller subgroups known as strata. Also, stratified random sampling is a more exact statistic because it provides a more accurate picture of the whole research population (Nickolas, 2021). Hence, this method was used to divide the research population of 221 government officials, into three subgroups known as strata, each of which is homogeneous to a given characteristic feature (Taherdoost, 2016), namely:

(i) **Strata 1**: National KM Practitioners:

   o 73 government officials that represent their respective national government departments at the DPSA National Knowledge Management Forum. These officials are responsible for implementing Knowledge Management in their respective national government departments.

(ii) **Strata 2**: Provincial KM Practitioners:

   o 148 government officials that represent their respective provincial government departments at the DPSA National Knowledge Management Forum. These officials are responsible for implementing KM in their respective provincial government departments.

(iii) **Strata 3**: National KM Coordinator:

   o Even though supported by others, only 1 government official is responsible for coordinating the implementation of KM nationally and who hosts the DPSA National Knowledge Management Forum.

Following that, even though other statistical formulas were available for estimating the research study's sample size (Taherdoost, 2017), the researcher opted to use the Taro Yamane formula (Adam, 2020; Taherdoost, 2017). The formula is as follows:

(i) **n = N/K (1) + N (e)2**

   o n = sample size;

   o N = target population;

   o K = constant (1); and

   o e = allowable margin of error

The margin of error, denoted by 'e', is the plus-or-minus figure that shows the range in which the

population's responses may differ from the sample. For example, if the margin of error is 7% and 87% of the respondents choose an answer, the researcher can be confident that if the same question is given to the full research population, between 80% (87% - 7%) and 94% (87% + 7%) will choose the same response (Saunders et al., 2019).

The confidence level is the probability that the sample accurately reflects the attitudes of the research population i.e., how confident the researcher is of the results and the higher the level, the more certain the researcher will be that the results are accurate (Saunders et al., 2019). The researcher used a 7% margin of error (precision) with a 95% confidence level.

Because strata 3 would be surveyed in full, the formula was applied just to strata 1 and strata 2. Figure 5.5 depicts how the stratified random sampling technique was used and how the Taro Yamane formula was applied for determining the sample size.
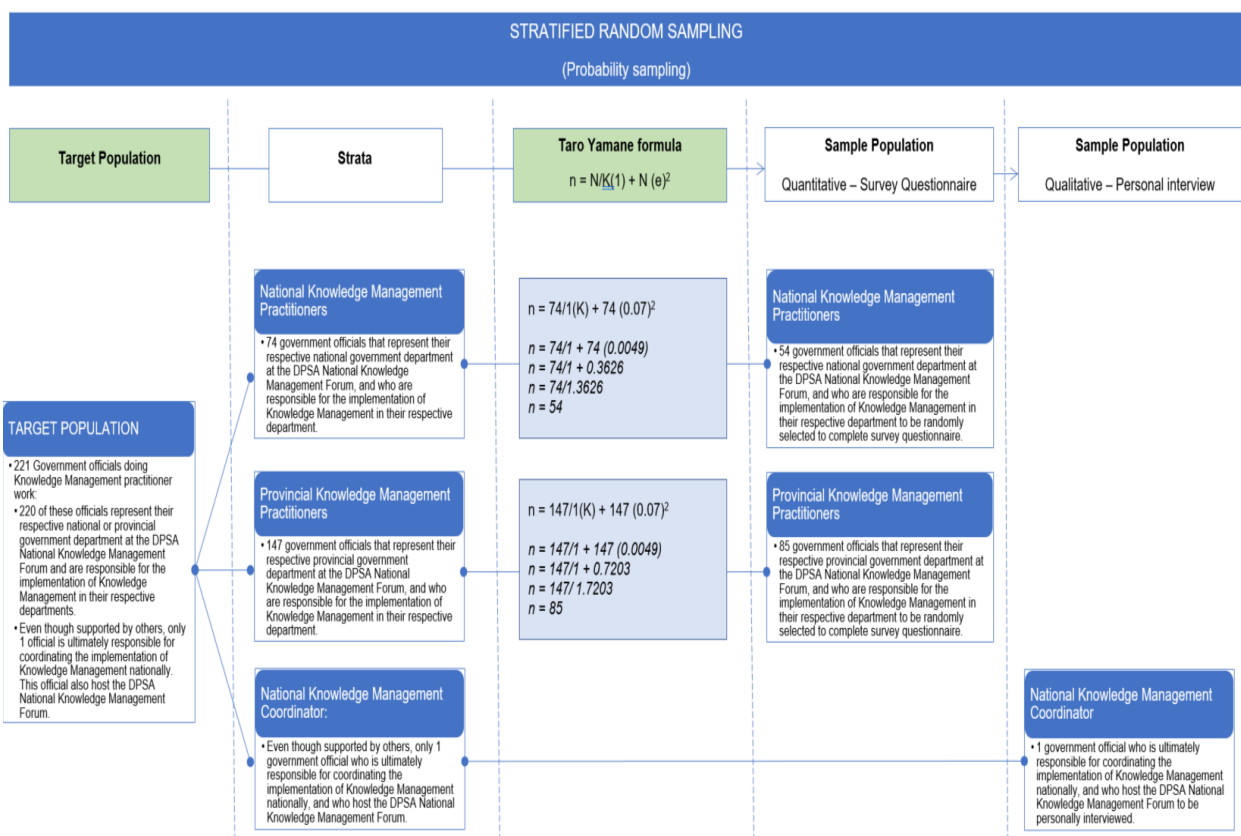
Figure 5.5: Sample determination strategy

The outcome was a sample population of 139 government officials, namely:

(i) National KM Practitioners:

- o 54 government officials (including National KM Coordinator) that represent their respective national government departments at the DPSA National Knowledge Management Forum. These officials are responsible for implementing KM in their respective national government departments.

(ii) Provincial KM Practitioners:

- o 85 government officials that represent their respective provincial government departments at the DPSA National Knowledge Management Forum. These officials are responsible for implementing KM in their respective provincial government departments.

(iii) National KM Coordinator:

- o 1 government official who is responsible for coordinating the implementation of KM nationally and who hosts the DPSA National Knowledge Management Forum.

Overall, the sampling strategy yielded a sample that was manageable, feasible to complete within the study timeframe, representative of the total research population and will provide meaningful information.

5.2.6.2 Data collection

Many scholars, including Douglas (2015), Mesly (2015), Maake (2016), Surbhi (2016) and Ajayi (2017), classify data collection into the two categories of primary and secondary data. Personal interviews, Internet-based surveys and questionnaires are some of the methods used to gather primary data. Other methods include questionnaires and focus groups. Secondary data include both raw data and summaries that have been published. For example, censuses, government publications, organisational records, reports, books, journal articles and websites (Saunders et al., 2019).

This study adopted the survey strategy. Hence, the researcher collected primary data through a survey questionnaire and a personal Internet-based interview. The secondary data were obtained through a literature review.

What data were collected and how it was collected are briefly discussed below:

a)   Survey Questionnaire and Interview Schedule

One of the reasons for using the survey questionnaire and interview schedule is because it considers the restrictions of time, money and resources. Because every respondent in the study was asked the same questions, these instruments enabled fast primary data collection of responses from a large sample before quantitative analysis (Saunders et al., 2019). An interview schedule is a list of the questions the researcher used to ask the interviewee during the personal Internet-based interview.

According to Schutte (2020), every aspect of the survey questionnaire and interviewee schedule affects its accuracy, namely:

    (i)   Type of information requested;
    (ii)   Order in which questions are asked;
    (iii)   The actual language used;
    (iv)   If sufficient questions are being asked;
    (v)   How the literature review fits into the survey;
    (vi)   Is the questionnaire and interview schedule on target; and
    (vii) How will the results be captured?

Knowing this, the survey questionnaire and interview schedule were meticulously crafted using De Wet Schutte's Dendrogram Technique as a guide. When designing questions for the study, the Dendrogram Technique is intended to aid researchers in collecting the exact data necessary to answer the research question(s) and meet the research objectives (Schutte, 2020). Also, this dendrogram reflects the accumulation of all knowledge gathered via the literature review to find possible solutions to the presented research objectives (Schutte, 2020).

The Dendrogram Technique was used to split the main research objective into sub-objectives and then split the sub-objectives into research questions. This was done by simply asking the question "is determined by ......?" after each objective and each sub-objective (Schutte, 2020). For example:

    (i)   Main objective: To develop a framework to improve Knowledge Management in the South African government to ensure improved service delivery... "is determined by ......?" Knowledge Management, its components and how it is designed to improve service delivery… "is determined by ......?" Knowledge Management components, Knowledge Management understanding, "Research question would be…...?" To your understanding, what are the Knowledge Management components?

The Dendrogram technique was used to generate the survey questionnaire and interview schedule in Table 5.6.

Table 5.6: Development of questionnaire and interview schedule

Main objective	Dendrogram technique	Sub-objectives	Dendrogram technique	Themes	Questions	Question type
To develop a framework to improve Knowledge Management in the South African government to ensure improved service delivery.	"Is determined by...?"	To explore Knowledge Management, its components and how it is designed to improve service delivery.	"Is determined by...?"	• Knowledge Management lifecycle familiarity; • Knowledge Management components and tools familiarity; • Relationship between Knowledge Management and service delivery; • Shared Knowledge Management Definition and Goal; • Understanding the Importance of Enterprise Content Management; • Understanding the importance of Community of Practice Initiatives • Understanding the importance of Lessons Learned Initiatives; • Employees' skills in using basic Knowledge Management tools.	I am very familiar with the Knowledge Management lifecycle.	Likert scale
					I am very familiar with the Knowledge Management components and tools.	Likert scale
					Knowledge Management improves service delivery.	Likert scale
					Knowledge Management is used in my department to improve service delivery.	Likert scale
					To ensure everyone is working toward the same goal, all National and Provincial Government Departments adopted the same Knowledge Management definition.	Likert scale
					There must be an Enterprise Content Management (ECM) Solution in every department. This is a very important tool for Knowledge Management.	Likert scale
					Being in a Community of Practice is a waste of everyone's time.	Likert scale
					Before launching a new initiative or project, we have lessons learned sessions. Lessons learnt are documented and applied to all new initiatives and projects.	Likert scale
					Knowledge Management is not needed to improve service delivery.	Likert scale
					I am very skilled in the following tools – ECM, Communities of Practice, Lessons Learned initiatives, Knowledge Retention and Retirees initiatives and Expertise Locator	Likert scale

Main objective	Dendrogram technique	Sub-objectives	Dendrogram technique	Themes	Questions	Question type
					Systems.	
					What is your understanding of the role of Knowledge Management in improving service delivery?	Interview schedule
					In your opinion, is the implementation of Knowledge Management in the South African government slow and disjointed.	Interview schedule
		To identify the factors that contribute to or deter the implementa-tion of Knowledge Management in the South African government.	"Is determined by...?"	• South African government's value of Knowledge Management; • Implementation skills and expertise; • Departmental Knowledge Management vision and mission; • A management perspective on Knowledge Management and Service Delivery; • Sufficient human resources in departments; and • Other potential Implementation Issues.	My department does not value Knowledge Management.	Likert scale
					I do not need to be trained on how to implement Knowledge Management. I have the skills to do so.	Likert scale
					My department has a clear Knowledge Management vision and mission.	Likert scale
					Management is unsure how Knowledge Management improves service delivery.	Likert scale
					In your opinion, does the senior management staff in the respective national and provincial government departments comprehend how Knowledge Management, which is available to them, can help improve service delivery? Why?	Interview schedule
					We have enough human resources in our unit to implement Knowledge Management in our department.	Likert scale
					Do you have enough staff to coordinate Knowledge Management in the South African government?	Interview schedule
					Public officials have the necessary expertise to implement Knowledge Management in	Likert scale

Main objective	Dendrogram technique	Sub-objectives	Dendrogram technique	Themes	Questions	Question type
					their departments.	
					Complete the sentence. If my department values Knowledge Management, they would...	Open-ended
					List a problem that makes it hard for your department to implement Knowledge Management.	Open-ended
					In your opinion, do you think government officials in the respective national and provincial government departments have the necessary expertise/skills to implement Knowledge Management in the South African government?	Interview schedule
		To determine how the implementation of a Knowledge Management framework can improve service delivery in the South African government.	"Is determined by...?"	• Need for a Knowledge Management Implementation Framework; • Status of Knowledge Management in the South African government; and • Knowledge Management and improved Service Delivery.	I need a framework to guide me on how to implement Knowledge Management in our department.	Likert scale
					Knowledge Management implementation in both National and Provincial Government Departments is disjointed (i.e., it is not conducted the same throughout all departments).	Likert scale
					Knowledge Management implementation in my department is slow.	Likert scale
					Knowledge Management is a creative and long-term solution that can improve service delivery.	Likert scale
					What are the success factors that help contribute to the coordination of Knowledge Management in all national and provincial government departments?	Interview schedule
					What challenges do you experience when	Interview

Main objective	Dendrogram technique	Sub-objectives	Dendrogram technique	Themes	Questions	Question type
					coordinating Knowledge Management in all national and provincial government departments?	schedule

		To ascertain the extent of the implementation of Knowledge Management in the South African government.	"Is determined by...?"	• Knowledge Management Critical Success Factors:
				  ○ Knowledge Management Objective;
				  ○ Knowledge Management Pillars (People, Process, Technology); and
				  ○ Knowledge Management Enablers.
				
				Focus:
				
				○ Knowledge Management Strategy;
				○ Knowledge Management Strategy Promotes Skills Development;
				○ Implementation of Knowledge Management Strategy;
				○ Knowledge Management Strategy Promotes
					My department has a Knowledge Management strategy.	Likert scale

					Our Knowledge Management strategy promotes skills development.	Likert scale
					A Knowledge Management strategy is being implemented in our department.	Likert scale
					Our Knowledge Management Strategy aims to enable our department to become a learning and innovative organisation.	Likert scale
					Our department's Knowledge Management strategy is strategically aligned with the DPSA National Knowledge Management Strategy Framework.	Likert scale
					We have a dedicated team/unit (e.g., Directorate Knowledge Management) responsible for implementing Knowledge Management in our department.	Likert scale
					I have clearly defined Knowledge Management responsibilities.	Likert scale
					Knowledge Management is an add-on activity in my department.	
					Our department has a framework that shows how to implement Knowledge Management.	Likert scale
					We measure Knowledge Management regularly to assess our Knowledge Management maturity and to identify gaps.	Likert scale

Main objective	Dendrogram technique	Sub-objectives	Dendrogram technique	Themes	Questions	Question type
				Learning and Innovation; ○ Knowledge Management Strategy aligned with DPSA National Knowledge Management Strategy Framework; ○ Dedicated Knowledge Management Unit; ○ Clearly Defined Knowledge Management Responsibilities; ○ Knowledge Management Activity; ○ Knowledge Management Implementation Framework; ○ Institutional Coherence and Standardisation in the South Africa Government; ○ Knowledge Management Maturity; and ○ Knowledge Management Implementation Status.	I am satisfied with how Knowledge Management is being implemented in my department.	Likert scale
					Knowledge Management is fully implemented in my department.	Likert scale
					A Knowledge Management Implementation Framework will promote institutional coherence and standardisation.	Likert scale
					The organisational structure for Knowledge Management across government is not coherent and standardised.	Interview schedule

Main objective	Dendrogram technique	Sub-objectives	Dendrogram technique	Themes	Questions	Question type
		To explore and identify the South African government's current service delivery frameworks and mechanisms.	"Is determined by...?"	• Awareness of Service Delivery Frameworks and Mechanisms; • Perspective on how Knowledge Management is Implemented; • Exposure to Government's Service Delivery Frameworks and Mechanisms; and • Measuring Impact of Government's Service Delivery Frameworks and Mechanisms.	My department believes it is critical to reinforce public officials' awareness of the frameworks and mechanisms used by governments to deliver services.	Likert scale
					I was never exposed to, introduced to, or provided with the government's service delivery frameworks and mechanisms. I have no idea what it is.	Likert scale
					The use of service delivery frameworks and mechanisms are regularly measured in my department to determine impact.	Likert scale
		To explore and identify creative and long-term solutions that can improve service delivery in South Africa.	"Is determined by...?"	• Tools for implementing Knowledge Management; • Proficiency in the Proposed Tools; • Proficiency in Programme and Project Management Methodology; • Proficiency in Change Management Methodology; • Inclusion of Knowledge Management in Service Delivery Improvement Plans;	Results-based Monitoring and Evaluation is a very useful tool for implementing Knowledge Management in my department.	Likert scale
					Programme and Project Management is a very useful tool for implementing Knowledge Management in my department.	Likert scale
					Change Management is a very useful tool for implementing Knowledge Management in my department.	Likert scale
					Strategic Planning is a very useful tool for implementing Knowledge Management in my department.	Likert scale
					Rate your proficiency in Results-Based Monitoring and Evaluation.	Likert scale
					Rate your proficiency in Programme and	Likert scale

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Main objective	Dendrogram technique	Sub-objectives	Dendrogram technique	Themes	Questions	Question type
				• Inclusion of Knowledge Management in Departmental Strategic Plans; and • Inclusion of Knowledge Management in Performance Agreements.	Project Management.	
					Rate your proficiency in Change Management.	Likert scale
					Rate your proficiency in Strategic Planning.	Likert scale
					Select only one Programme and Project Management Methodology you are most proficient in: PMBOK, PRINCE2, Agile, None.	Multiple choice
					Select only one Change Management Methodology you are most proficient in.	Multiple choice
					Knowledge Management is included in our department's Service Delivery Improvement Plans.	Likert scale
					The implementation of Knowledge Management in our department is listed in our strategic plans, as a service standard/indicator.	Likert scale
					The implementation of Knowledge Management in our department is listed in our Performance Agreements as a Key Performance Indicator.	Likert scale
					The Knowledge Management Implementation Framework when developed will be a cutting-edge long-term solution to improved service delivery.	Interview schedule
					What suggestions for improvements to the Knowledge Management Implementation Framework would you make?	Interview schedule

The questionnaire included closed-ended questions, questions using the Likert scale and open-ended questions (Makanyeza et al., 2013). Because of this, both quantitative and qualitative data could be sourced.

The questionnaire included Likert Scale questions because it measures more than just attitudes but also perspectives, personalities and descriptions of individuals' lives and circumstances. As a matter of interest, Rensis Likert, a social psychologist, came up with the Likert scale in 1932. It is the most-used summated rating scale in the social sciences (Spector, 1992). The Likert Scale questions were assigned with responses that range from Strongly Agree to Strongly Disagree. This provided the researcher with a comprehensive picture of the respondent's opinions. Also, Likert Scales contained a middle point for respondents who were neither agreeing nor disagreeing on the issue (Joshi & Pal, 2015:398-402).

According to Spector (1992), four characteristics exist that make it a summated rating scale, namely:

(i)   A scale must include numerous components joined or added together;

(ii)   Each item must measure something that has a quantitative measurement continuum behind it i.e., it assesses the quality of something that can be changed numerically rather than subjectively e.g., an attitude might range from highly positive to very negative;

(iii) Unlike a multiple-choice examination, there is no correct response for each item on the summated rating scale; and

(iv)   Each scale item is a statement and respondents were asked to rate each statement on a scale. This entails asking participants to identify which of the numerous response options they prefer.

With the support of the literature review, the survey questionnaire and interview schedule were developed, meaning that the questionnaire and interview schedule were founded on a thorough theoretical foundation. If this was not done, both the survey questionnaire and interview schedule would be nothing more than a collection of several, typically intriguing questions that exist independently from each other (Spector, 1992).

The questionnaire was chosen for this study because of the benefits it provides in terms of cost minimization for the researcher and respondent confidentiality (Barbier, 2004; Schutte, 2020). Additionally, the survey questionnaire was created using Microsoft Forms and then to be distributed to both the national government and provincial government officials via the Microsoft Office 365 online platform.

b) Personal Internet-based interview

According to Bolderston (2012), interviews are an important part of the research and both seasoned and inexperienced researchers can use them to collect data for their studies. The semi-structured or unstructured interview is often used in qualitative research. A face-to-face interview–interviewee dyad is typical of qualitative interviews. However, in recent years data have been collected in increasingly diverse forms such as focus groups and with Covid and the need for social distancing, mobile, e-mail and Internet-based (MS Teams and Zoom chat-based platforms) are used. A personal one-on-one Internet-based interview is conducted between the researcher and the respondent. This approach had the advantage of allowing those being interviewed to express themselves privately and without being limited by the researcher's structure (Bolderston, 2012). The interview schedule served as a guide for gathering information from the interviewee (*see* Table 5.6).

c) Literature review

Secondary data, as previously stated, contains both raw data and published summaries, which include information obtained and offered by someone else for their research objectives (Saunders et al. 2019). In other words, secondary data deals with recycled and used information collected through a literature review. Hence, a literature review was the secondary data collection method.

The literature was chosen to explain the scientific rationale of the topic under investigation, as well as to highlight what research has already been done and how the findings relate to the current issue. The selected literature helped to overcome the complexity of the research review. Understanding what studies were already done helped the researcher prepare the thesis with a greater breadth of insight and experience. The sources revealed inquiries that were close to this one, as well as previously unknown data sources. The sources also included novel concepts and methods that had not previously been considered. Furthermore, the authenticity of the examined literature was scrutinized closely, since not all written content is the product of solid scientific design or can be checked. The literature sources selected included books, periodicals, journals, web pages, academic papers and Internet archive materials.

5.2.6.3   Data validity (triangulation)

Data validity is concerned with triangulation and was used in the study to validate data from more than two data sources through cross-verification. Yardleg (2009, cited by Yin, 2011:81) claimed that the term triangulation comes from research in navigation, where the interaction of three distinct points of reference is used to establish an object's exact location (Tengeh, 2011). Triangulation in this research study aims to improve validity by using three methods to corroborate

or validate data (Tengeh, 2011). Carter et al. (2014) and Johnson (2017) cite four different methods of triangulation:

(i) **Methods triangulation** includes the use of multiple methods to collect data of similar events and is usually used in qualitative studies e.g., interviews, observation and field notes;

(ii) **Investigator triangulation** is when more than two researchers participate in the same study to offer a wider breadth of observations, viewpoints and conclusions;

(iii) **Theory triangulation** uses several theories for data analyses and data interpretation. With this method, different hypotheses and theories can help the researcher to either support or disprove results; and

(iv) **Data source triangulation** entails data collection from several individuals. This includes relatives, groups of people and individuals, to obtain multiple viewpoints and data validation.

The researcher, to increase the validity of the results, used more than three data sources—documents, organisational records, a survey interview as a survey questionnaire, as well as a personal Internet-based interview.

Morton et al. (2012) state that not every sampled person who receives the questionnaire will complete it. As a result, the survey questionnaire was distributed to all 221 government officials (research population). This was done to increase the response rate and address the quality and validity questions. Additionally, the survey questionnaire was distributed to both the national government and provincial government officials. Respondents were asked to identify their level of government employment, i.e., national, or provincial. The objective is to analyse data on three levels: (i) national government; (ii) provincial government and (iii) national and provincial government data combined. This enables the researcher to gain an understanding of what is happening in provincial and national departments independently, as well as how the data appears when combined. All of this is done to address issues about data quality and validity, as well as to pinpoint the precise government sphere of concern.

5.2.6.4   Data analysis and interpretation

The study used the mixed-method research approach. This approach is known to assist researchers in the analysis and interpretation of data, as it enables researchers to easily identify contradictions between quantitative and qualitative data (Creswell, 2013). Both quantitative and qualitative data were collected.

For quantitative purposes, both national and provincial government officials were asked to complete an online survey questionnaire. The quantitative survey questionnaire was created using Microsoft Forms. To collect the data, the target population was sent an email with a link to the online questionnaire. The data were collected in real-time in Microsoft Excel, i.e., when respondents finished the online survey questionnaire, their data were immediately recorded in a Microsoft Excel file in the Microsoft Office 365 online cloud, accessible by the researcher. The collected data were uploaded to 'DATAtab,' a browser-based statistical analysis application, for analysis and processing.

For qualitative purposes, a personal Internet-based interview was held with the DPSA official who is responsible for coordinating KM implementation nationally and who hosts the DPSA National Knowledge Management Forum. The qualitative data collected from the personal Internet-based interview was separately analysed as this requires different analysing tools and techniques. Here induction data analysis (induction reasoning) was applied, which is the ideal qualitative method of content analysis for this study.

(a)   Descriptive statistics and inferential statistics

Statistics is a science that consists of a set of tools for collecting, analysing and interpreting raw data to gain knowledge and then presenting the empirical data in numerical form (Maravelakis, 2019). The two major fields of statistics are descriptive statistics and inferential statistics. Both descriptive and inferential statistics were used to present, interpret and draw inferences from the quantitative and qualitative data collected (DATAtab Team, 2021). In Chapter 6 of this research study, descriptive statistics were used to present the data, whereas, in Chapter 7, inferential statistics were used to analyse, interpret and draw inferences (conclusions) from the data. The difference between descriptive and inferential statistics is explained below.

(i)   **Descriptive Statistics**: After collecting data, one of the first stages is to organise, summarise and present data using graphs. This involves calculating the average and identifying data sets i.e., data trends and patterns. This is the purpose of descriptive statistics (DATAtab Team, 2021). The use of descriptive statistics allows researchers to display data in a more understandable format, such as frequency tables, bar charts,

histograms, scatter plots and box plots, among others (DATAtab Team, 2021). This enhances data understanding and provides a visual overview of data sets (Trochim, 2022). It is critical to understand that descriptive statistics are not used to infer conclusions but to display data in a visually appealing and understandable format. Inferential statistics is responsible for drawing conclusions. There are two ways to display data using descriptive statistics (Trochim, 2022):

- o **Measures of Central Tendency**: Uses a single value to describe the centre of a data set. The term Average is well known for a measure of central tendency. Trochim (2022) distinguishes three sorts of estimates of central tendency:
  - ▪ **Mean**: The mean or average is the most frequently used technique for calculating central tendency. In this calculation, the average sum is divided by the total number of data points. For example, the sum of 5 values is 167, so the mean is 167/5 = 33.4. Mean can only be used with numerical data. The mean considers all the numbers in a data set;
  - ▪ **Median**: This is the middle number in a set of data. It is calculated by first listing the data in numerical order and then locating the value in the middle of the list. For example, the median in 1, 2, 3, 4, 5, 6, 7, 8, 9 (odd numerical list) is 5 and in 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (even numerical list) is 5 and 6. Median can only be used with numerical data; and
  - ▪ **Mode**: This is the number that appears most frequently in the set of data i.e., the most frequently occurring value is the mode. The mode can be used with both numerical and nominal data. Nominal data is data in the form of names or labels.
- o **Measures of Variability (dispersion)**: The intent behind measures of variability is to provide a sense of the spread (dispersion) of data in each statistical sample. For example, the average percentage score for 139 government officials could be 75% out of 100%. Not every government official, however, will have received 75%. Rather, their percentage scores will be distributed evenly. Some government officials will have a lower value, while others will have a higher value. Measures of variability allow the researcher to summarise how evenly distributed these percentage scores are. The three frequently used measures of variability are:
  - ▪ Range: The range is the difference between the maximum value and minimum value score of a distribution. Researchers may wish to determine if all the response categories on a survey question have been used, as well as the distribution's general balance;

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- Variance: Variance quantifies the degree to which the numbers in a data set deviate from the mean; and

- Standard Deviation: The standard deviation is a statistical measure that may be used to determine how evenly distributed the numbers in a data set are.

(ii) **Inferential Statistics**: After applying descriptive statistics, inferential statistics are used to predict and estimate generalisations and inferences (conclusions) about the whole study population using the sample data. The sample data visually presented in Chapter 6 were analysed and interpreted to draw conclusions about the whole research population. According to Amin (2019), inferential statistics is used to understand and establish (i) potential relationship differences between two or more variables; (ii) whether two or more samples when compared vary; (iii) what generalisations can be taken from the sample and applied to the entire research population; and (iv) significant differences or correlations between variables critical to the research question. To do this, several statistical analysis tests can be used depending on the statement to be made about the population or the question to be answered about the population. Examples, the chi-square test, t-test, binomial test, exploratory factor analysis test, Analysis of Variance tests (ANOVA), Wilcoxon test and the Mann-Whitney U-Test, among many others (DATAtab Team, 2021). In this study, cross-tabulations and the Chi-Square test were primarily used. Additionally, when inferential statistics are applied, the researcher uses a reasoning approach to get conclusions that go beyond the data. This is very important. When the appropriate test is applied, the researcher adopts one of the three types of reasoning, abductive, inductive, or deductive reasoning, to analyse data to draw conclusions (Trochim, 2022; Streefkerk, 2019). Inductive reasoning is adopted for this research study, which means the researcher when analysing data to draw conclusions will follow this approach: (i) conduct a specific observation, (ii) find emerging patterns and trends in data; and (iii) reach a conclusion (Thomas, 2006; Johnson, 2018). Furthermore, the researcher accepts that while using inductive reasoning, the generalisations made, and conclusions drawn may be viewed as probable, but they are not guaranteed. That is, even if educated or informed conclusions and generalisations are established based on facts and data, just because they sound correct does not imply, they are correct (Betts, 2022).

The functions of descriptive and inferential statistics are depicted in Figure 5.6 below.
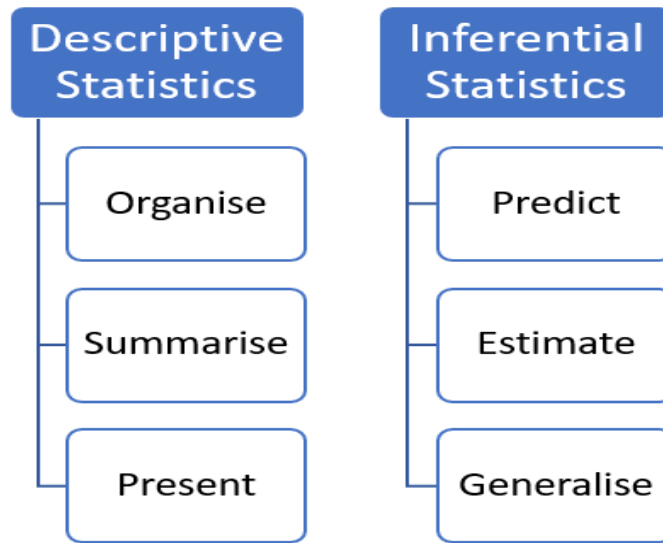
Figure 5.6: Functions of descriptive and inferential statistics
Source: Adapted from Amin (2019:4)

Finally, the results of both quantitative and qualitative survey instruments were carefully merged to (i) understand contradictions between the quantitative and qualitative results; (ii) ensure biases associated with one method cancel out; (iii) strengthen the results of the study.

Once this was done, conclusions about the study's outcomes were drawn and the framework on how to implement KM in the South African government to ensure improved service delivery was constructed.

5.3   Chapter summary

The research method, type and approach that was employed to explore the research question were all explained in detail in this section. The study adopts a descriptive as well as an exploratory approach to the research process.

Additionally, the research study was designed using a quantitative and qualitative research approach. As a result, the mixed method of research was used. A survey questionnaire was used for quantitative purposes and a personal Internet-based interview for qualitative purposes. The Saunder's Research Onion was used to assist the researcher to develop a reliable and credible

research methodology and approach.

In summary, the reliability and credibility of this study's research findings were due to the following:

(i)   **Saunder's Research Onion**: highlights the various choices available when designing a research methodology;

(ii) **Taro Yamane formula**: to ensure the correct sample size is selected;

(iii) **Probability Sampling Technique workflow**: to ensure the appropriate sampling technique is selected for the study;

(iv) **Stratified Random Sampling Technique**: to produce a sample that correctly represents the total research population;

(v)   **Dendrogram Technique**: to guarantee the questionnaire is on target;

(vi) **High level of 'results' confidence**: adoption of 7% margin of error and 95% confidence level, to ensure high-level confidence that results are very accurate;

(vii) **Response rate mitigation**: to ensure an increased response rate of respondents by creating and sending the questionnaire to the entire research population using Microsoft Forms which is a web-based cloud services application of Microsoft Office 365 via email; and

(viii) **Methods triangulation**: to increase the validity of results, data were collected from multiple sources and cross-verified to ensure corroboration and data validation.

Overall, for the study to be meaningful, it would include both the respondents' interpretations of their experiences as well as the researcher's interpretations of those experiences.

CHAPTER 6

QUESTIONNAIRE AND INTERVIEW RESULTS

6.1   Introduction

The previous chapter discussed the research methodology used in this study. This chapter presents the results of the data acquired through the survey questionnaires and personal Internet-based interviews. The results are displayed in an understandable format using descriptive statistics, that is, measures of central tendencies, such as mean, median and mode, as well as measures of variability, such as range, variance and standard deviation, are statistically calculated from the data to reveal data sets, trends and patterns. The data sets, trends and patterns that emerge are presented in narrative text, supported by easy-to-understand clustered column graphs, radar maps and frequency tables. Both statistically significant and insignificant results are discussed. The quantitative data collected via the survey questionnaires are presented first, followed by the qualitative data collected from the personal Internet-based interviews.

6.2   Presentation of results using frequency tables and graphs

Results were presented in a comprehensible manner using frequency tables and graphs. A frequency table is a table that summarises the frequency with which each value appears in the data as well as shows the absolute and relative frequency of variables, allowing for data patterns and trends to emerge (DATAtab Team, 2021). Absolute frequencies are the numbers that indicate how often a certain type of variable happens. Relative frequencies, which are usually expressed as a percentage, indicating how often a certain type of variable happens in comparison to all other variables (DATAtab Team, 2021).

The frequency table had two critical columns: (i) Percentage and (ii) Valid Percentage. The Valid Percentage column included all data, including those that were missing or invalid. The missing or invalid value was excluded from the Percentage column. Missing or invalid values occur when respondents select "no answer," "can't say," or "do not know," as their response to a survey questionnaire. So, to avoid distorted values, the frequency table showed both the percentage and valid percentage column (DATAtab Team, 2021). Data were also displayed graphically using bar charts and radar maps (DATAtab Team, 2021).

To aid data analysis and data interpretation, contingency tables were used. Contingency tables are also known as cross-tabulations or crosstabs and are a type of table that displays the frequency distribution of two or more variables. The aim of using contingency tables was to explain the thematic relationships of variables and highlight potential interactions. Consequently, the Chi-

Square test was used in conjunction with cross-tabulations to determine whether a statistically significant relationship exists between two categorical variables (DATAtab Team, 2021).

Furthermore, the symbol '*n*' reflects the actual number (frequency) of respondents who answered a single question, a category of questions, or the full questionnaire, depending on what the researcher wants to establish.

6.3 Results: Quantitative survey questionnaire

Even though the Taro Yamane formula yielded a sample of 139 government officials (54 national government employees and 85 provincial government employees), the survey questionnaire was distributed to all 221 government officials doing KM practitioner work. This was done to boost the response rate, as not every selected official who receives the questionnaire would respond (Morton et al., 2012). The response rate formula was:

Response Rate % = total responses received / total sample size x 100

The response rate was reported as a percentage (Ramshaw, 2019). The response rate of the sample population of government officials appointed at the national and provincial levels is depicted in Table 6.1.

Table 6.1: Response rate

Respondents	Sample size	Response rate	Percentage
National	54	27	50%
Provincial	85	38	45%
Total	139	65	47%

Several scholars agreed that a statistically valid survey has a response rate of more than 30%. According to Chung (2021), a reasonable response rate is between 5% and 30%, while an excellent response rate is 50% or more. Ramshaw (2019) stated that a statistically valid response rate is higher than the average, which is anything greater than 25%. Additionally, Clearinghouse for Military Family Readiness (2019) also states that the average survey response rate for external surveys ranges from 10% to 15% and up to 54% for in-person surveys. Overall, the findings of this research study were considered statistically valid as it has an overall response rate of above 30% (Clearinghouse for Military Family Readiness, 2019; Ramshaw, 2019; Chung, 2021). With a margin of error of 7% and a confidence level of 95%, the survey's response rate of 47% (*n*=65) is regarded as sufficient for delivering trustworthy, valid and reliable findings that correctly reflect the

entire target population (iSixSigma, 2022).

The survey questionnaire, which was the primary data collection tool consisted of 62 questions and was structured around the six sub-objectives of this research study. The questionnaire was created using Microsoft Forms and distributed to the target population via the Microsoft Office 365 online platform to collect data. The first section of the questionnaire dealt with biographical data and is reported below. Following that, the quantitative survey questionnaire findings for each of the six sub-objectives of this study were presented. Also, three categories of data were presented: national government, provincial government and South African government. This helped the researcher comprehend what was happening in provincial and national departments, as well as how the data appeared when combined.

6.3.1   Demographic data

The responses to the various demographic data categories are discussed below.

6.3.1.1   Gender distribution

Females made up most responses. Table 6.2 show that 63.1% (n=41) of the respondents were female, while 39.9% (n=24) were male. This reveals a disproportionately low representation of males.

Table 6.2: Gender distribution

	Frequency	%	Valid %	Cumulative %
Female	41	63.1%	63.1%	63.1%
Male	24	36.9%	36.9%	100%
Total	65	100%	100%	

Figure 6.1 below depicts the gender distribution of the respondents in terms of the percentage of the overall sample.
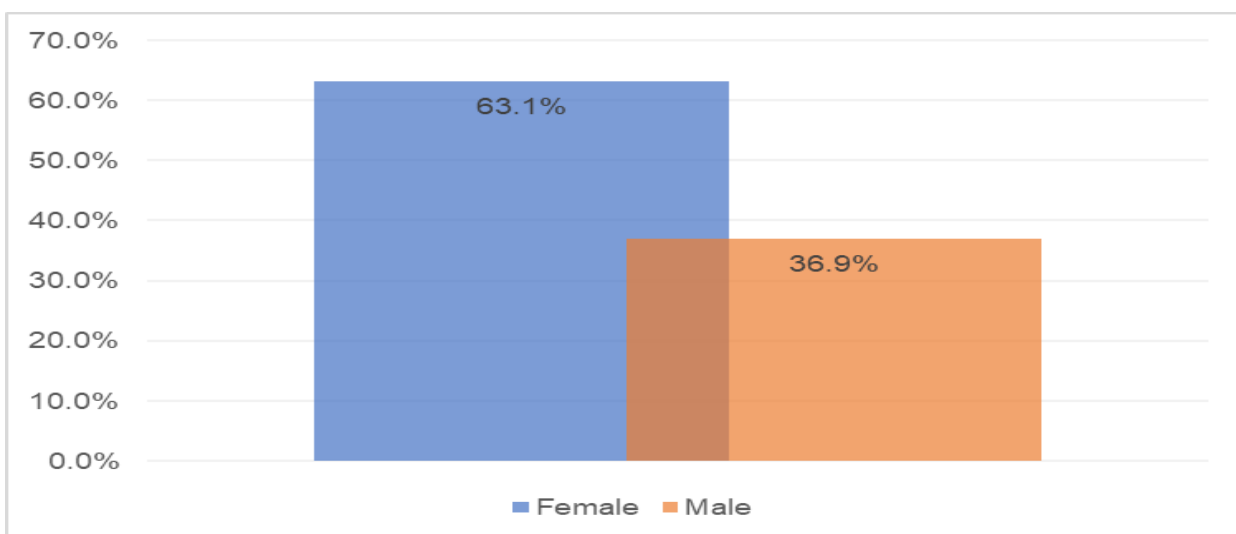
Figure 6.1: Gender distribution (*n*=65)

6.3.1.2 Age distribution

According to Table 6.3, 69.2 % (*n*=45) of the respondents were between the ages of 41 and 60. These were most respondents. Only 24.6% (*n*=16) of the respondents were between 20 and 40 years old and 6.2% (*n*=4) were over the age of 60 years old.

Table 6.3: Age distribution

	Frequency	%	Valid %	Cumulative %
41 - 60 years old	45	69.2%	69.2%	69.2%
20 - 40 years old	16	24.6%	24.6%	93.8%
Over 60 years old	4	6.2%	6.2%	100%
Total	65	100%	100%	

Figure 6.2 below depicts the age distribution of the respondents in terms of the percentage of the overall sample.
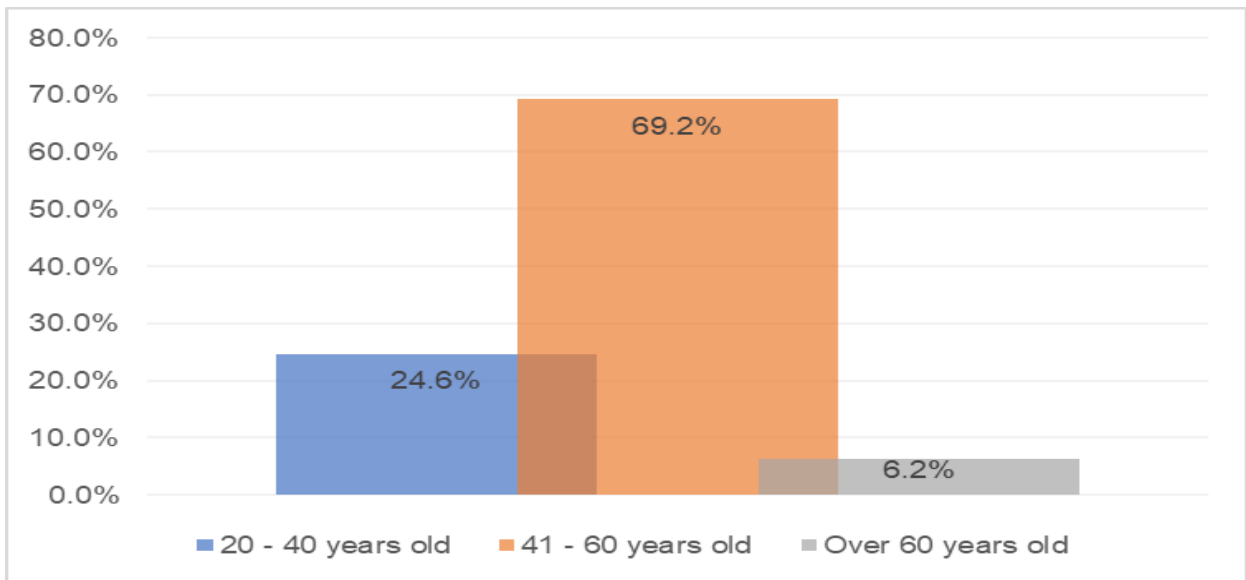
Figure 6.2: Age distribution (*n*=65)

6.3.1.3   Education distribution

Based on the results depicted in Table 6.4 below as well as graphically presented in Figure 6.3 below, all of the respondents (*n*=65) have a post-secondary (post-matric) education. Additionally, 50.8% (*n*=33) of the respondents were the vast majority and have a Bachelor's degree and 26.2% (*n*=17) were the second-highest and these respondents have a Master's degree.

Table 6.4: Education distribution

	Frequency	%	Valid %
Bachelor's degree	33	50.8%	50.8%
Master's Degree	17	26.2%	26.2%
Honours	3	4.6%	4.6%
National Diploma / Vocational	2	3.1%	3.1%
Post Graduate Diploma in Archival Science	1	1.5%	1.5%
Grade 12 Diploma	1	1.5%	1.5%
Postgraduate Diploma-Honours Level	1	1.5%	1.5%
Postgraduate Diploma and Honours	1	1.5%	1.5%
Post Graduate Qualification equivalent to an Honours Degree	1	1.5%	1.5%
Postgraduate	1	1.5%	1.5%
B (HONS)	1	1.5%	1.5%
Postgraduate Diploma	1	1.5%	1.5%
Postgraduate Certificate	1	1.5%	1.5%
Currently - PhD Candidate (final year)	1	1.5%	1.5%
Total	65	100%	100%
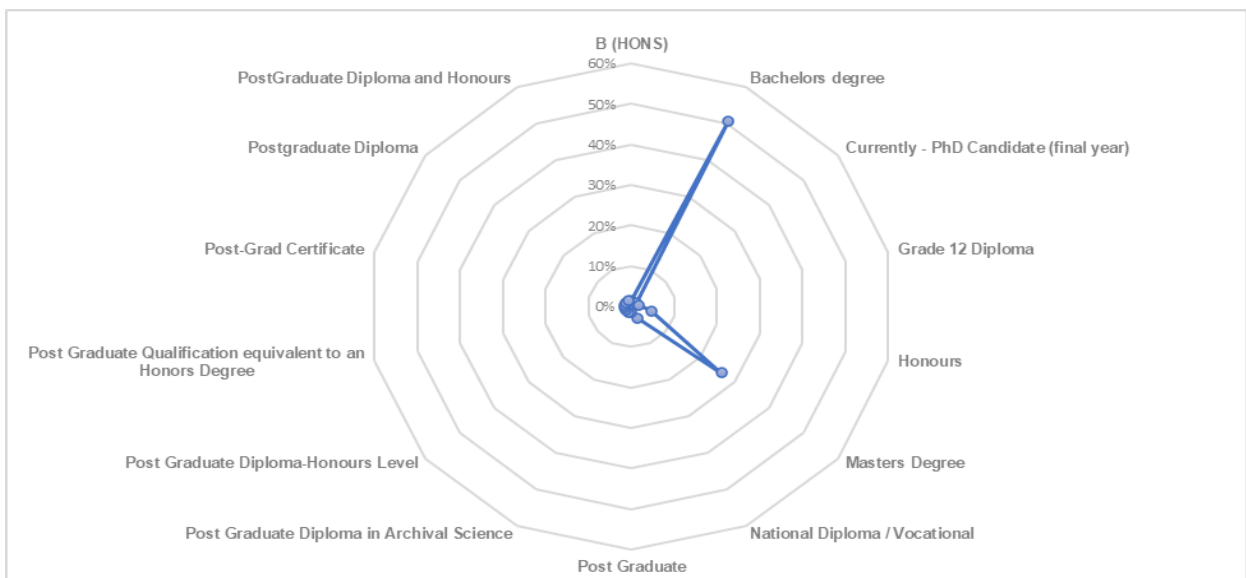
Figure 6.3: Education distribution (*n*=65)

Table 6.5 depicts a cross-tabulation of the number of National and Provincial Government employees with bachelor's and master's degrees, broken down by gender and age distribution. Females between the ages of 41 and 60 scored the highest in both national and provincial government, having the most master's degrees in national government (*n*=6) and a bachelor's degree in provincial government (*n*=9).

Table 6.5: Cross-tabulation of National and Provincial government employees with a Bachelor's and Master's degree, according to gender and age distribution (*n*=50)

Gender	Age	National Government				Provincial Government			
		Bachelor's degree		Master's Degree		Bachelor's degree		Master's Degree	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
Female	20 - 40 years old	3	6%	1	2%	2	4%	1	2%
	41 - 60 years old	5	10%	6	12%	9	18%	2	4%
	Over 60 years old	1	2%	0	0%	0	0%	0	0%
Male	20 - 40 years old	0	0%	0	0%	1	2%	1	2%
	41 - 60 years old	4	8%	0	0%	7	14%	5	10%
	Over 60 years old	0	0%	0	0%	1	2%	1	2%
Grand Total		13	26%	7	14%	20	40%	10	20%

6.3.1.4   Total work experience

Table 6.6 and Figure 6.4 show that 73.8% (*n*=48) of the respondents who took the survey each have a total work experience of 15 years and more.

Table 6.6: Total work experience

	Frequency	%	Valid %	Cumulative %
15 years and more	48	73.8%	73.8%	73.8%
10 - 15 years	15	23.1%	23.1%	96.9%
2 years - 5 years	2	3.1%	3.1%	100%
Total	65	100%	100%	
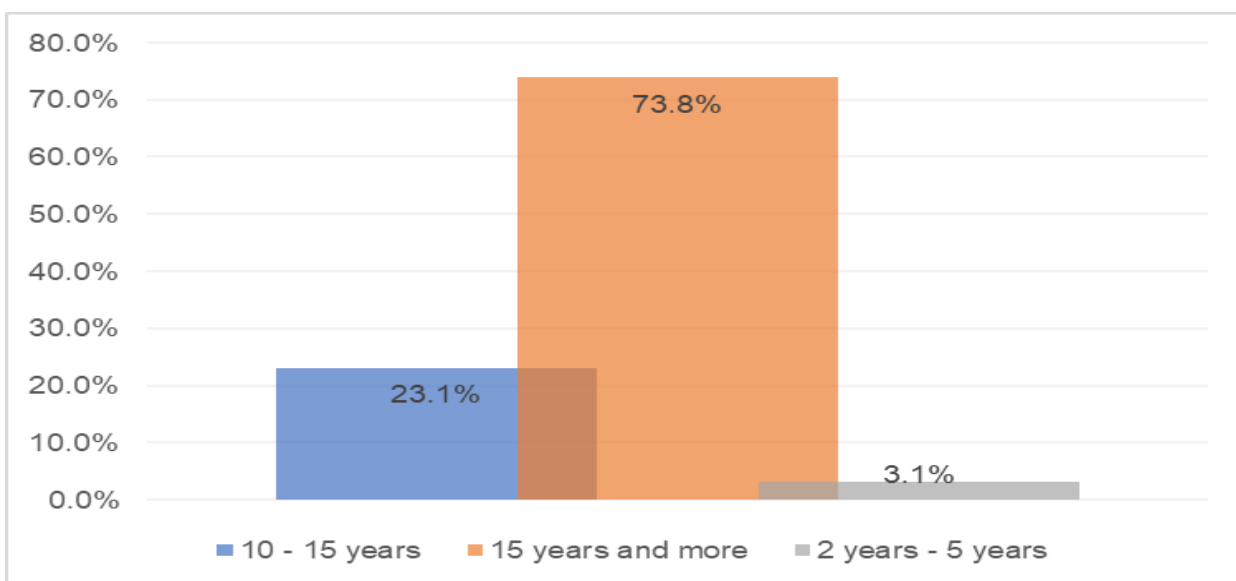
Figure 6.4: Total work experience (*n*=65)

6.3.1.5 Total public sector work experience

According to the data in Table 6.7 and Figure 6.5, 76.9% (*n*=50) of respondents have more than 10 years' experience working in the public sector. Consequently, most respondents should have a very good understanding of the public sector work environment and what is expected of them as government officials.

Table 6.7: Total work experience in the public sector

	Frequency	%	Valid %	Cumulative %
15 years and more	34	52.3%	52.3%	52.3%
10 - 15 years	16	24.6%	24.6%	76.9%
6 years - 10 years	10	15.4%	15.4%	92.3%
2 years - 5 years	5	7.7%	7.7%	100%
Total	65	100%	100%	
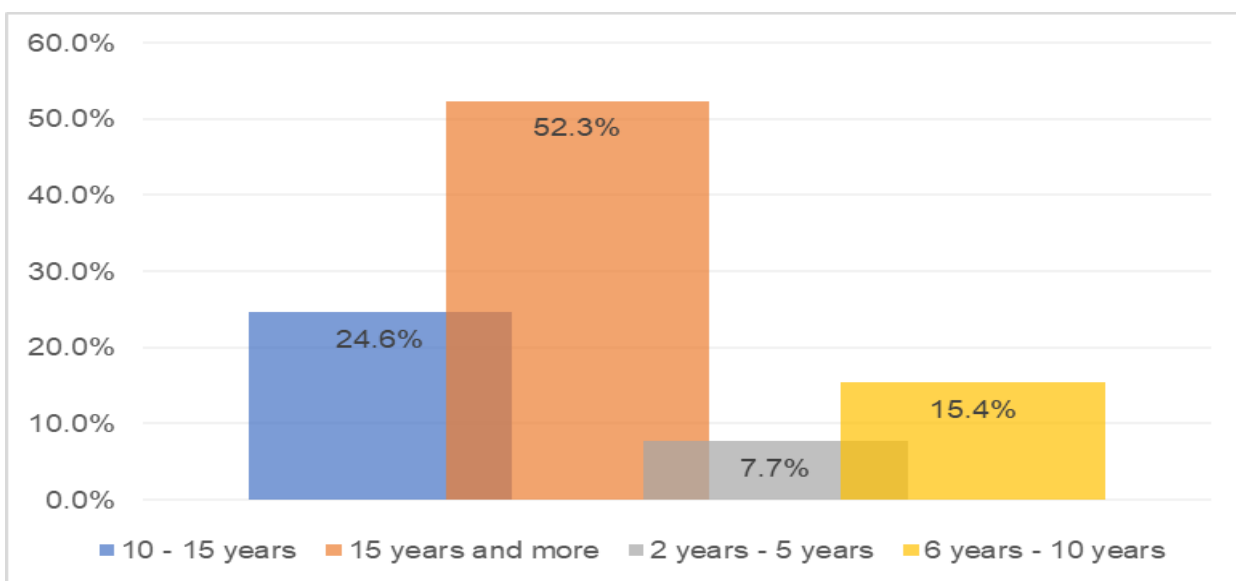
Figure 6.5: Total work experience in the public sector (*n*=65)

6.3.1.6 Employment level

The results displayed in Table 6.8 and as well as graphically presented in Figure 6.6 below show that 43.1% (*n*=28) of the respondents were Deputy Directors, whereas 30.8% (*n*=20) were Directors and up. The rest of the values (26.2%) were from junior management and lower-level staff. According to the results, government officials who were responsible for implementing KM in their respective departments have varying levels of employment. Consequently, these officials have varying perspectives on how to implement KM.

Table 6.8: Employment level

	Frequency	%	Valid %	Cumulative %
Deputy Director (Middle Management Staff)	28	43.1%	43.1%	43.1%
Director or up (Senior Management Staff)	20	30.8%	30.8%	73.9%
Assistant Director (Junior Management Staff)	15	23.1%	23.1%	97%
Level 7 or below (Administrative Staff)	2	3.1%	3.1%	100%
Total	65	100%	100%	
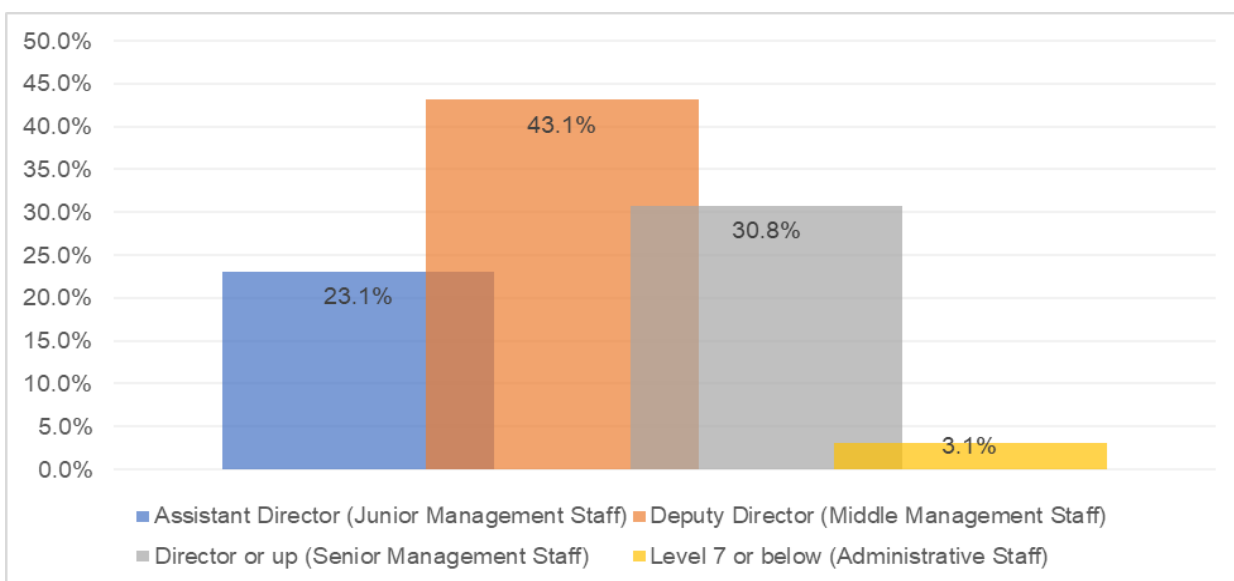
Figure 6.6: Employment level (*n*=65)

6.3.1.7 National or Provincial government employee

According to Table 6.9 and Figure 6.7, 58.5% (*n*=38) of the government officials who participated in the survey were from the provincial government, while 41.5% (*n*=27) were from the national government.

Table 6.9: National or Provincial government employee

	Frequency	%	Valid %	Cumulative %
Provincial Government	38	58.5%	58.5%	58.5%
National Government	27	41.5%	41.5%	100%
Total	65	100%	100%	
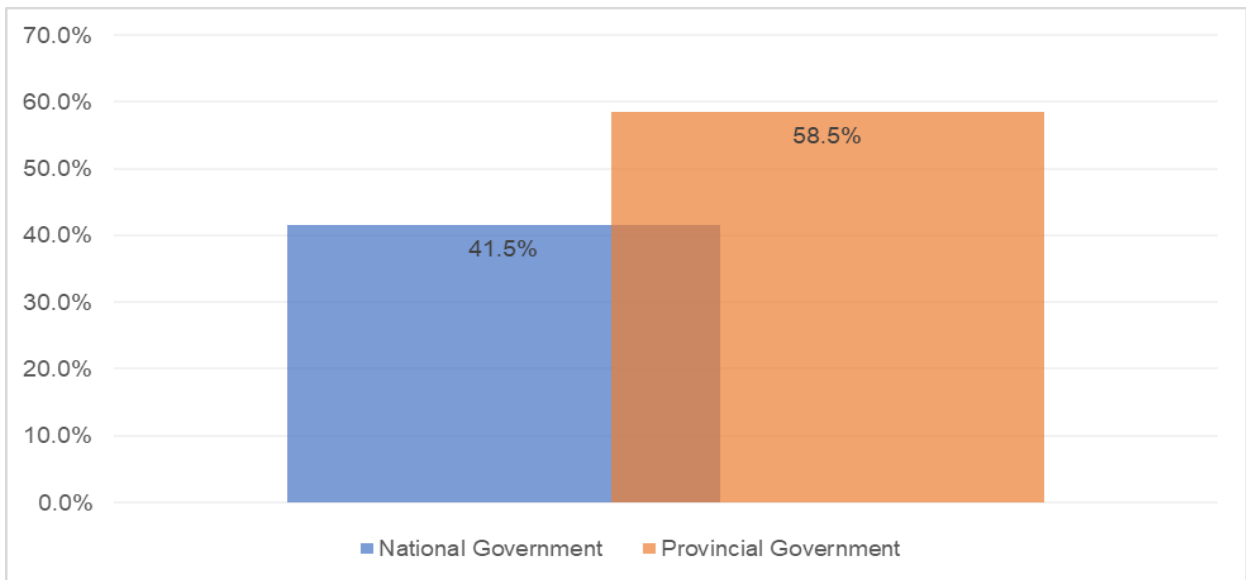
Figure 6.7: National and Provincial government employment status (*n*=65)

6.3.2   Sub-objective 1: To explore Knowledge Management, its components and how it is designed to improve service delivery.

The themes aligned to Sub-objective 1 are depicted in Figure 6.8. These themes were tested using the survey questionnaire and interview schedule. Sub-objective 1 was achieved when these themes were addressed.
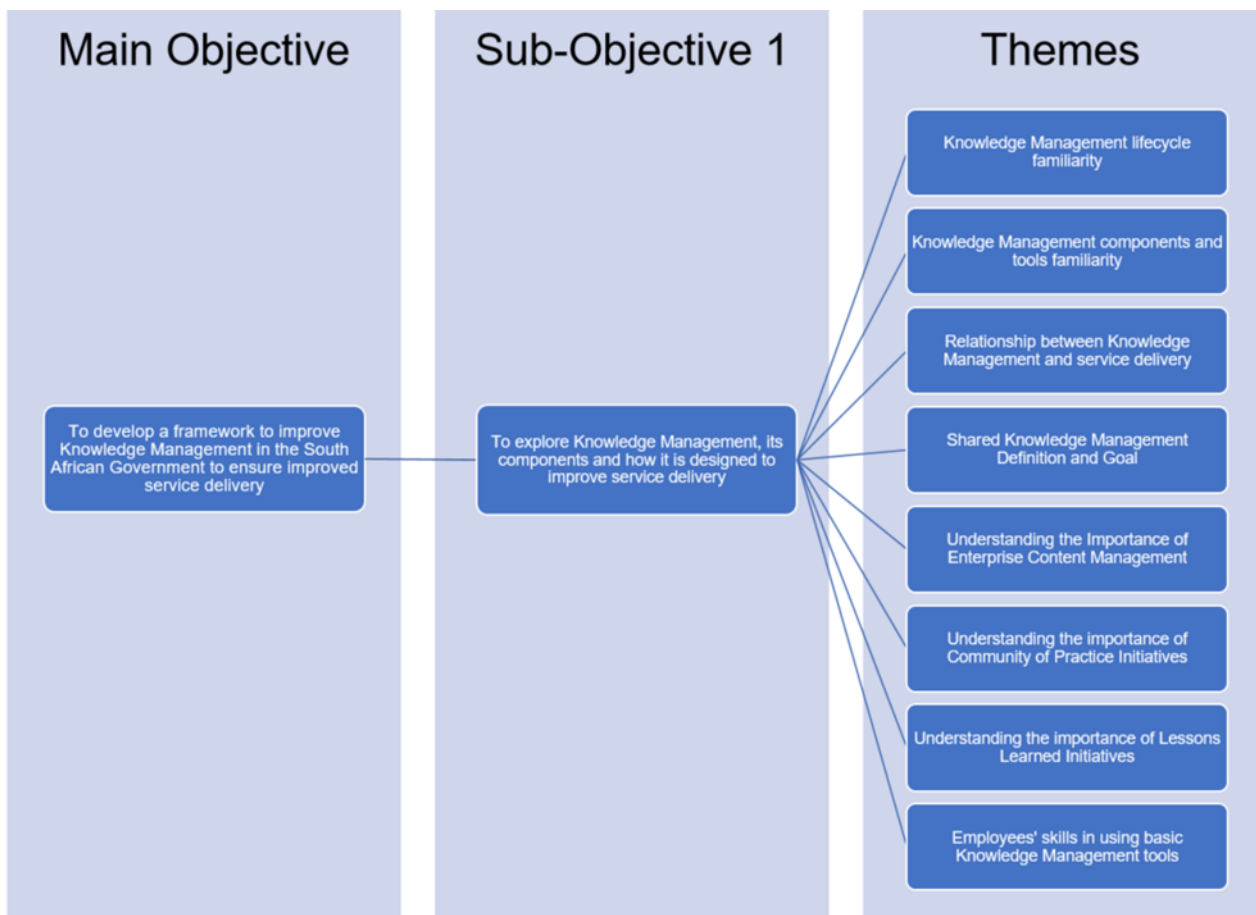
Figure 6.8: Alignment of themes to Sub-objective 1

6.3.2.1   Knowledge management lifecycle familiarity

Table 6.10 and Figure 6.9 below show that 78.5% (*n*=51) of respondents were familiar with the KM lifecycle. Because respondents were responsible for implementing KM in their respective departments, they should be familiar with its basics. This begins with an understanding of its lifecycle, which involves the capture, storage and utilisation of knowledge (Davenport & Prusak, 2000). Problematic, however, was the 21.5% (*n*=14) of respondents who lack a fundamental understanding of KM, which was strange given that they were responsible for implementing KM in their respective departments.

Table 6.10: Familiarity with the knowledge management lifecycle

	Frequency	**%**	**Valid %**	**Cumulative %**
Strongly Agree	25	38.5%	38.5%	38.5%
Agree	26	40%	40%	78.5%
Neutral	9	13.8%	13.8%	92.3%
Disagree	4	6.2%	6.2%	98.5%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	
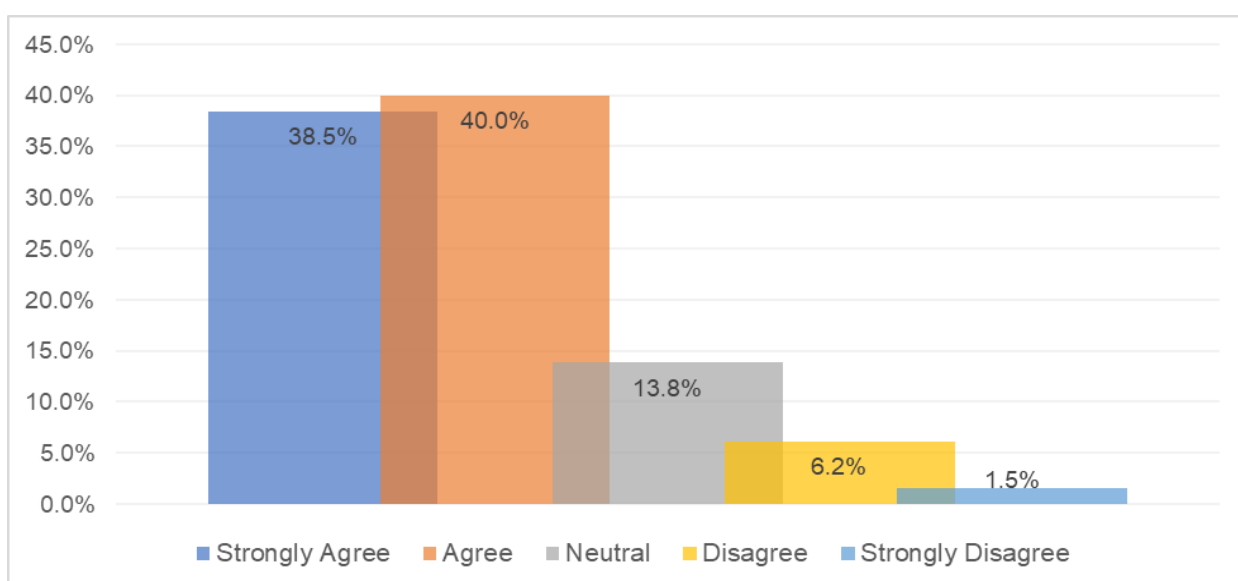
Figure 6.9: Familiarity with the Knowledge Management lifecycle (*n*=65)

6.3.2.2 Knowledge management components and tools familiarity

Table 6.11 and Figure 6.10 below reveal that 70.7% (*n*=46) were very familiar with the KM components and tools. This was a sizable proportion of government officials. However, the 29.3% of respondents (*n*=19) who were unfamiliar with the KM components and tools was concerning, considering that they were expected to implement these components and tools within their respective departments.

Table 6.11: Familiarity with knowledge management components and tools

	Frequency	%	Valid %	Cumulative %
Strongly Agree	24	36.9%	36.9%	36.9%
Agree	22	33.8%	33.8%	70.7%
Neutral	14	21.5%	21.5%	92.2%
Disagree	3	4.6%	4.6%	96.8%
Strongly Disagree	2	3.1%	3.1%	100%
Total	65	100%	100%	
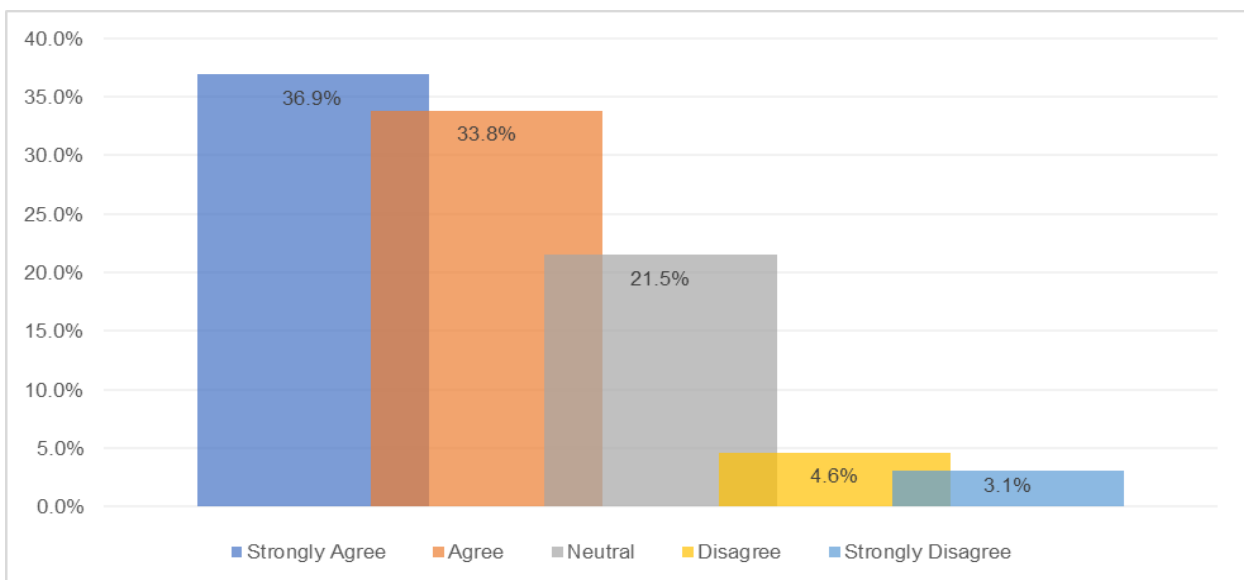
Figure 6.10: Familiarity with the knowledge management components and tools (*n*=65)

6.3.2.3   Relationship between knowledge management and service delivery

95.4 % (*n*=62) of the respondents agreed that KM, when done correctly improves service delivery. The results are shown in Table 6.12 and graphically presented in Figure 6.11 below. This was an important finding, especially considering that the research study was based on the premise that improved KM would result in improved service delivery.

Table 6.12: Knowledge management if done correctly can improve service delivery

	Frequency	%	Valid %	Cumulative %
Strongly Agree	42	64.6%	64.6%	64.6%
Agree	20	30.8%	30.8%	95.4%
Neutral	3	4.6%	4.6%	100.0%
Disagree	0	0%	0%	
Strongly Disagree	0	0%	0%	
Total	65	100%	100%	
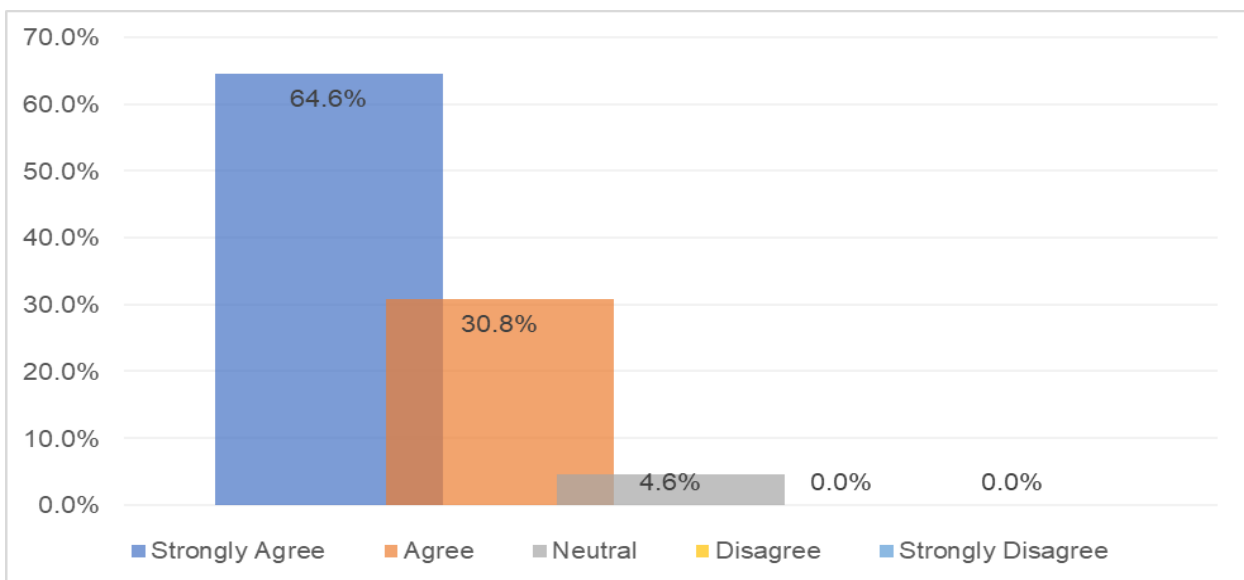
Figure 6.11: Knowledge management if done correctly can improve service delivery (*n*=65)

Additionally, according to Table 6.13, there was no statistically significant difference between the Male and Female groups in terms of the dependent variable "Knowledge management if done correctly can improve service delivery." This test was performed to see if gender influenced this significant finding. Surprisingly, the data indicate that no. Both men and women believe that "Knowledge management, if done correctly, can improve service delivery."

Table 6.13: Cross-tabulation of knowledge management if done correctly can improve service delivery and gender distribution (*n*=65)

Dependent Variable	Gender	n	Mean	Std. Deviation	Std. Error Mean
Knowledge Management if done correctly can improve service delivery.	Male	24	1.7	0.6	0.1
	Female	41	1.8	0.5	0.1

As illustrated in Table 6.14 and Figure 6.12, 89.2% (*n*=58) of respondents strongly believe that knowledge management is critical to improving service delivery in the South African government.

Table 6.14: Knowledge management is not needed to improve service delivery

	Frequency	%	Valid %	Cumulative %
Strongly Agree	3	4.6%	4.6%	4.6%
Agree	0	0%	0%	4.6%
Neutral	4	6.2%	6.2%	10.8%
Disagree	16	24.6%	24.6%	35.4%
Strongly Disagree	42	64.6%	64.6%	100%
Total	65	100%	100%	
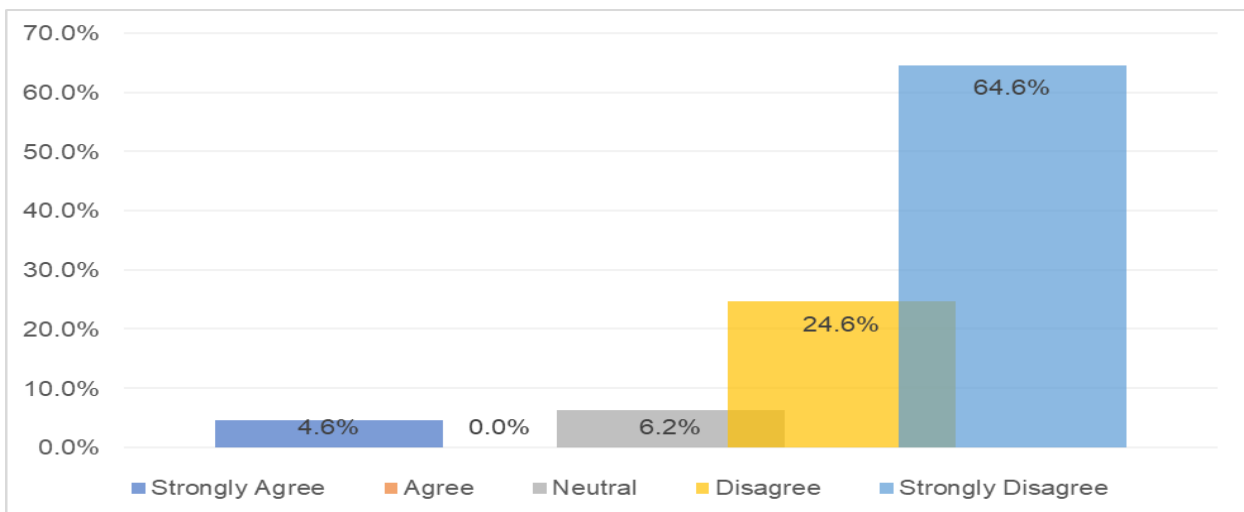
Figure 6.12: Knowledge management is not needed to improve service delivery (*n*=65)

Furthermore, to corroborate the findings, a Spearman correlation which measures the degree of association between two variables was done to determine if a relationship between "Knowledge Management can improve service delivery if done correctly," as shown in Table 6.12 and "Knowledge Management is not needed to improve service delivery," as seen in Table 6.14, exists. According to the Spearman correlation, there's a significant medium, positive correlation relationship between both variables i.e., both variables would increase and decrease together (see Table 6.15) (DATAtab Team, 2021). This simply suggested that if respondents agreed on one variable, they would also agree on the other and vice versa. Hence, Knowledge Management is needed to improve service delivery.

Table 6.15: Spearman correlation between "Knowledge management can improve service delivery if done correctly," and "Knowledge management is not needed to improve service delivery"

	r^1	p (2-tailed)
Knowledge Management if done correctly can improve service delivery and Knowledge Management is not needed to improve service delivery.	0.4	.001

6.3.2.4   Shared knowledge management definition and goal

According to Table 6.16 and Figure 6.13, 76.9% (*n*=50) of respondents confirmed that all National and Provincial Government Departments adopted the same Knowledge Management definition and were working towards the same goal. The goal was to find out if all the respondents understand how important it is to have a shared definition and goal for Knowledge Management, especially since this research study suggests that the vision in the VMOSA strategic planning framework is the organisation's dream that everyone needs to understand and share (CommunityToolBox, 2022). Having said that, the remaining 15.4% (*n*=15) of respondents need to be made aware of the significance of this.

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[1] Strength of correlation - 0,0 < 0,1 = no correlation; 0,1 < 0,3 = low correlation; 0,3 < 0,5 = medium correlation; 0,5 < 0,7 = high correlation; 0,7 < 1 = very high correlation

Table 6.16: Shared knowledge management definition and goal

	Frequency	**%**	**Valid %**	**Cumulative %**
Strongly Agree	24	36.9%	36.9%	36.9%
Agree	26	40%	40%	76.9%
Neutral	10	15.4%	15.4%	92.3%
Disagree	4	6.2%	6.2%	98.5%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	
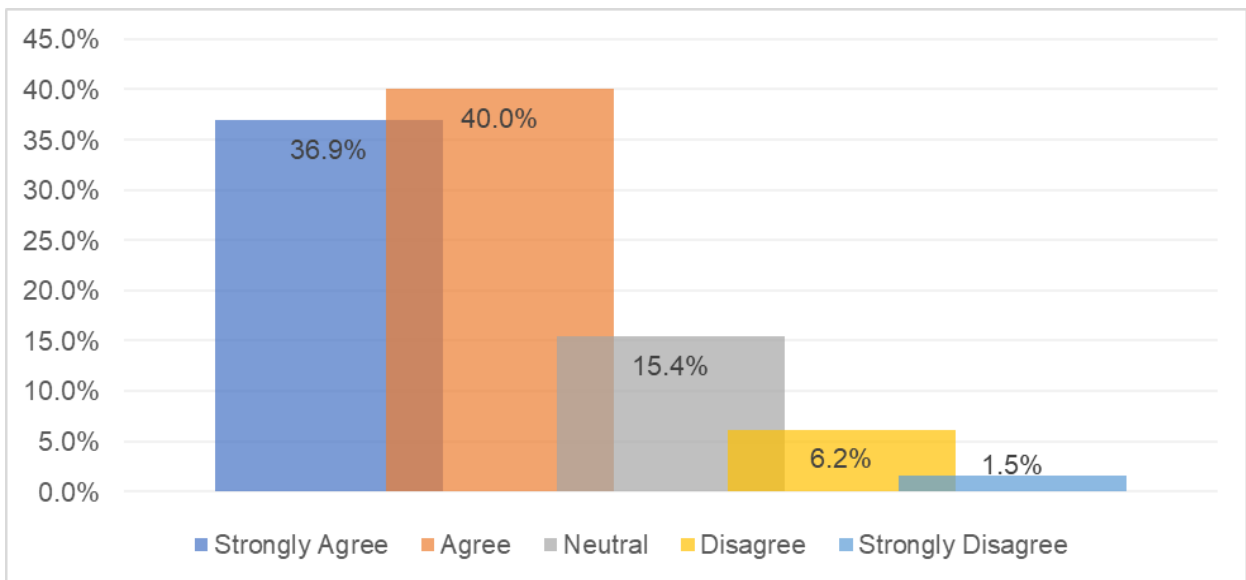
Figure 6.13: Shared knowledge management definition and goal (*n*=65)

6.3.2.5   Understanding the importance of Enterprise Content Management

According to Table 6.17 and Figure 6.14, 95.4% (*n*=62) of respondents agreed that all departments within the South African government should have an Enterprise Content Management solution. Since an Enterprise Content Management system is the most obvious and immediate aspect of KM, most or all the respondents should know about it. The fact that 4.6% (*n*=3) of respondents did not know how important this system is, was a problem.

Table 6.17: Importance of enterprise content management

	Frequency	**%**	**Valid %**	**Cumulative %**
Strongly Agree	26	40%	40%	40.0%
Agree	36	55.4%	55.4%	95.4%
Neutral	2	3.1%	3.1%	98.5%
Disagree	1	1.5%	1.5%	100.0%
Strongly Disagree	0	0%	0%	
Total	65	100%	100%	
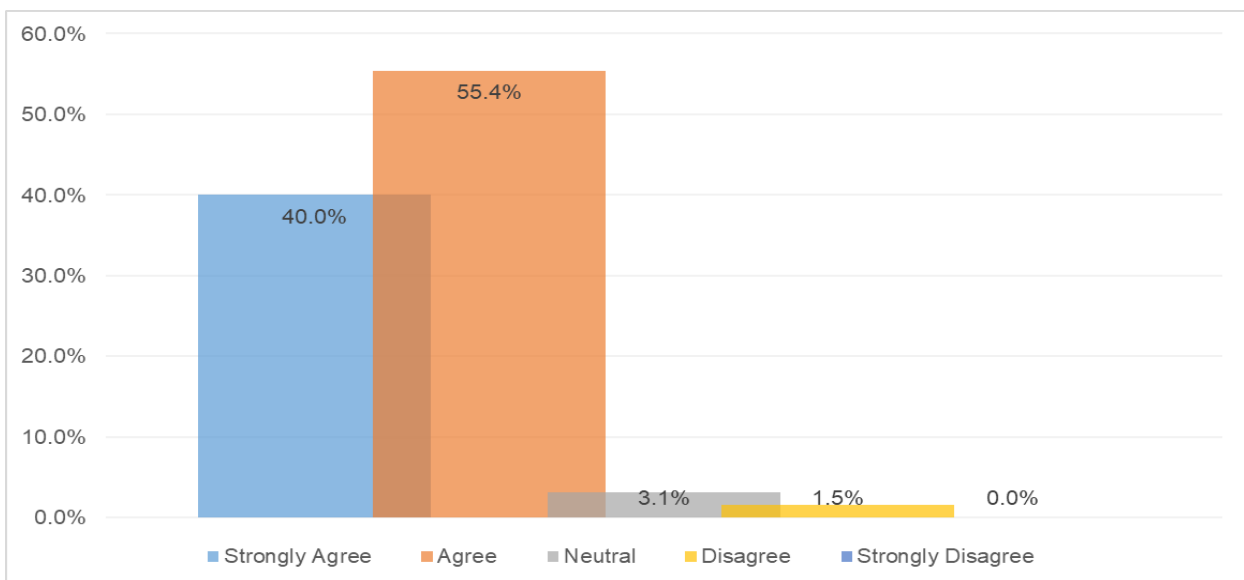
Figure 6.14: Importance of enterprise content management (*n*=65)

6.3.2.6 Understanding the importance of Community of Practice initiatives

According to Table 6.18 and Figure 6.15, 87.7% (*n*=57) of government officials implementing KM in their departments believe that Community of Practices Initiatives was not a waste of everyone's time. This demonstrates that the officials implementing KM were aware of some of the most useful KM components and tools. As a result, their response corroborates other data indicating their understanding of what KM is.

Table 6.18: Importance of community of practice initiatives for knowledge management

	Frequency	%	Valid %	Cumulative %
Strongly Agree	0	0%	0%	0.0%
Agree	0	0%	0%	0.0%
Neutral	8	12.3%	12.3%	12.3%
Disagree	26	40%	40%	52.3%
Strongly Disagree	31	47.7%	47.7%	100%
Total	65	100%	100%	
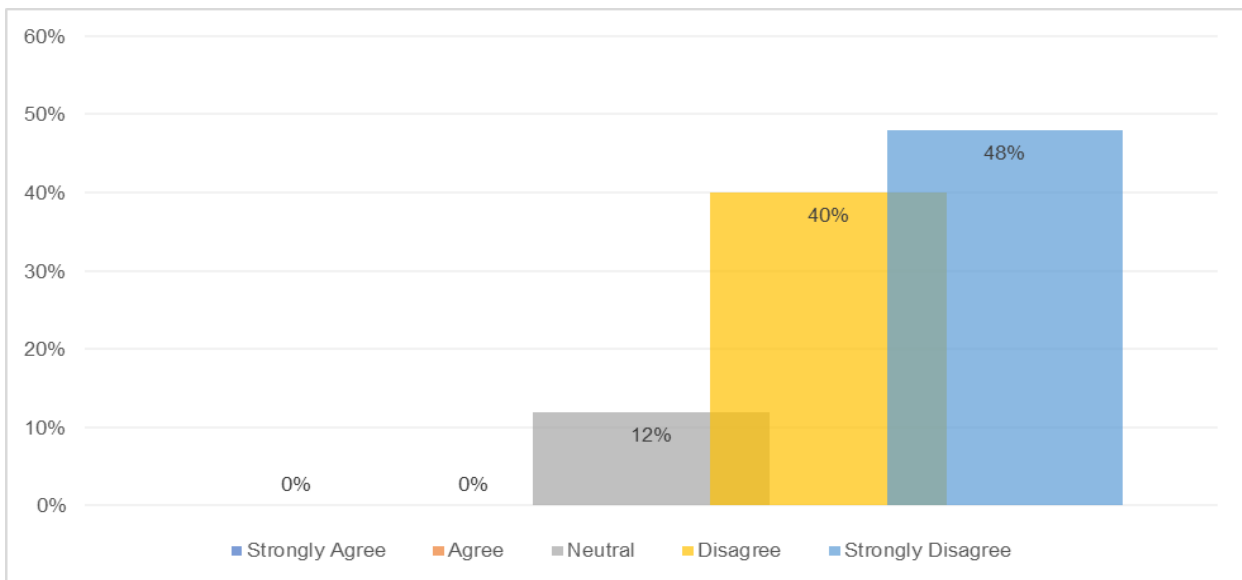
Figure 6.15: Importance of community of practice initiatives for knowledge management (*n*=65)

6.3.2.7   Understanding the importance of lessons learned initiatives

According to the results shown in Table 6.19 and graphically presented in Figure 6.16 below, 50.8% (*n*=33) of respondents agreed that lessons learned were documented and applied to all new initiatives and projects. One of the five basic tools for managing knowledge is the "lessons learned" initiative (Koenig, 2018). This is used to capture, store and use knowledge. Problematic, though, was the 26.2% (*n*=17) of respondents who said they did not think Lesson Learned Initiatives were important.

Table 6.19: Importance of lesson learned initiatives for knowledge management

	Frequency	%	Valid %	Cumulative %
Strongly Agree	10	15.4%	15.4%	15.4%
Agree	23	35.4%	35.4%	50.8%
Neutral	15	23.1%	23.1%	73.9%
Disagree	15	23.1%	23.1%	97.0%
Strongly Disagree	2	3.1%	3.1%	100%
Total	65	100%	100%	
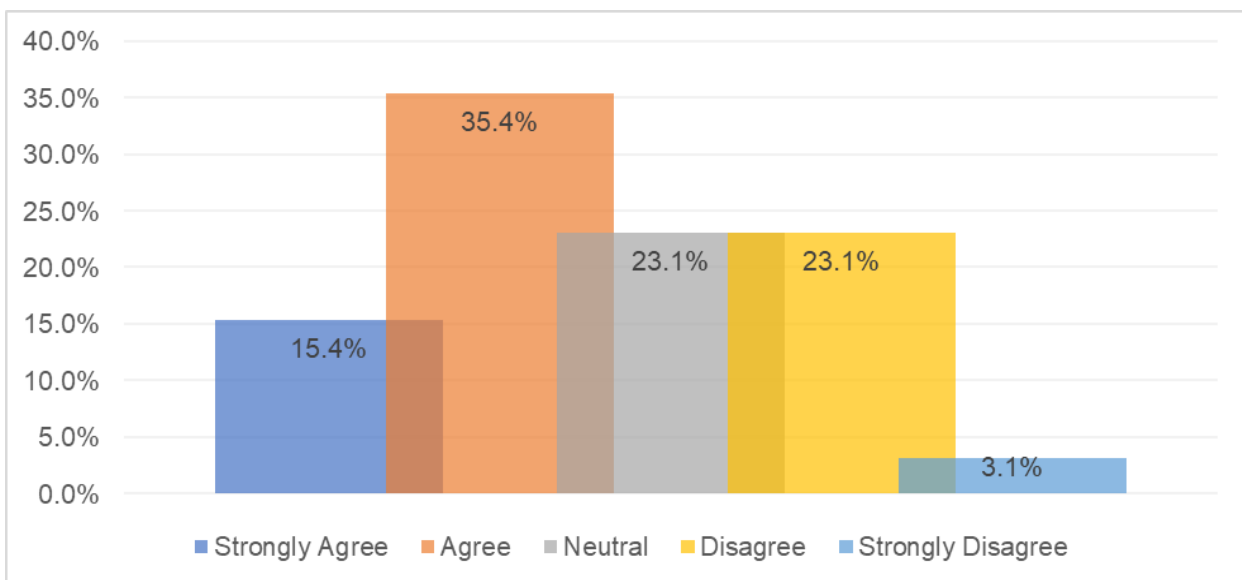
Figure 6.16: Importance of lesson learned initiatives for knowledge management (*n*=65)

6.3.2.8   Employees' skills in using basic knowledge management tools

According to the literature review, the basic tools that all Knowledge Management practitioners must be skilled in, to capture, store and use knowledge successfully are referred to as Knowledge Management tools. The basic tools include Enterprise Content Management, an Expertise Locator System, Lessons Learned, Communities of Practice and Knowledge Retention and Retirees Initiatives (Koenig, 2018). This was one of the themes explored using the quantitative survey questionnaire. The results are presented below.

Enterprise Content Management

According to the data shown in Table 6.20 and graphically presented in Figure 6.17, 44.6% (*n*=29) of respondents said they were very skilled in Enterprise Content Management solutions but what's intriguing was that 30.8% of respondents were neutral on the matter. The fact that 55.5% (*n*=14) of respondents did not know whatsoever about Enterprise Content Management presented a challenge, though. This gives rise to apprehension because they were accountable for implementing these systems inside their departments.

Table 6.20: Enterprise content management skill

	Frequency	%	Valid %	Cumulative %
Strongly Agree	9	13.8%	13.8%	13.8%
Agree	20	30.8%	30.8%	44.6%
Neutral	20	30.8%	30.8%	75.4%
Disagree	4	6.2%	6.2%	81.6%
Strongly Disagree	12	18.5%	18.5%	100%
Total	65	100%	100%	
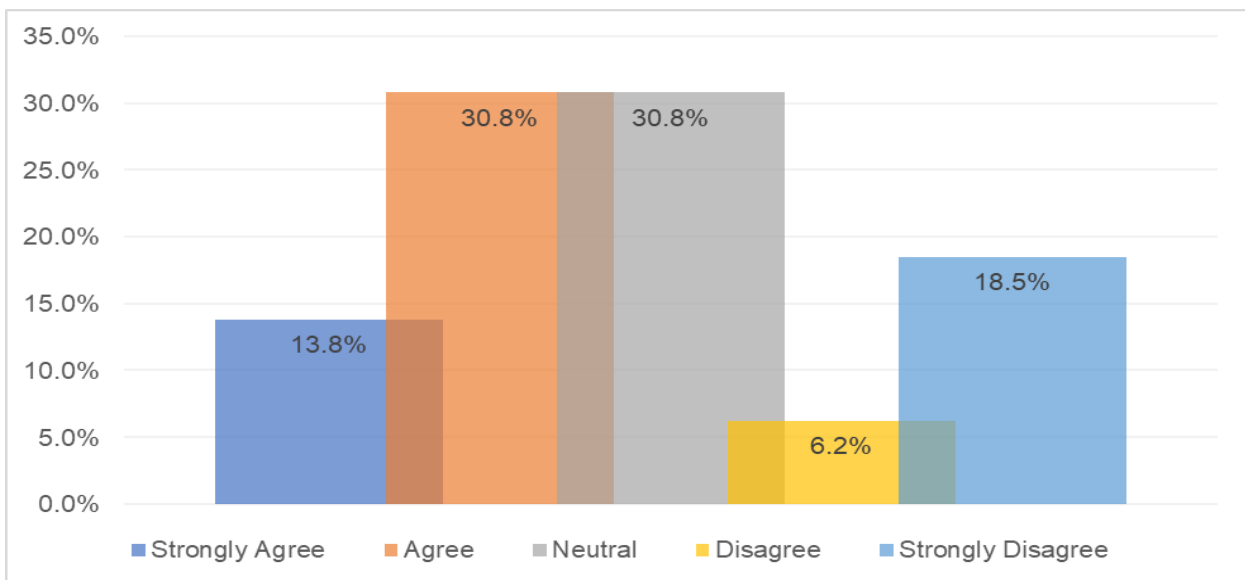
Figure 6.17: Enterprise content management skill (*n*=65)

Communities of Practice

As indicated in Table 6.21 and Figure 6.18, 55.4% (*n*=36) of respondents believe they were proficient at conducting Communities of Practice initiatives in their respective departments. Alarming was that 44.6% (*n*=29) of respondents indicated otherwise. It was troubling that a large percentage of respondents lack skills in the very tools that are supposed to be implemented in their department.

Table 6.21: Communities of practice skills

	Frequency	**%**	**Valid %**	**Cumulative %**
Strongly Agree	15	23.1%	23.1%	23.1%
Agree	21	32.3%	32.3%	55.4%
Neutral	17	26.2%	26.2%	81.6%
Disagree	11	16.9%	16.9%	98.5%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	
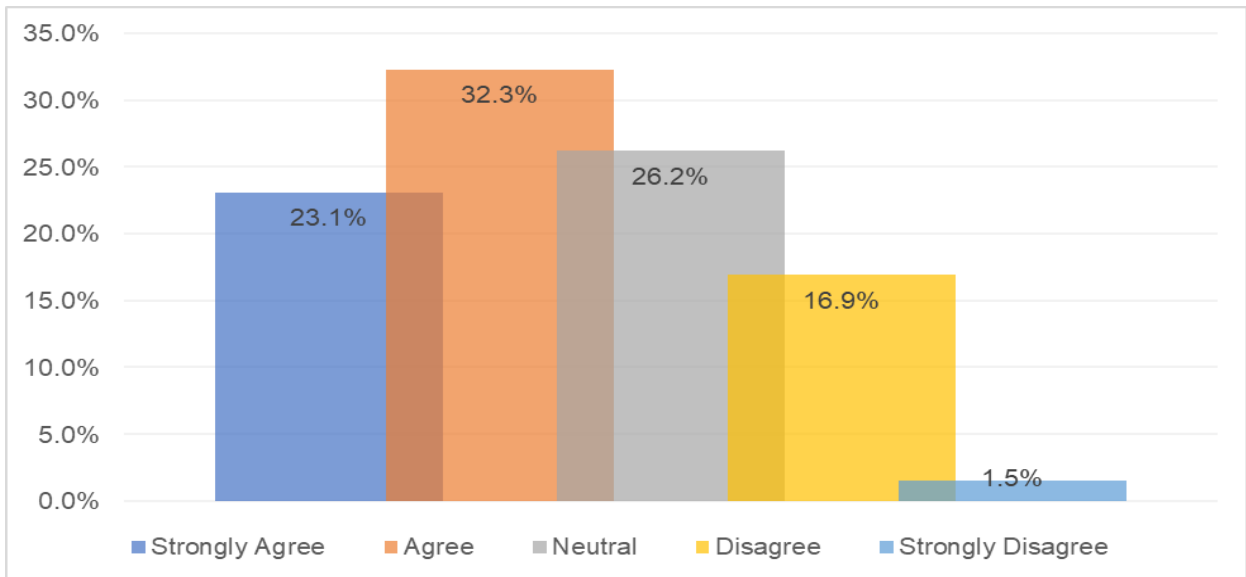
Figure 6.18: Communities of practice skills (*n*=65)

Lessons Learned Initiatives

The results displayed in Table 6.22 and graphically presented in Figure 6.19, depict that 58.5% (*n*=38) of respondents said they were skilled at conducting Lessons Learned initiatives in their respective departments. It was concerning that 41.5% (*n*=27) of respondents lack skills in the very tools that are supposed to be implemented in their department.

Table 6.22: Lessons learned skills

	Frequency	**%**	**Valid %**	**Cumulative %**
Strongly Agree	18	27.7%	27.7%	27.7%
Agree	20	30.8%	30.8%	58.5%
Neutral	16	24.6%	24.6%	83.1%
Disagree	10	15.4%	15.4%	98.5%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	
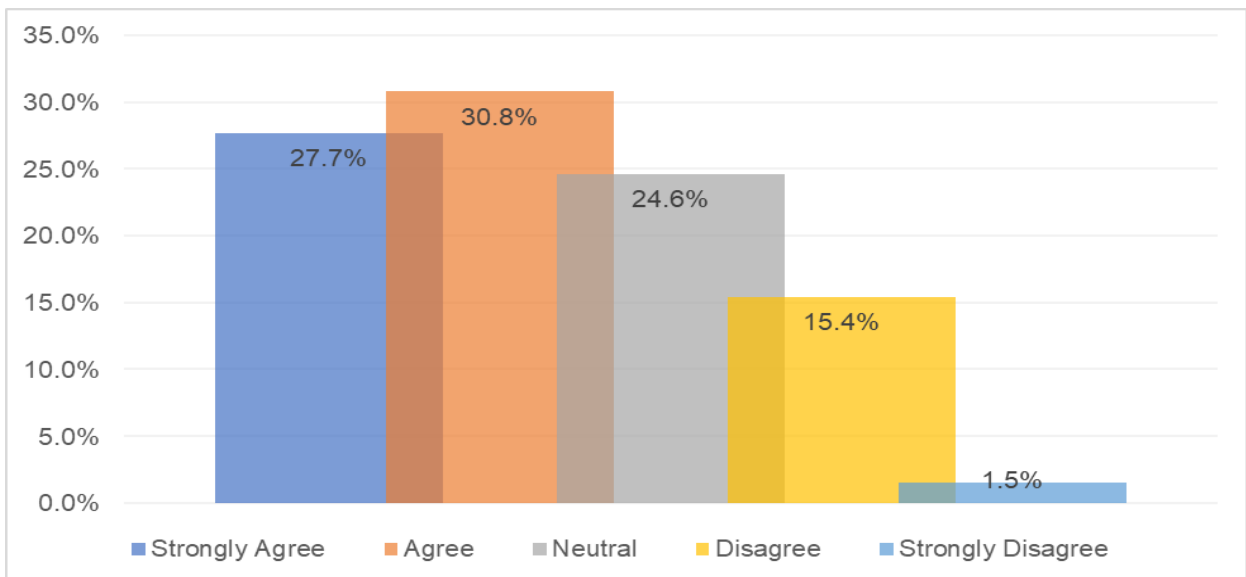
Figure 6.19: Lessons learned initiative (*n*=65)

Knowledge Retention and Retirees' Initiatives

According to the results shown in Table 6.23 and Figure 6.20, 55.4% (*n*=36) of respondents were skilled at conducting Knowledge Retention and Retirees initiatives in their respective departments. It was concerning that 44.6% (*n*=29) of respondents lack skills in the very tools that are supposed to be implemented in their department.

Table 6.23: Knowledge retention and retiree skills

	Frequency	%	Valid %	Cumulative %
Strongly Agree	10	15.4%	15.4%	15.4%
Agree	26	40%	40%	55.4%
Neutral	16	24.6%	24.6%	80.0%
Disagree	10	15.4%	15.4%	95.4%
Strongly Disagree	3	4.6%	4.6%	100%
Total	65	100%	100%	
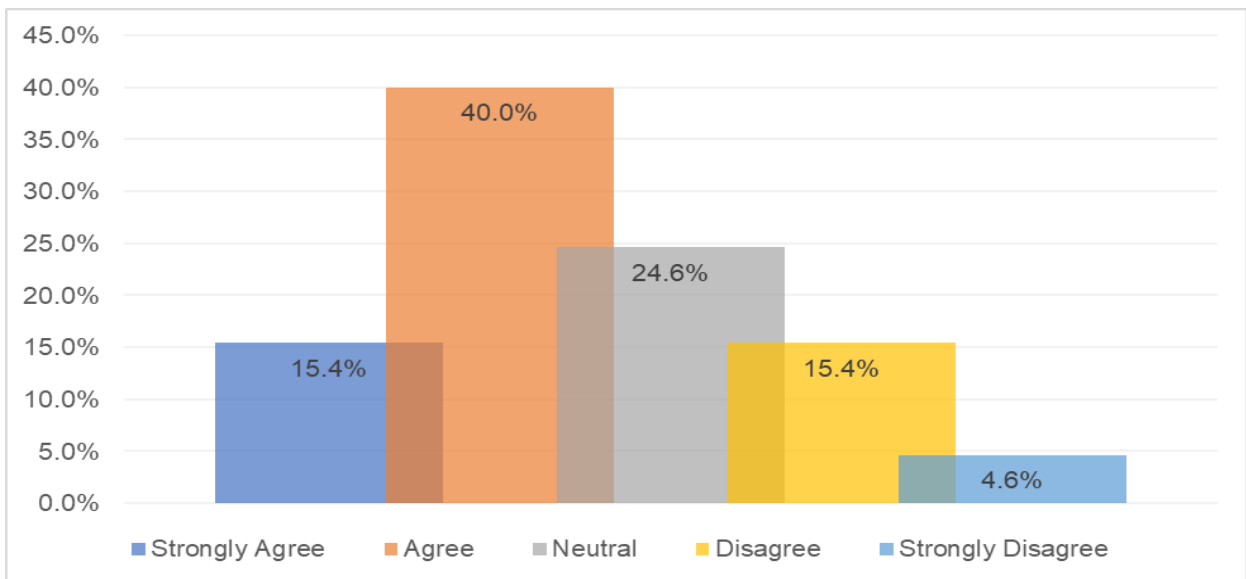
Figure 6.20: Knowledge retention and retiree skills (*n*=65)

Expertise Locator Systems

According to Table 6.24 and Figure 6.21, 40% (*n*=26) of respondents were unsure whether they were skilled in Expertise Locator Systems. When combined with the "Disagree" and "Strongly Disagree" results, this equals 72.3% (*n*=47) of respondents who were not skilled in this basic KM component/tool. It was reasonable to assume that respondents were unaware of what Expertise Locator systems were. As a result, it was possible to conclude that more than 70% of national and provincial government departments lack Expertise Locator Systems, indicating a serious knowledge gap.

Table 6.24: Expertise locator system skills

	Frequency	%	Valid %	Cumulative %
Strongly Agree	6	9.2%	9.2%	9.2%
Agree	12	18.5%	18.5%	27.7%
Neutral	26	40%	40%	67.7%
Disagree	18	27.7%	27.7%	95.4%
Strongly Disagree	3	4.6%	4.6%	100%
Total	65	100%	100%	
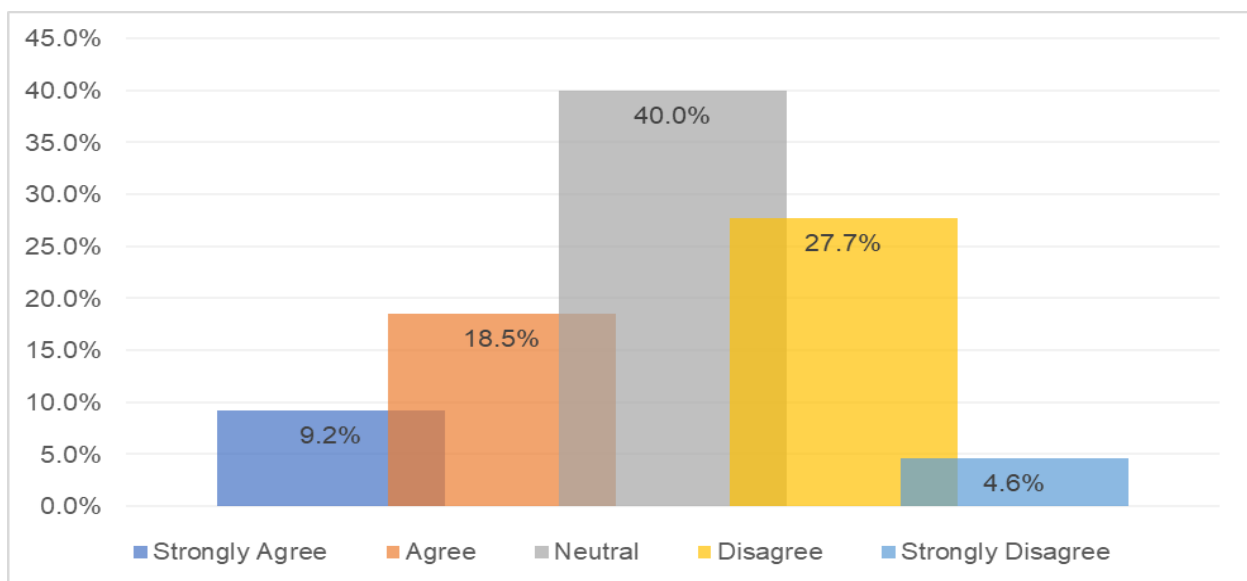
Figure 6.21: Expertise locator system skills (*n*=65)

6.3.3 Sub-objective 2: To identify the factors that contribute to or deter the implementation of knowledge management in the South African government

The themes aligned to Sub-objective 2 are depicted in Figure 6.22. These themes were tested using the survey questionnaire and interview schedule. Sub-objective 2 was achieved when these themes were addressed.
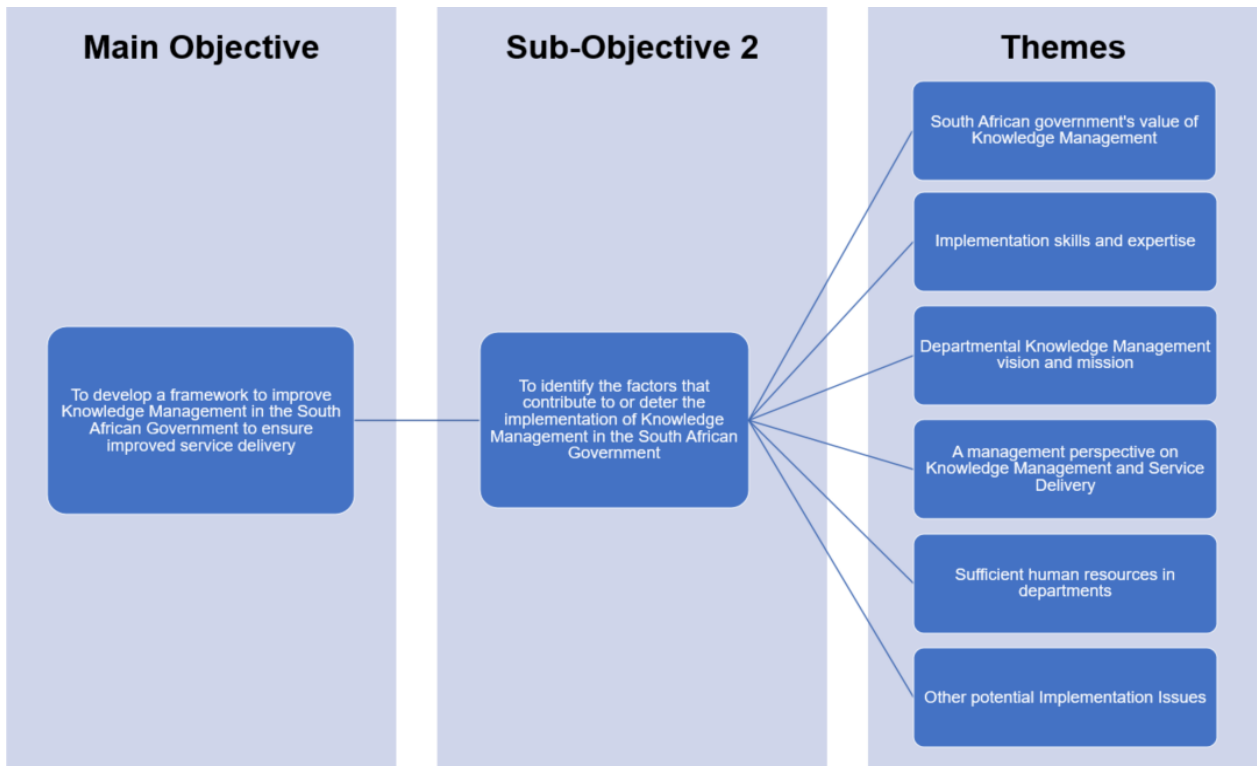
Figure 6.22: Alignment of themes to Sub-objective 2

6.3.3.1 South African government's value of knowledge management

Table 6.25 and Figure 6.23 show that 46.1% (*n*=30) of respondents believe their department values KM, which was less than half of what the remaining respondents said. The results showed that most departments did not care much about KM. With little value placed on KM, it was not surprising that the implementation of KM remains exceedingly slow and disjointed. Hence, the lack of value placed on KM is a deterrent.

Table 6.25: My department does not value knowledge management

	Frequency	%	Valid %	Cumulative %
Strongly Agree	8	12.3%	12.3%	12.3%
Agree	12	18.5%	18.5%	30.8%
Neutral	15	23.1%	23.1%	53.9%
Disagree	22	33.8%	33.8%	87.7%
Strongly Disagree	8	12.3%	12.3%	100%
Total	65	100%	100%	
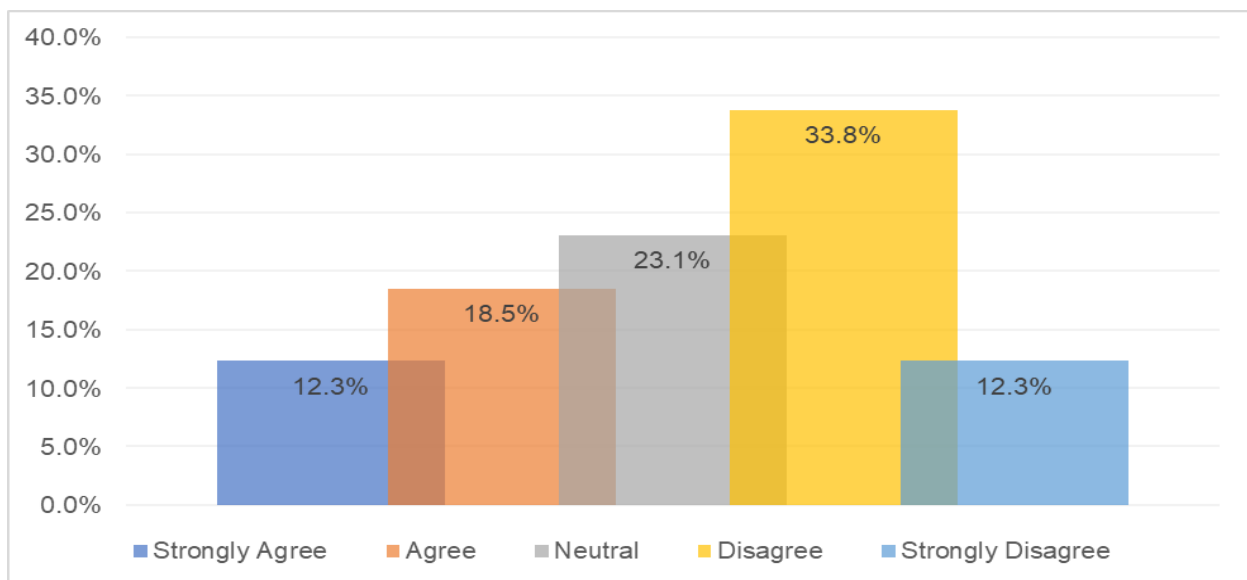
Figure 6.23: My department does not value knowledge management (*n*=65)

Additionally, to further validate whether the South African government values KM, respondents were asked to respond to an open-ended question that reads "Complete the sentence. If my department values KM, they would...". Table 6.26 reveals that responses were submitted by 100% (*n*=65) of respondents. When the responses were analysed, the following phrases were found to be most frequently stated, i.e., phrases stated by more than one respondent: KM (*n*=34), KM Strategy (*n*=4), KM Unit (*n*=3), Human Resources (*n*=3), KM Initiative (*n*=2), Recognize KM (*n*=2), Strategic Level (*n*=2), Performance Agreement (*n*=2) and Departmental Knowledge (*n*=2).

Table 6.26: Open-ended responses on departmental value of knowledge management

	Frequency%	Valid %	
Structure it correctly.	1	1.5%	1.5%
Value the input and guidance provided by Knowledge Management practitioners regarding knowledge management practices.	1	1.5%	1.5%
Co-operate.	1	1.5%	1.5%
Ensure that Knowledge Management is discussed at every strategic engagement and that the necessary investments to change the culture would be made.	1	1.5%	1.5%
Ensure that the unit and all its Strategies lead the way we deal with Corporate Knowledge as a whole.	1	1.5%	1.5%
Participate in knowledge management initiatives from the highest level.	1	1.5%	1.5%
Implement it in its entirety.	1	1.5%	1.5%
Support it by investing in human resources and budget in the knowledge management unit.	1	1.5%	1.5%
Recognise knowledge management and appoint at least a records manager.	1	1.5%	1.5%
Design the Departmental structure to favour Knowledge Management personnel/u	1	1.5%	1.5%
… Implement relevant systems to ensure a capable and effective public service.	1	1.5%	1.5%
Provide basic resources to ensure that it is properly institution and sustainable	1	1.5%	1.5%
Institutionalise it through performance agreements for each employee so that Knowledge Management is not seen as an additional unnecessary task.	1	1.5%	1.5%
Include the head of the Knowledge Management team in all strategic planning meetings and all corporate governance committees.	1	1.5%	1.5%
Prioritise the funding needed for Knowledge Management programmes.	1	1.5%	1.5%
Ensure approval of a Knowledge Management Strategy and policy.	1	1.5%	1.5%

	Frequency%	Valid %	
Beef up personnel in Knowledge Management.	1	1.5%	1.5%
Improve efficiencies and drive service delivery improvement	1	1.5%	1.5%
Implement and apply it fully.	1	1.5%	1.5%
Not duplicate projects.	1	1.5%	1.5%
No comment.	1	1.5%	1.5%
Implement and resource it.	1	1.5%	1.5%
Actively promote the implementation of the Departmental Knowledge Management Strategy.	1	1.5%	1.5%
Ensure that we have a fully equipped Knowledge Management unit that is given the necessary support for them to fully implement Knowledge Management.	1	1.5%	1.5%
Support the knowledge management activities and support the development process of the Knowledge Management Strategy.	1	1.5%	1.5%
They would regard knowledge as a strategic resource.	1	1.5%	1.5%
Drive it at the Executive Management level.	1	1.5%	1.5%
Invest more in research and development	1	1.5%	1.5%
Enhance and streamline processes.	1	1.5%	1.5%
Drive a large-scale information and awareness campaign on the need and means for Knowledge Management.	1	1.5%	1.5%
They would not treat it as a separate unit instead of locating it where it would be easier to be embedded in the processes of the department.	1	1.5%	1.5%
We would be able to give the needed support on policy implementation as well as have an informed policy review process.	1	1.5%	1.5%
Ensure that the framework is fully implemented and contributes toward skills development for continuous improvement within the Department.	1	1.5%	1.5%

	Frequency%	Valid %	
By now have formalised a staff structure to support Knowledge Management and equip it with the necessary tools.	1	1.5%	1.5%
Have better planning processes.	1	1.5%	1.5%
Be able to implement a great succession plan to continue to deliver excellent service.	1	1.5%	1.5%
Learn more about it.	1	1.5%	1.5%
Support it and put it on the strategic objectives.	1	1.5%	1.5%
Prioritize the Knowledge Management Assessment. When I refer to Department, I mean my Chief Directorate	1	1.5%	1.5%
Put it at a strategic level.	1	1.5%	1.5%
Implement it.	1	1.5%	1.5%
Appoint Knowledge Management expert.	1	1.5%	1.5%
Invest in knowledge management principles i.e., people, processes and systems.	1	1.5%	1.5%
Ensure that top management does value its importance.	1	1.5%	1.5%
Support the Knowledge Management unit.	1	1.5%	1.5%
Implement the knowledge management strategy and policy in place.	1	1.5%	1.5%
Promote engagements in Knowledge Management at all levels.	1	1.5%	1.5%
Follow up on information shared at knowledge management workshops.	1	1.5%	1.5%
Support the implementation, fund the initiatives and ensure that Knowledge Management is embedded in the Performance Agreement of each employee to enforce the contribution	1	1.5%	1.5%
Elevate it to the strategic level.	1	1.5%	1.5%

		Frequency%	Valid %	
Put more financial and human resources into establishing the knowledge management system as soon as possible.		1	1.5%	1.5%
Make a concerted effort to orientate staff using experts in the Knowledge Management field, who has gone through the lessons learned process.		1	1.5%	1.5%
Improve the service delivery in the department.		1	1.5%	1.5%
They would hire staff strictly for Knowledge Management.		1	1.5%	1.5%
Recognise knowledge management as a strategic function and support knowledge management initiatives		1	1.5%	1.5%
Ensure that they allocate enough resources (People) to the Unit to oversee and implement Knowledge Management.		1	1.5%	1.5%
Preserve the departmental knowledge and avoid knowledge loss (institutional memory).		1	1.5%	1.5%
Change the culture to allow for knowledge-s		1	1.5%	1.5%
Ensure we have all the resources needed to implement the tools and to include them in the APP and strategic plan of the department.		1	1.5%	1.5%
Use it in their day-to-day work.		1	1.5%	1.5%
Improve service access to best practices.		1	1.5%	1.5%
Purchase the necessary software and hardware and develop internal capacity.		1	1.5%	1.5%
Monitor and evaluate the effectiveness of services rendered in Knowledge Management and improve on weaknesses.		1	1.5%	1.5%
Have a constant source of reliable, credible and timely evidence to inform decisions, reporting and policy analysis across all areas of the business (mandate) of the department.		1	1.5%	1.5%
Place it correctly in the Organizational Structure and allocate enough relevant human resources to the unit.		1	1.5%	1.5%
Total		65	100%	100%

6.3.3.2   Implementation skills and expertise

The implementation skills of government officials responsible for implementing KM in their respective department was tested. According to the findings presented in Table 6.27 and Figure 6.24, 52.3% (*n*=34) of respondents believe they require KM training due to a lack of necessary skills. Consequently, a lack of implementation skills was identified as a factor that deters the implementation of KM in the South African government.

Table 6.27: I do not need knowledge management implementation training. I have the skills

	Frequency	%	Valid %	Cumulative %
Strongly Agree	6	9.2%	9.2%	9.2%
Agree	15	23.1%	23.1%	32.3%
Neutral	10	15.4%	15.4%	47.7%
Disagree	21	32.3%	32.3%	80.0%
Strongly Disagree	13	20%	20%	100%
Total	65	100%	100%	
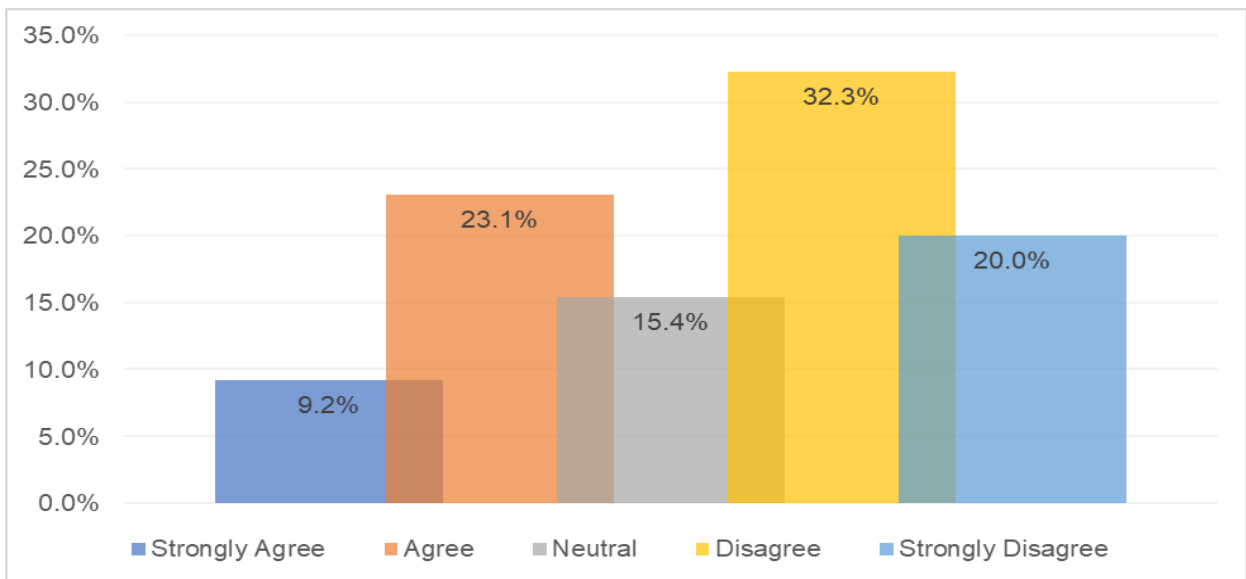
Figure 6.24: I do not need knowledge management implementation training. I have the skills (*n*=65)

The question was rephrased to further validate the response on skills. According to Table 6.28

and Figure 6.25, 64.7% (*n*=42) of respondents did not believe that they have the necessary expertise to implement KM in their department. This lends credence to the argument that government officials responsible for implementing KM in their respective departments require training on how to do so since they lacked the required skills and experience.

Table 6.28: Necessary expertise to implement knowledge management

	Frequency	%	Valid %	Cumulative %
Strongly Agree	2	3.1%	3.1%	3.1%
Agree	14	21.5%	21.5%	24.6%
Neutral	7	10.8%	10.8%	35.4%
Disagree	30	46.2%	46.2%	81.6%
Strongly Disagree	12	18.5%	18.5%	100%
Total	65	100%	100%	
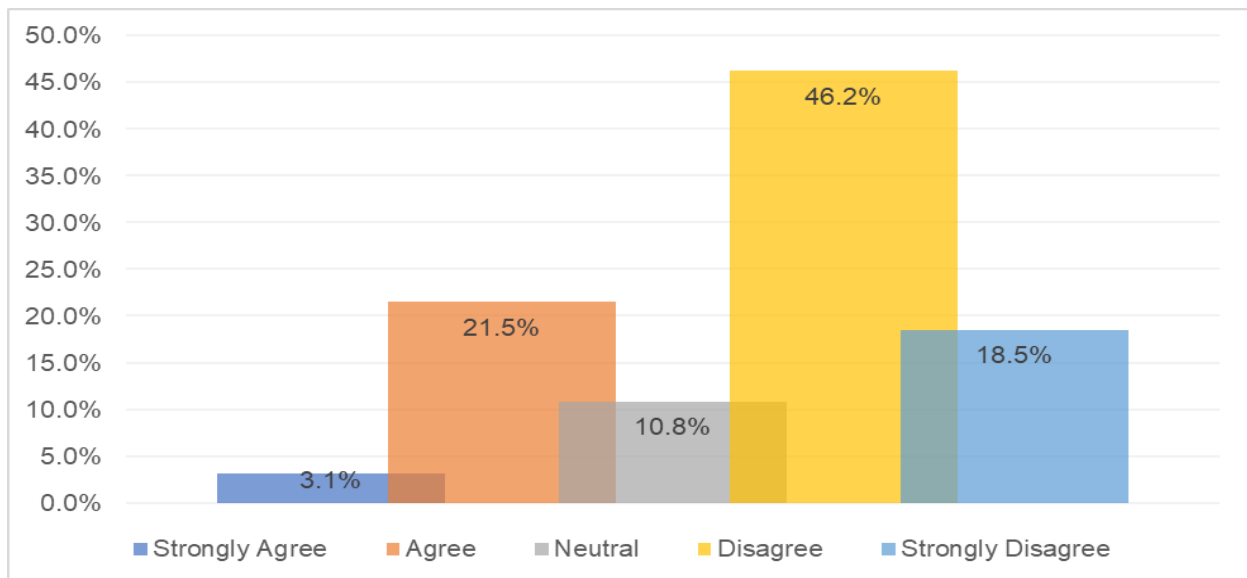
Figure 6.25: Necessary expertise to implement knowledge management (*n*=65)

6.3.3.3   Departmental knowledge management vision and mission

The results displayed in Table 6.29 and Figure 6.26, show that 38.5% (*n*=25) of respondents believe their department has a clear KM vision and mission. However, a total of 32.3% (*n*=21) of the respondents did not agree with this statement, with 29.2% (*n*=19) neutral on the matter. A

vision and a mission are critical components of any organisation because it provides direction i.e., it dictates the route of action (CommunityToolBox, 2022). Hence, a vision and mission are factors that contribute to the implementation of KM in the South African government and a lack thereof were identified as deterrents. Also, since 61.5% (*n*=40) of respondents did not agree, the need for the VMOSA strategic planning framework was justified. That is, the findings validated the requirement for the VMOSA strategic planning framework. The first two components of the VMOSA strategic planning framework are vision and mission (CommunityToolBox, 2022). It must be mandatory for government officials implementing KM to include a vision and a mission in their strategic plans and project implementation frameworks when implementing KM.

Table 6.29: Departmental knowledge management vision and mission

	Frequency	%	Valid %	Cumulative %
Strongly Agree	7	10.8%	10.8%	10.8%
Agree	18	27.7%	27.7%	38.5%
Neutral	19	29.2%	29.2%	67.7%
Disagree	16	24.6%	24.6%	92.3%
Strongly Disagree	5	7.7%	7.7%	100%
Total	65	100%	100%	
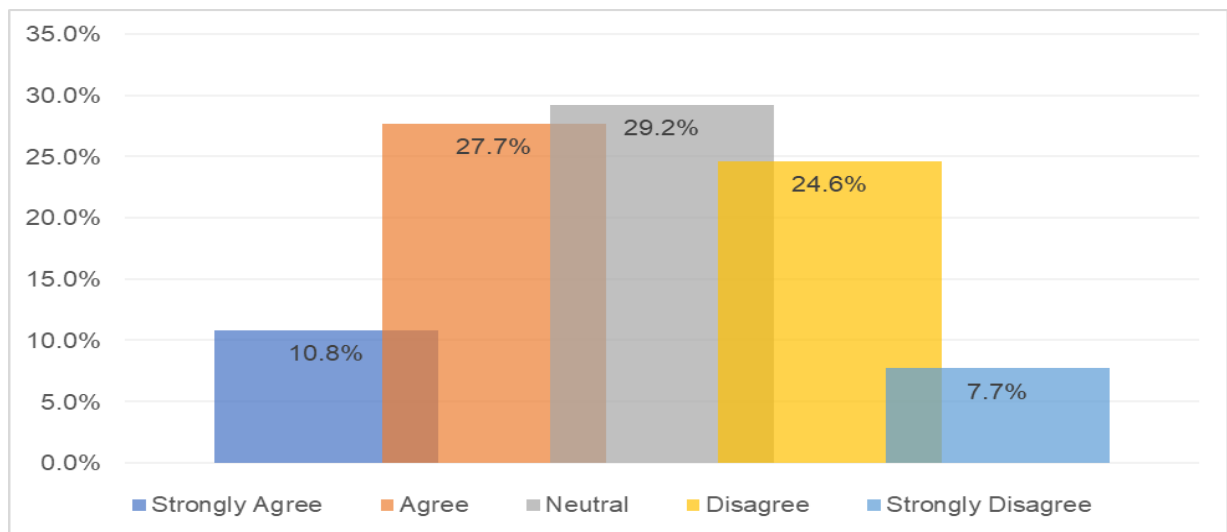
Figure 6.26: Departmental knowledge management vision and mission (*n*=65)

6.3.3.4 A management perspective on knowledge management and service delivery

According to Table 6.30 and Figure 6.27, 44.6% (*n*=29) of respondents agreed that the management perspective on KM and service delivery is that management is unsure how KM improves service delivery. The respondents should either know for certain or do not. The findings suggest that the respondents were not communicating effectively with their managers regarding the implementation of KM. If management was not interested in implementing KM, this would become known during these engagements. Not knowing indicates that little or no discussions were happening on the implementation of KM. Consequently, the respondent's uncertainty was identified as a factor that deters the implementation of KM in the South African government.

Table 6.30: Management unsure how knowledge management improves service delivery

	Frequency	%	Valid %	Cumulative %
Strongly Agree	7	10.8%	10.8%	10.8%
Agree	22	33.8%	33.8%	44.6%
Neutral	12	18.5%	18.5%	63.1%
Disagree	18	27.7%	27.7%	90.8%
Strongly Disagree	6	9.2%	9.2%	100%
Total	65	100%	100%	
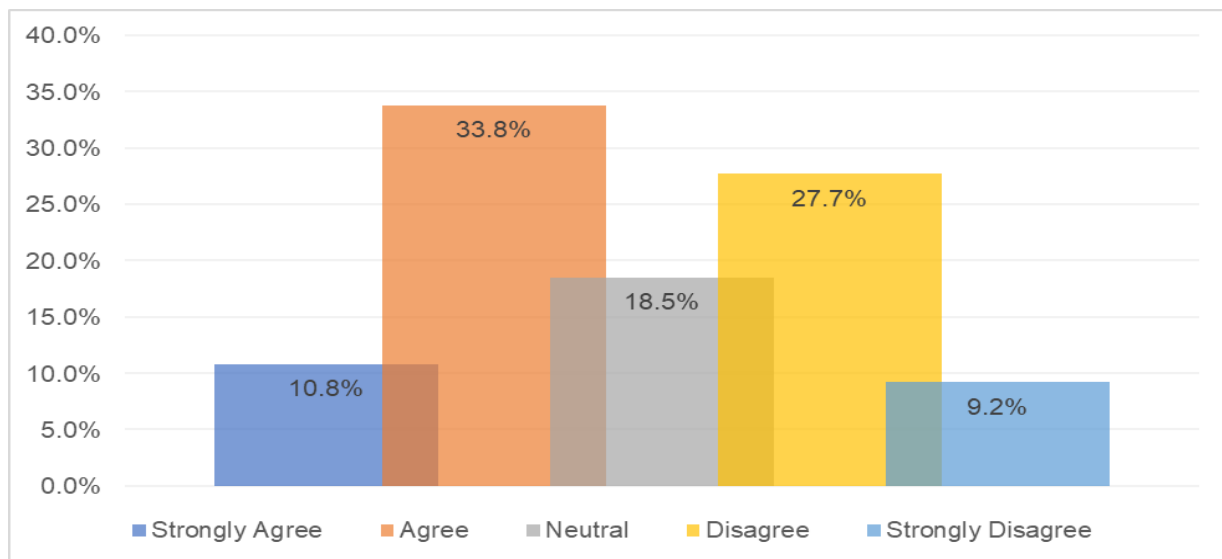
Figure 6.27: Management unsure how knowledge management improves service delivery (*n*=65)

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6.3.3.5   Sufficient human resources in departments

According to Table 6.31 and Figure 6.28, 69.2% (*n*=45) of respondents believe their unit does not have enough human resources to implement KM in their department. The lack of human resources in departments is a factor that deters the implementation of KM in the South African government.

Table 6.31: Sufficient human resources in departments

	Frequency	%	Valid %	Cumulative %
Strongly Agree	2	3.1%	3.1%	3.1%
Agree	11	16.9%	16.9%	20.0%
Neutral	7	10.8%	10.8%	30.8%
Disagree	19	29.2%	29.2%	60.0%
Strongly Disagree	26	40%	40%	100%
Total	65	100%	100%	
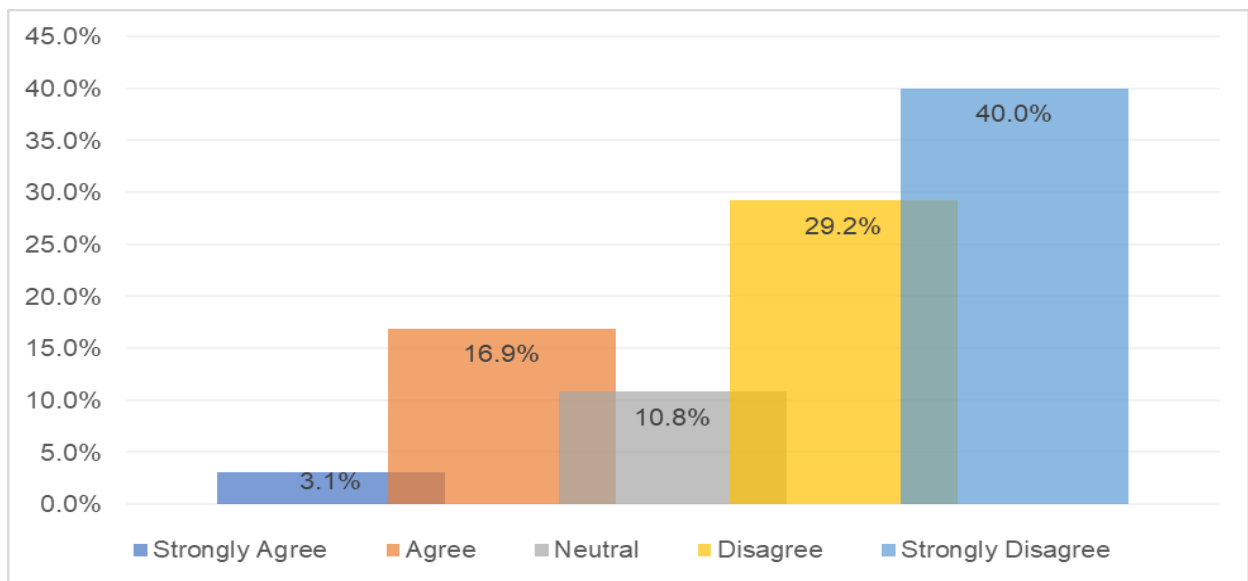
Figure 6.28: Sufficient human resources in departments (*n*=65)

6.3.3.6   Other potential implementation issues

Respondents were asked to complete an open-ended question that reads "List a problem that makes it hard for your department to implement Knowledge Management..." Table 6.32 lists the

responses submitted by 100% (*n*=65) of respondents. When the responses were analysed, the following phrases were found to be most frequently stated, i.e., phrases said by more than one respondent: Knowledge Management (*n*=30), Knowledge Management Initiative (*n*=6), Lack of Understanding (*n*=3), Lack of Support (*n*=2), Lack of Top (*n*=2), Shortage of Staff (*n*=2) and Human Resources (*n*=2).

Table 6.32: List a problem that makes it hard for your department to implement knowledge management

	Frequency%	Valid %	
Senior management buy-in.	1	1.5%	1.5%
Officials do not feel the need to participate in Knowledge Management initiatives to drive a knowledge-sharing culture.	1	1.5%	1.5%
SMS involvement lacking.	1	1.5%	1.5%
Lack of understanding of the importance of Knowledge Management initiatives by leadership and Knowledge Management is not embedded as part of everyone's role and responsibility.	1	1.5%	1.5%
Staffing.	1	1.5%	1.5%
Lack of Top Management involvement in Knowledge Management initiatives and staffing Knowledge Management units.	1	1.5%	1.5%
Knowledge Management is utilised by office managers.	1	1.5%	1.5%
Not enough human resources to implement knowledge management initiatives	1	1.5%	1.5%
Understanding the need for knowledge management.	1	1.5%	1.5%
Shortage of staff, No tools for Knowledge Management and enough support from Management.	1	1.5%	1.5%
The unwillingness of the older generation to adopt new ideas and ways of work.	1	1.5%	1.5%
Lack of human resources - I am the only employee.	1	1.5%	1.5%
The emphasis on Knowledge Management importance is only verbal but not in a form of policy.	1	1.5%	1.5%

	Frequency%	Valid %	
Knowledge Management is located under a specific line function and not under corporate services, where it should reside within the Strategic Planning unit, along with Monitoring and Evaluation and Risk Management (the department does not have a business process or organisational design unit as it is a small department)	1	1.5%	1.5%
Reliance on SharePoint as the only official records management repository.	1	1.5%	1.5%
Lack of participation by staff members in Knowledge Management initiatives.	1	1.5%	1.5%
Resource constraints.	1	1.5%	1.5%
Budget.	1	1.5%	1.5%
Funding and adequate resourcing.	1	1.5%	1.5%
Lack of support from leadership.	1	1.5%	1.5%
Dedicated resources to guide/onboard others as Knowledge Management are everyone's responsibility	1	1.5%	1.5%
Buy in.	1	1.5%	1.5%
Lack of buy-in from management and unwillingness to share information within their functional area.	1	1.5%	1.5%
Not being sure of how to define Knowledge Management and what its functions are.	1	1.5%	1.5%
Knowledge Management no aligned with Department' strategies hence it is difficult to implement.	1	1.5%	1.5%
The bottom-up approach in planning, implementation and no alignment of Knowledge Management strategy with departmental strategy.	1	1.5%	1.5%
Buying in by Management and Leadership and lack of human and operational resources.	1	1.5%	1.5%
Entrenched silos.	1	1.5%	1.5%
Many silo systems and processes.	1	1.5%	1.5%
Capacity - staff already stretched to perform basic outputs and fill gaps.	1	1.5%	1.5%
Shortage of staff.	1	1.5%	1.5%

	Frequency%	Valid %	
Lack of understanding of the importance of managing knowledge.	1	1.5%	1.5%
Moral of staff is low. In terms of structure, the vacant posts must be filled.	1	1.5%	1.5%
The implementation is not a problem, this we do subconsciously. It is the defragmentation of all Knowledge Management components that is a challenge. E.g., there is no central point or fault to access Knowledge Management info. access	1	1.5%	1.5%
Institutional memory.	1	1.5%	1.5%
Manpower and expertise.	1	1.5%	1.5%
No Wi-Fi in some of the regions.	1	1.5%	1.5%
Finances and buy-in from management.	1	1.5%	1.5%
Buy-in and other 'strategic' tasks.	1	1.5%	1.5%
Officials do not have an interest.	1	1.5%	1.5%
Budget.	1	1.5%	1.5%
Participation by other departments.	1	1.5%	1.5%
Silos do not understand the need for knowledge management and think is is not everyone's responsibility.	1	1.5%	1.5%
Lack of top and senior management support for Knowledge Management initiatives	1	1.5%	1.5%
Lack of support from political office.	1	1.5%	1.5%
Know-how and misunderstanding of the knowledge impact.	1	1.5%	1.5%
Knowledge Management is seen as an add on to daily activities and not as a platform to assist with service delivery.	1	1.5%	1.5%
Inability to identify a unit responsible for knowledge management. Lack of understanding of the purpose of knowledge management.	1	1.5%	1.5%
Understanding of Knowledge Management and how it will be implemented Knowledge Management is an enabler and dependent on core business.	1	1.5%	1.5%

	Frequency%	Valid %	
Leadership buy-in and support.	1	1.5%	1.5%
Department has a poor ICT infrastructure to carry such a system needed.	1	1.5%	1.5%
Readiness, resource & capacity, understanding.	1	1.5%	1.5%
Our office is not used to information sharing.	1	1.5%	1.5%
Knowledge Management is not having its director.	1	1.5%	1.5%
Despite efforts to clarify the role of Knowledge Management, the management of my department is still adamant that Knowledge Management and Librarianship share the same things.	1	1.5%	1.5%
Not enough resources, not enough expertise and too much to implement with fewer resources.	1	1.5%	1.5%
Information considered confidential business units working in silos.	1	1.5%	1.5%
Very limited capacity / no dedicated capacity.	1	1.5%	1.5%
Staff skilled in the practice.	1	1.5%	1.5%
IT is not a KPI across roles and is not linked to performance	1	1.5%	1.5%
We do not have an experience in Knowledge Management to be able to implement it in our department.	1	1.5%	1.5%
Auditor-General requiring hard copy signatures.	1	1.5%	1.5%
Lack of interest, Knowledge Management is not a priority.	1	1.5%	1.5%
Extreme silos in working towards a common objective where managers are only concerned about the work of their unit.	1	1.5%	1.5%
Lack of knowledge and understanding by Management and Organization Design Unit. Lack of cooperation from Content owners.	1	1.5%	1.5%
Total	65	100%	100%

6.3.4 Sub-objective 3: To determine how the implementation of a knowledge management framework can improve service delivery in the South African government

The themes aligned to Sub-objective 3 are depicted in Figure 6.29. These themes were tested using the survey questionnaire and interview schedule. Sub-objective 3 was achieved when these themes were addressed.
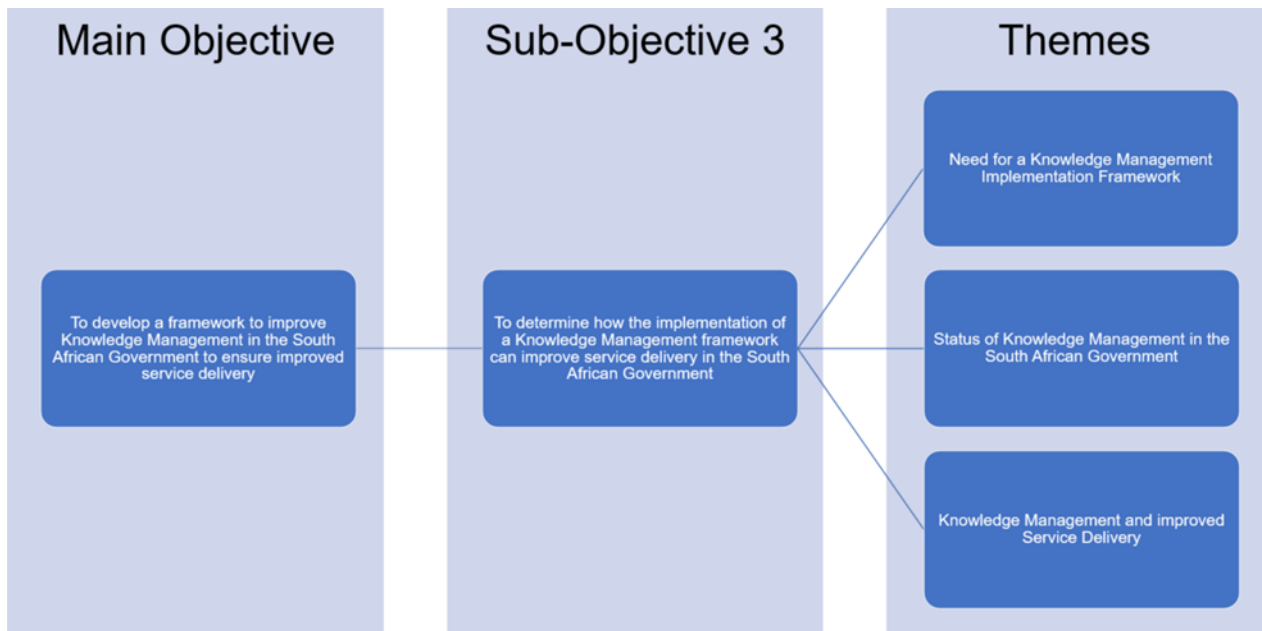
Figure 6.29: Alignment of themes to Sub-objective **3**

6.3.4.1 Need for a knowledge management implementation framework

According to Table 6.33, 81.5% (*n*=53) of respondents agreed that a framework to guide them in implementing Knowledge Management in their department was needed. Most respondents have expressed interest in this framework.

Table 6.33: Require framework to implement knowledge management

	Frequency	%	Valid %	Cumulative %
Strongly Agree	24	36.9%	36.9%	36.9%
Agree	29	44.6%	44.6%	81.5%
Neutral	5	7.7%	7.7%	89.2%
Disagree	6	9.2%	9.2%	98.4%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	

As revealed in Table 6.33, 1.5% (*n*=53) of respondents agreed that a framework to guide them in implementing KM in their department was needed. The information is illustrated in Figure 6.30 below:
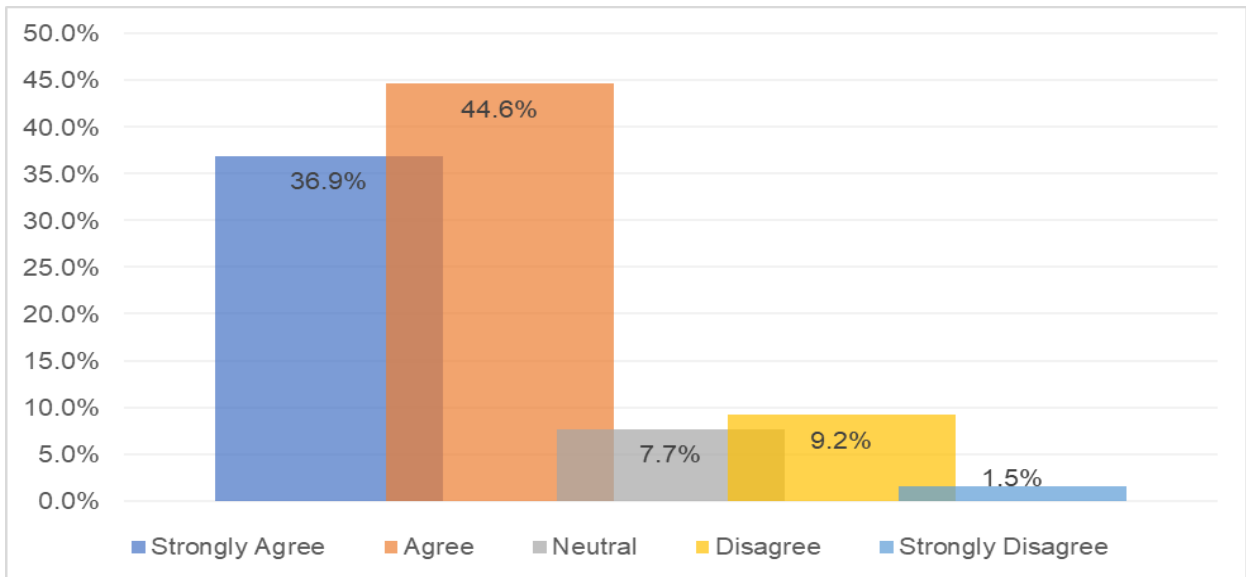
Figure 6.30: Require framework to implement knowledge management (*n*=65)

6.3.4.2   Status of knowledge management in the South African government

Table 6.34 and Figure 6.31 indicate that 72.3% (*n*=47) of respondents agreed with KM implementation in the South African government Departments is disjointed (i.e., it is not conducted the same throughout all departments).

Table 6.34: Knowledge management disjointed in South African government

	Frequency	%	Valid %	Cumulative %
Strongly Agree	21	32.3%	32.3%	32.3%
Agree	26	40%	40%	72.3%
Neutral	9	13.8%	13.8%	86.1%
Disagree	8	12.3%	12.3%	98.4%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	
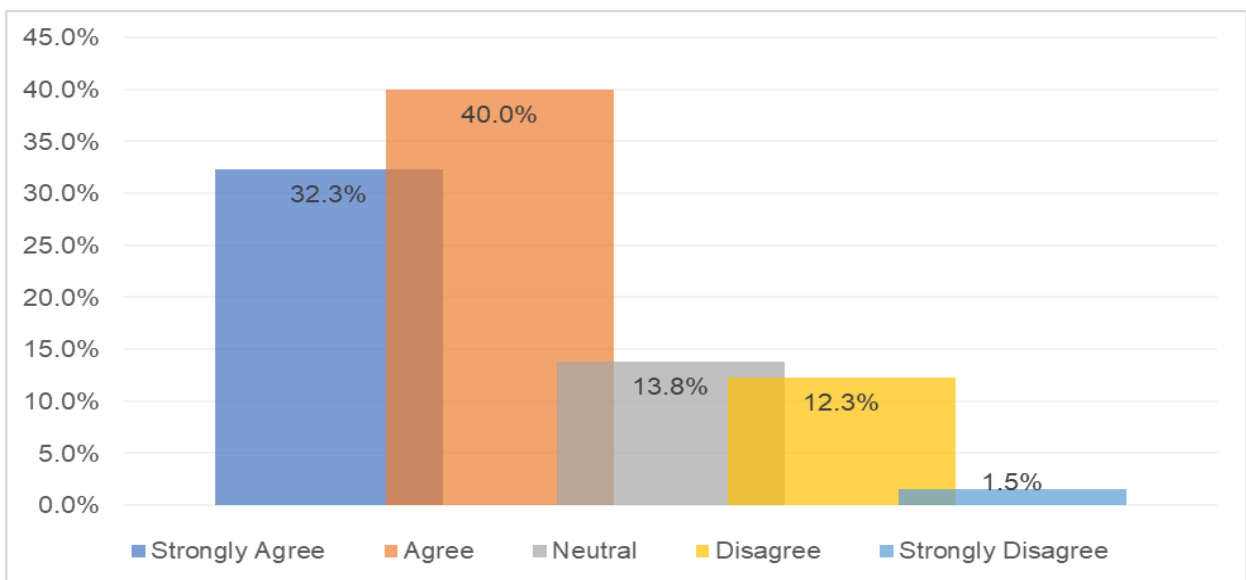
Figure 6.31: Knowledge management disjointed in South African government (*n*=65)

According to Table 6.35 and Figure 6.32 below, 72.3% (*n*=47) of respondents agreed that KM implementation in their department is slow.

Table 6.35: Knowledge management implementation in department slow

	Frequency	%	Valid %	Cumulative %
Strongly Agree	16	24.6%	24.6%	24.6%
Agree	31	47.7%	47.7%	72.3%
Neutral	6	9.2%	9.2%	81.5%
Disagree	10	15.4%	15.4%	96.9%
Strongly Disagree	2	3.1%	3.1%	100%
Total	65	100%	100%	
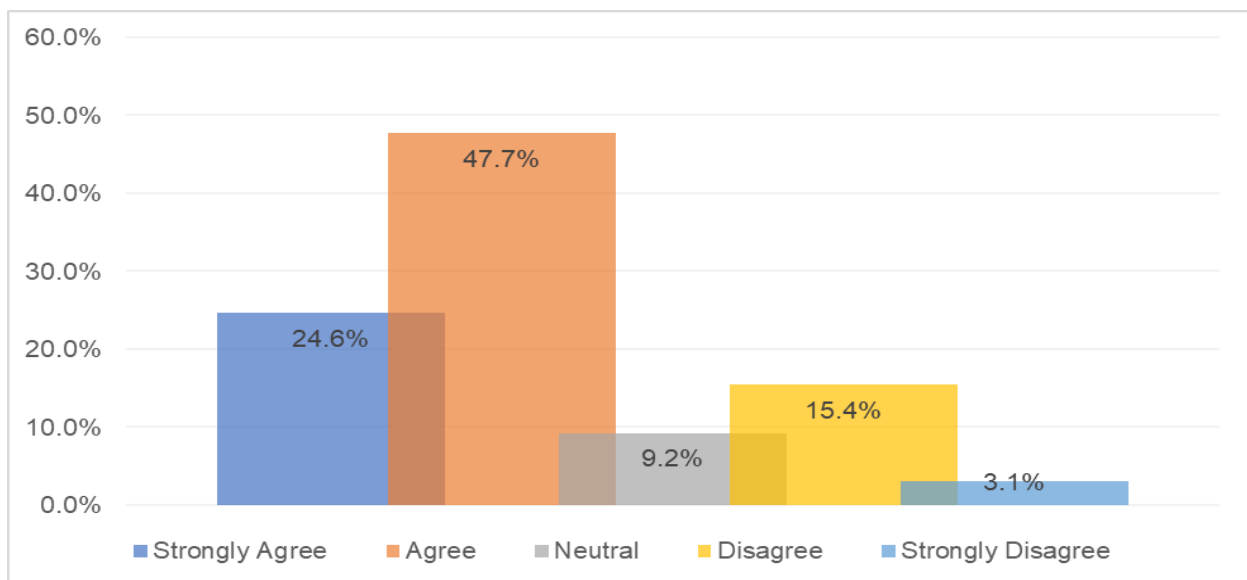
Figure 6.32: Knowledge management implementation in department slow (*n*=65)

A Spearman correlation was performed to test whether there was an association between "Knowledge Management implementation in both National and Provincial Government Departments are disjointed (i.e., it is not conducted in the same manner throughout all departments)" and "Knowledge Management implementation in my department is slow." The result of the Spearman correlation showed that there was a significant medium, positive correlation between these variables, i.e., when the value of one variable increases or decreases, the value of the other variable does the same concurrently (see Table 6.36) (DATAtab Team, 2021). This means that if the variable "Knowledge Management implementation in both National and Provincial Government Departments is disjointed" directly influences the variable "Knowledge Management implementation in my department is slow", both would be affected. If one variable

increases or decreases, so does the other. These two variables will move in the same direction (DATAtab Team, 2021).

Table 6.36: Spearman correlation between knowledge management implementation in both National and Provincial government departments is disjointed and knowledge management implementation in my department is slow

	r^2	p (2-tailed)
Knowledge management implementation in both National and Provincial Government Departments is disjointed and Knowledge Management implementation in my department is slow.	0.5	<.001

Overall, a KMIF, when developed, aims to guarantee that KM implementation across the several departments of the South African government is coordinated, structured, collaborative and, most importantly, standardised.

6.3.4.3   Knowledge management and improved service delivery

The results displayed in Table 6.37 show that 95.4% (*n*=62) of the respondents agreed that KM is a creative and long-term solution that can improve service delivery. The information is illustrated in Figure 6.33 below. An overwhelming majority of respondents support the premise that improved KM would result in improved service delivery.

Table 6.37: Knowledge management is a creative and long-term solution that can improve service delivery

	Frequency	%	Valid %	Cumulative %
Strongly Agree	38	58.5%	58.5%	58.5%
Agree	24	36.9%	95.4%	95.4%
Neutral	3	4.6%	100.0%	100.0%
Disagree	0	0%	0%	
Strongly Disagree	0	0%	0%	
Total	65	100%	100%	

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[2] Strength of correlation - 0,0 < 0,1 = no correlation; 0,1 < 0,3 = low correlation; 0,3 < 0,5 = medium correlation; 0,5 < 0,7 = high correlation; 0,7 < 1 = very high correlation
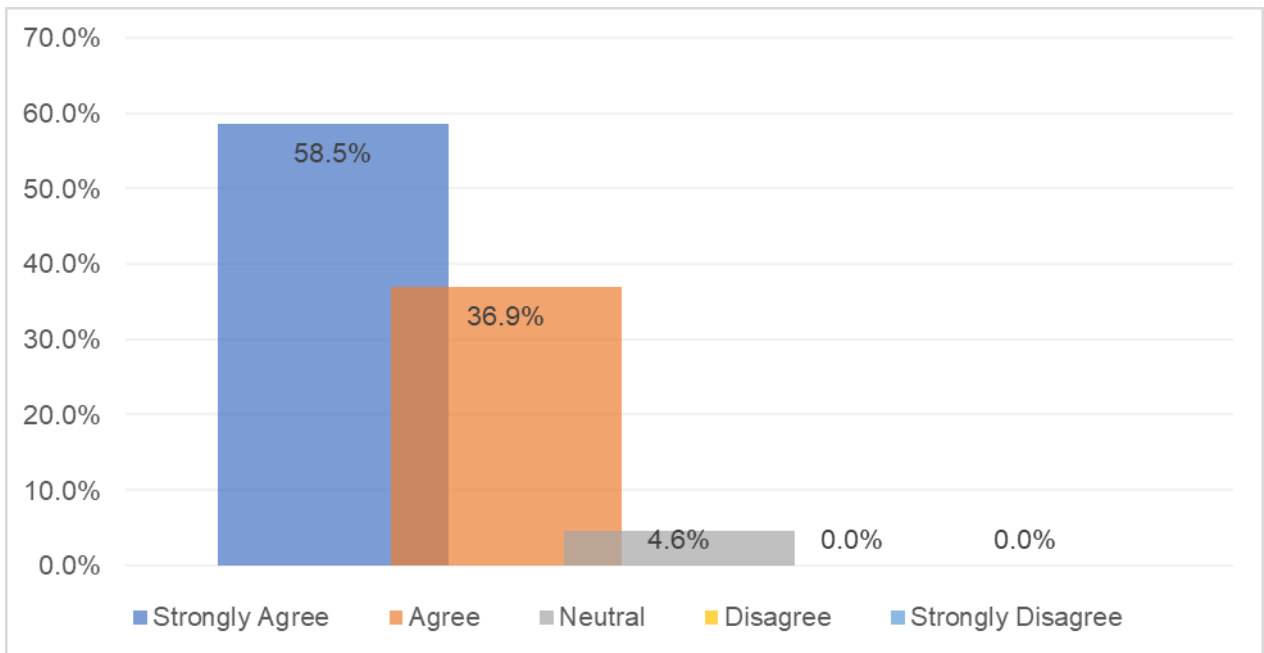
Figure 6.33: Knowledge management is a creative and long-term solution that can improve service delivery (*n*=65)

6.3.5 Sub-objective 4: To ascertain the extent of the implementation of knowledge management in the South African government

Figure 6.34 illustrates the concepts that correlate with Sub-objective 4. The survey questionnaire and interview schedule were used to test these themes. The achievement of Sub-objective 4 occurred when these themes were addressed.
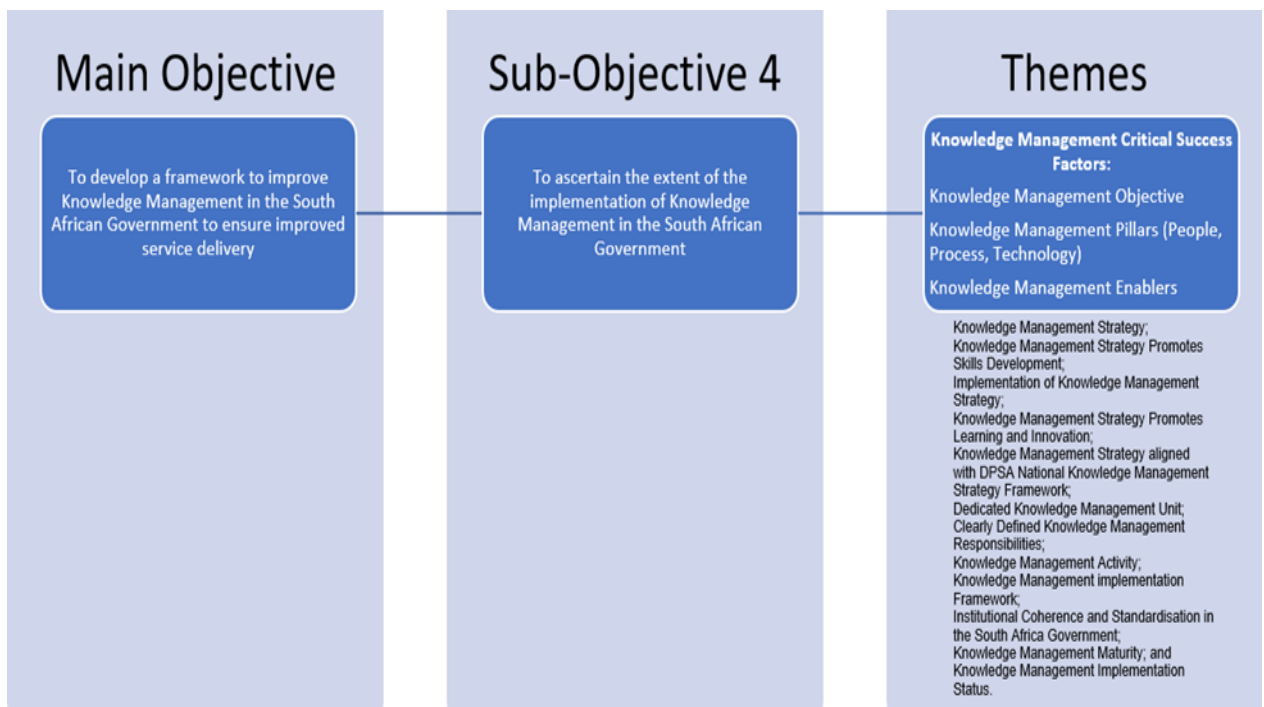
Figure 6.34: Alignment of themes to Sub-objective 4

Source: Researcher's own construct

The KM CSFs include the KM Objective, the KM Pillars and the KM Enablers. Although KM CSF components were tested throughout the entire survey questionnaire, this section only addressed the following:

(i)   KM Strategy;

(ii)   KM Strategy Promotes Skills Development;

(iii)   Implementation of KM Strategy;

(iv)   KM Strategy Promotes Learning and Innovation;

(v)   KM Strategy aligned with DPSA National Knowledge Management Strategy Framework;

(vi)   Dedicated KM Unit;

(vii) Clearly Defined KM Responsibilities;

(viii) KM Activity;

(ix)   KMIF;

(x)   Institutional Coherence and Standardisation in the South Africa Government;

(xi)   KM Maturity; and

(xii) KM Implementation Status.

6.3.5.1   Knowledge management strategy

The results displayed in Table 6.38 and graphically presented in Figure 6.35 show that 67.7% (*n*=44) of respondents agreed their department has a KM strategy. Hence, of all departments that have a KM strategy in place, it can be argued that 32.3% did not.

Table 6.38: Has a knowledge management strategy

	Frequency	%	Valid %	Cumulative %
Strongly Agree	26	40%	40%	40.0%
Agree	18	27.7%	27.7%	67.7%
Neutral	7	10.8%	10.8%	78.5%
Disagree	10	15.4%	15.4%	93.9%
Strongly Disagree	4	6.2%	6.2%	100%
Total	65	100%	100%	
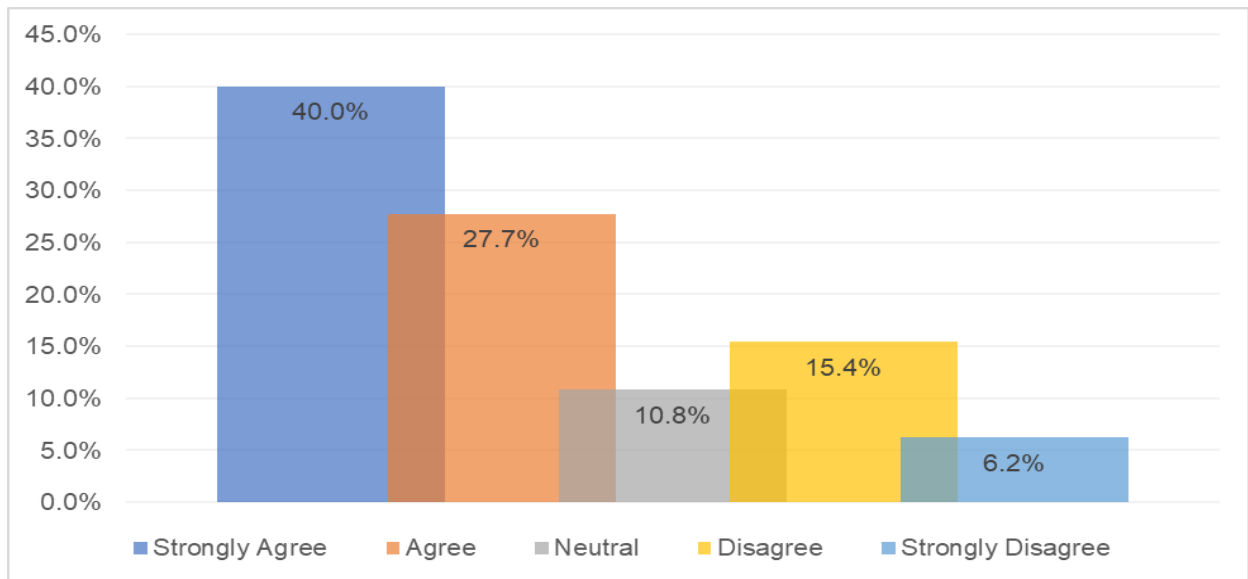
Figure 6.35: Has a knowledge management strategy (*n*=65)

6.3.5.2   Knowledge management strategy promotes skills development

According to Table 6.39 and Figure 6.36, 55.4% (*n*=36) of respondents agreed that their KM strategy promotes skills development. Promoting skill development is a crucial component of any KM strategy. Because only 55.4% (*n*=36) said that theirs did, it is disturbing that the others did

not. This is an issue.

Table 6.39: Knowledge management strategy promotes skills development

	Frequency	%	Valid %	Cumulative %
Strongly Agree	13	20%	20%	20.0%
Agree	23	35.4%	35.4%	55.4%
Neutral	15	23.1%	23.1%	78.5%
Disagree	10	15.4%	15.4%	93.9%
Strongly Disagree	4	6.2%	6.2%	100%
Total	65	100%	100%	
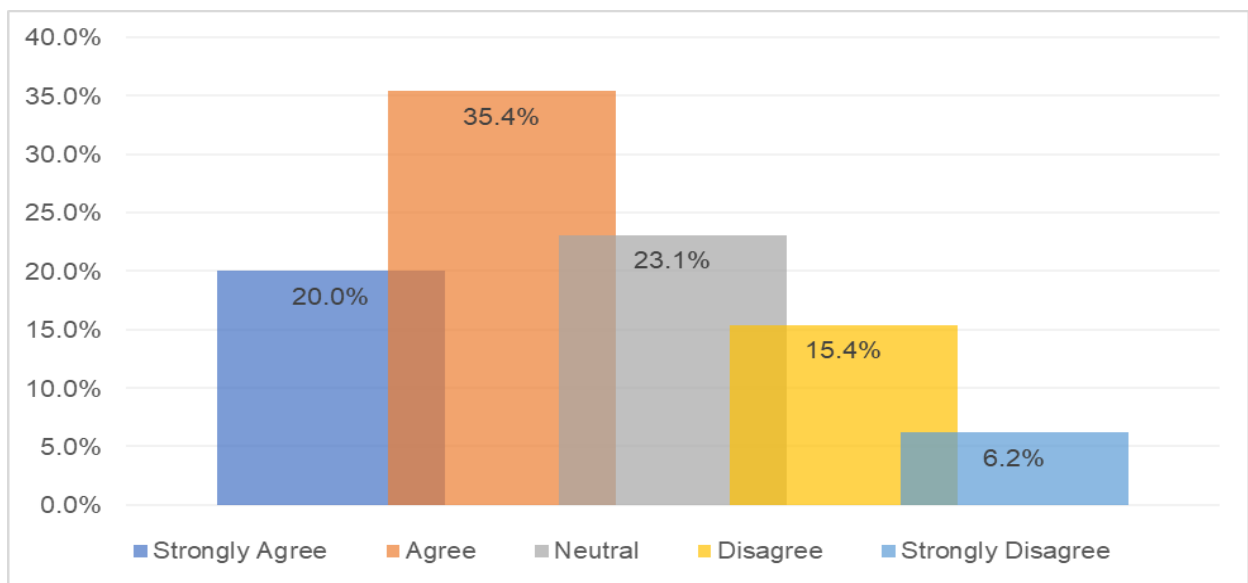
Figure 6.36: Knowledge management strategy promotes skills development (*n*=65)

6.3.5.3   Implementation of knowledge management strategy

According to Table 6.40 and Figure 6.37, 52.3% (*n*=34) of respondents agreed that their KM strategy is being implemented in their department. To have a strategy for the management of the government's knowledge was one thing, however, how that strategy is implemented is the single most critical component (Bryson & George, 2020). Nonetheless, the significance of this finding lies in the fact that it contributes to why the implementation of KM is so slow and disjointed in the

South African government.

Table 6.40: Knowledge management strategy is implemented in the department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	11	16.9%	16.9%	16.9%
Agree	23	35.4%	35.4%	52.3%
Neutral	13	20%	20%	72.3%
Disagree	12	18.5%	18.5%	90.8%
Strongly Disagree	6	9.2%	9.2%	100%
Total	65	100%	100%	
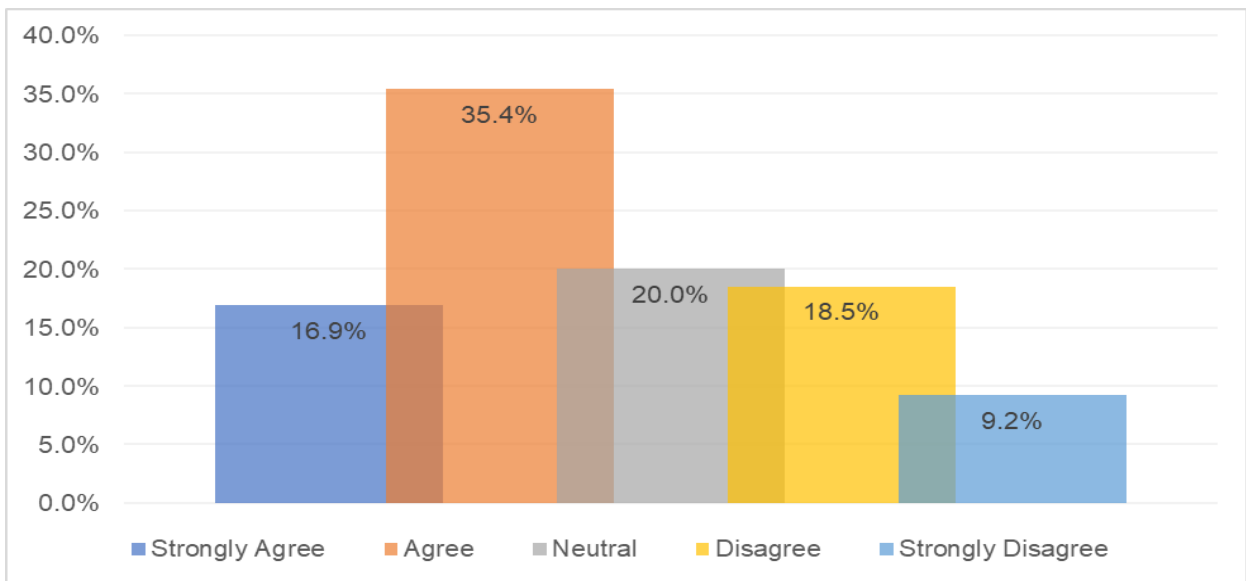
Figure 6.37: Knowledge management strategy is implemented in the department (*n*=65)

6.3.5.4 Knowledge management strategy promotes learning and innovation

Table 6.41 and Figure 6.38 show that 61.5% (*n*=40) of respondents agreed their KM strategy aims to enable their department to become a learning and innovative organisation. Promoting learning and innovation is another crucial component of any KM strategy (DPSA, 2019).

Table 6.41: Knowledge management strategy promotes learning and innovation

	Frequency	%	Valid %	Cumulative %
Strongly Agree	16	24.6%	24.6%	24.6%
Agree	24	36.9%	36.9%	61.5%
Neutral	13	20%	20%	81.5%
Disagree	7	10.8%	10.8%	92.3%
Strongly Disagree	5	7.7%	7.7%	100%
Total	65	100%	100%	
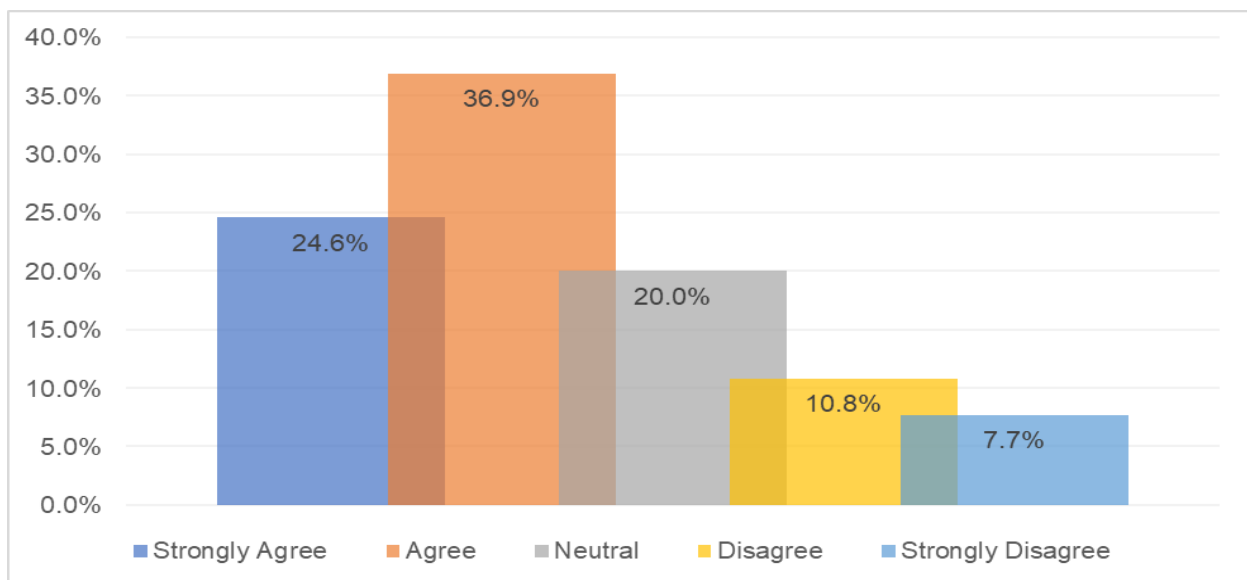
Figure 6.38: Knowledge management strategy promotes learning and innovation (*n*=65)

6.3.5.5   Knowledge management strategy aligned with DPSA National Knowledge Management Strategy Framework

The results are displayed in Table 6.42 and Figure 6.39, 50.8% (*n*=33) of respondents agreed their department's KM strategy is strategically aligned to the DPSA National Knowledge Management Strategy Framework. However, 30.8% (*n*=20) were neutral on the matter. The findings show that the South African government is not taking a consistent or standardised approach to KM implementation.

Table 6.42: Knowledge management strategy aligned with DPSA National Knowledge Management Strategy Framework

	Frequency	%	Valid %	Cumulative %
Strongly Agree	13	20%	20%	20.0%
Agree	20	30.8%	30.8%	50.8%
Neutral	20	30.8%	30.8%	81.6%
Disagree	9	13.8%	13.8%	95.4%
Strongly Disagree	3	4.6%	4.6%	100%
Total	65	100%	100%	
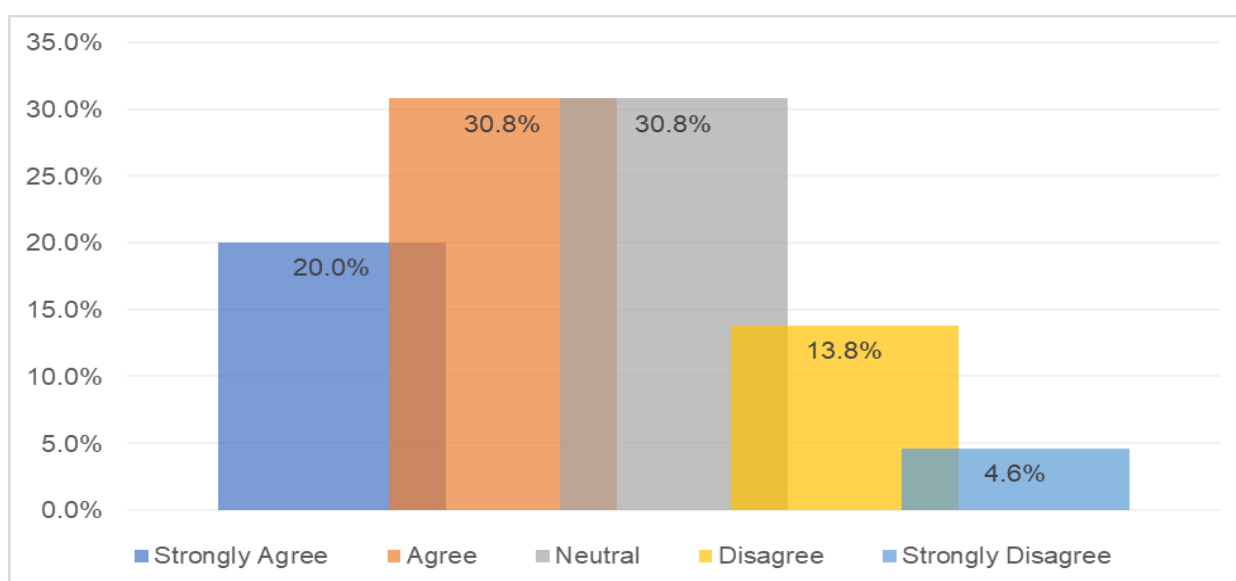
Figure 6.39: Knowledge management strategy aligned with Department of Public Service and Administration National Knowledge Management Strategy Framework (*n*=65)

6.3.5.6 Dedicated knowledge management unit

According to Table 6.43 and Figure 6.40, 60% (*n*=39) of respondents said they have a dedicated team/unit (e.g., Directorate Knowledge Management) responsible for implementing KM in their department. This is a good finding. A fully-fledged and dedicated KM unit exists in most national and provincial government departments. With KM implementation being slow and disjointed, it can be argued that the dedicated unit either (a) does not know how to implement KM, i.e., is unskilled; (b) does not have a KM strategy to guide them, or (c) are not performing KM work.

Table 6.43: Dedicated team/unit implementing knowledge management in the department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	19	29.2%	29.2%	29.2%
Agree	20	30.8%	30.8%	60.0%
Neutral	7	10.8%	10.8%	70.8%
Disagree	11	16.9%	16.9%	87.7%
Strongly Disagree	8	12.3%	12.3%	100%
Total	65	100%	100%	
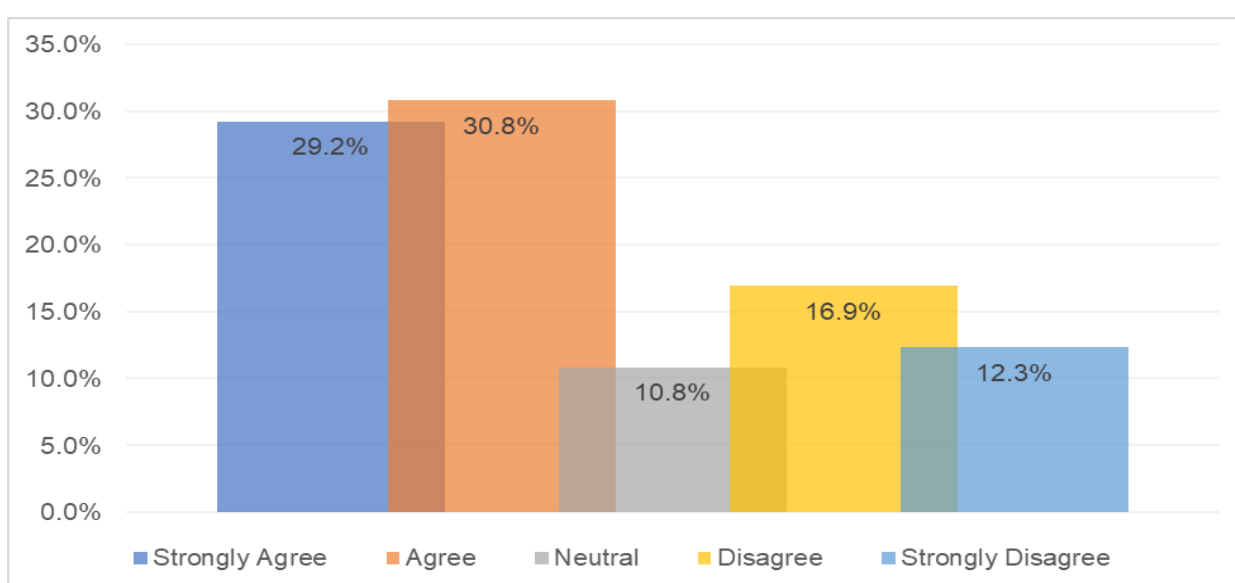
Figure 6.40: Dedicated team/unit implementing knowledge management in the department (*n*=65)

6.3.5.7   Clearly defined knowledge management responsibilities

The results are displayed in Table 6.44 and Figure 6.41, 63.1% (*n*=41) of respondents agreed they have clearly defined KM responsibilities. As a result, with KM implementation being slow and disjointed and this finding stating that they have clearly defined KM responsibilities, it can be argued that the dedicated unit either (a) does not know how to implement KM, i.e., is unskilled; (b) does not have a KM strategy and (c) needs a KMIF to guide them on how to implement KM in their respective national or provincial government department.

Table 6.44: Clearly defined knowledge management responsibilities

	Frequency	%	Valid %	Cumulative %
Strongly Agree	18	27.7%	27.7%	27.7%
Agree	23	35.4%	35.4%	63.1%
Neutral	7	10.8%	10.8%	73.9%
Disagree	11	16.9%	16.9%	90.8%
Strongly Disagree	6	9.2%	9.2%	100%
Total	65	100%	100%	
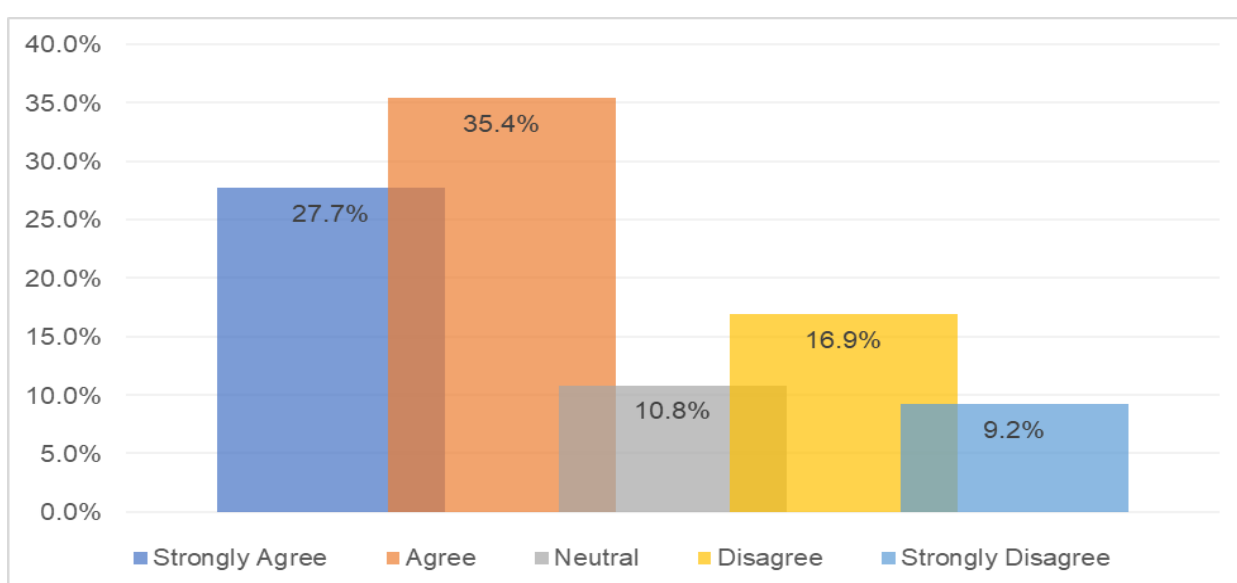
Figure 6.41: Clearly defined knowledge management responsibilities (*n*=65)

6.3.5.8   Knowledge management activity

This question was asked to refute the general perception that several national and provincial government departments consider KM as an add-on activity to their core responsibilities. According to the results presented in Table 6.45 and Figure 6.42, 43.1% (*n*=28) of respondents agreed that KM is an add-on activity in their department, with 40% (*n*=26) of respondents not agreeing. As a result, it is plausible to assert that more than 50% of South African government departments did not place a high priority on KM, supporting the assumption that the South African government may not fully comprehend how KM, which is available to them, can help them improve service delivery (Kimani, 2013; Sawe & Rotich, 2016). This also explains why the implementation

of KM in the South African government is slow and disjointed.

Table 6.45: Knowledge management is an add-on activity in the department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	5	7.7%	7.7%	7.7%
Agree	23	35.4%	35.4%	43.1%
Neutral	11	16.9%	16.9%	60.0%
Disagree	18	27.7%	27.7%	87.7%
Strongly Disagree	8	12.3%	12.3%	100%
Total	65	100%	100%	
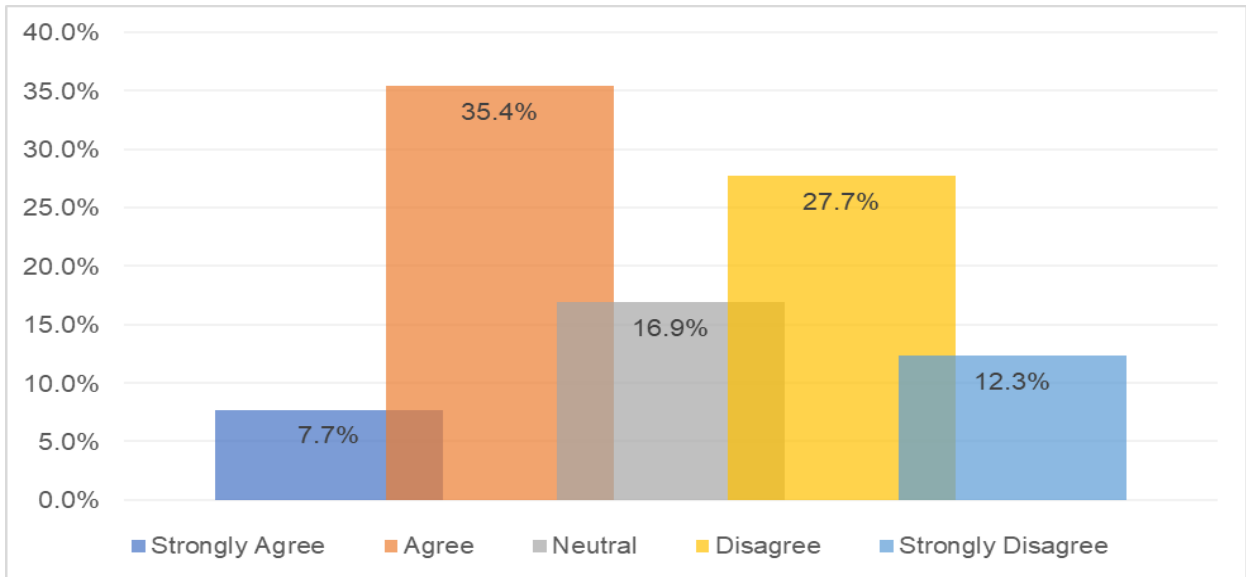
Figure 6.42: Knowledge management is an add-on activity in the department (*n*=65)

Additionally, Table 6.46 below depicts a cross-tabulation of the percentage of National and Provincial Government employees who believe KM is an add-on activity in their department. According to the results, 29.2 % of those who agreed were provincial government employees and 21.5 % were national government employees. Consequently, this finding supports the two prior findings on "dedicated unit" and "responsibilities." In other words, this finding suggests that the dedicated unit with KM responsibilities either (a) does not know how to implement KM, i.e., is unskilled; (b) does not have a KM strategy; or (c) needs a KMIF to guide them on how to implement KM in their respective national or provincial government department.

Table 6.46: Cross-tabulation of National and Provincial government employees with knowledge management is an add-on activity in the department

		Are you employed by the National or Provincial Government?		
		Provincial Government	National Government	Total
Knowledge Management is an add-on activity in my department.	Strongly Agree	4.6%	3.1%	7.7%
	Agree	24.6%	10.8%	35.4%
	Neutral	10.8%	6.2%	16.9%
	Disagree	10.8%	16.9%	27.7%
	Strongly Disagree	7.7%	4.6%	12.3%
	Total	58.5%	41.5%	100%

6.3.5.9 Knowledge Management Implementation Framework

The results presented in Table 6.47 and Figure 6.43 illustrates that 46.1% (*n*=30) of respondents agreed their department has a KMIF, however, 53.8% (*n*=35) of respondents did not agree (values include those *that stated neutral*). Hence, the argument about the necessity of such a framework is supported because more than half of the respondents who participated in the study claimed that their departments did not have a KM framework.

Table 6.47: Department has a Knowledge Management Implementation Framework

	Frequency	%	Valid %	Cumulative %
Strongly Agree	9	13.8%	13.8%	13.8%
Agree	21	32.3%	32.3%	46.1%
Neutral	12	18.5%	18.5%	64.6%
Disagree	14	21.5%	21.5%	86.1%
Strongly Disagree	9	13.8%	13.8%	100%
Total	65	100%	100%	
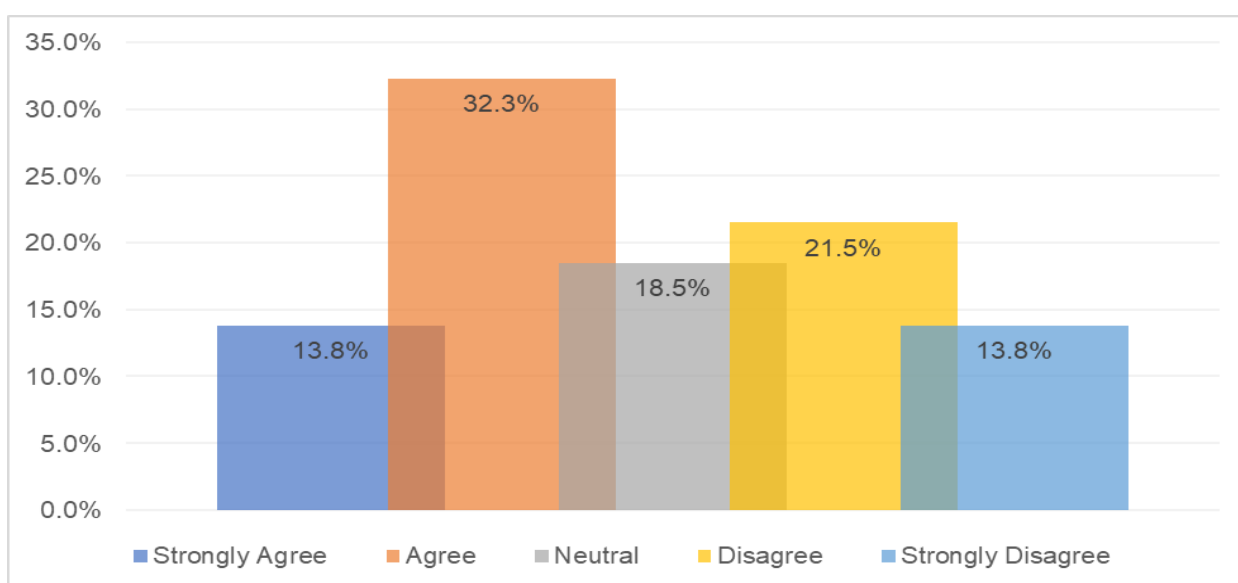
Figure 6.43: Department has a Knowledge Management Implementation Framework (*n*=65)

6.3.5.10   Institutional coherence and standardisation in the South African government

According to Table 6.48 and Figure 6.44, 76.9% (*n*=50) of respondents agreed that a KMIF will promote institutional coherence and standardisation. So, there needs to be a KMIF. This framework will help respondents fully implement KM in their departments. It will also make sure that all national and provincial government departments are consistent and follow the same rules when it comes to implementing KM. Most importantly, it will help improve service delivery in the South African government.

Table 6.48: Knowledge Management Implementation Framework promotes institutional coherence and standardisation

	Frequency	%	Valid %	Cumulative %
Strongly Agree	27	41.5%	41.5%	41.5%
Agree	23	35.4%	35.4%	76.9%
Neutral	12	18.5%	18.5%	95.4%
Disagree	1	1.5%	1.5%	96.9%
Strongly Disagree	2	3.1%	3.1%	100%
Total	65	100%	100%	
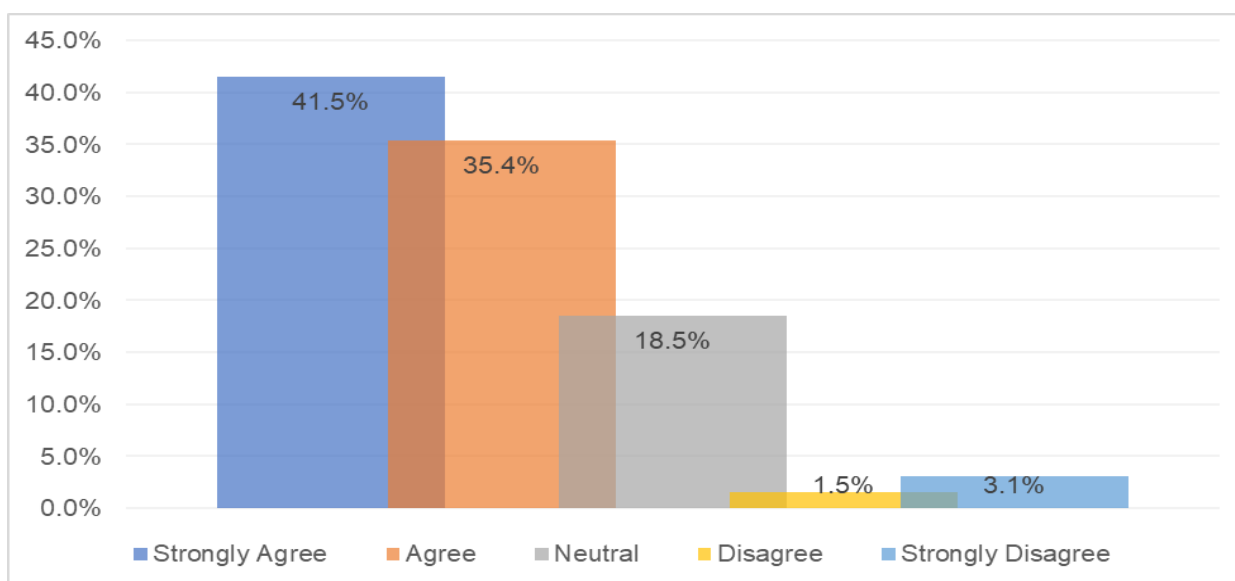
Figure 6.44: Knowledge Management Implementation Framework promotes institutional coherence and standardisation (*n*=65)

6.3.5.11   Knowledge management maturity

Every organisation should be concerned with understanding its present level of maturity. When maturity is assessed against a consistent framework and scale, activity is normalised in a common language and a baseline for measuring improvement is established (Torresc, 2014). According to Table 6.49 and graphically presented in Figure 6.45 only 33.9% (*n*=22) of respondents, measured the maturity of their KM, which is an extremely low proportion. No results were being produced that give the South African government a process-based plan for how to improve.

Table 6.49: Knowledge management measured regularly to assess knowledge management maturity

	Frequency	%	Valid %	Cumulative %
Strongly Agree	4	6.2%	6.2%	6.2%
Agree	18	27.7%	27.7%	33.9%
Neutral	14	21.5%	21.5%	55.4%
Disagree	17	26.2%	26.2%	81.6%
Strongly Disagree	12	18.5%	18.5%	100%
Total	65	100%	100%	
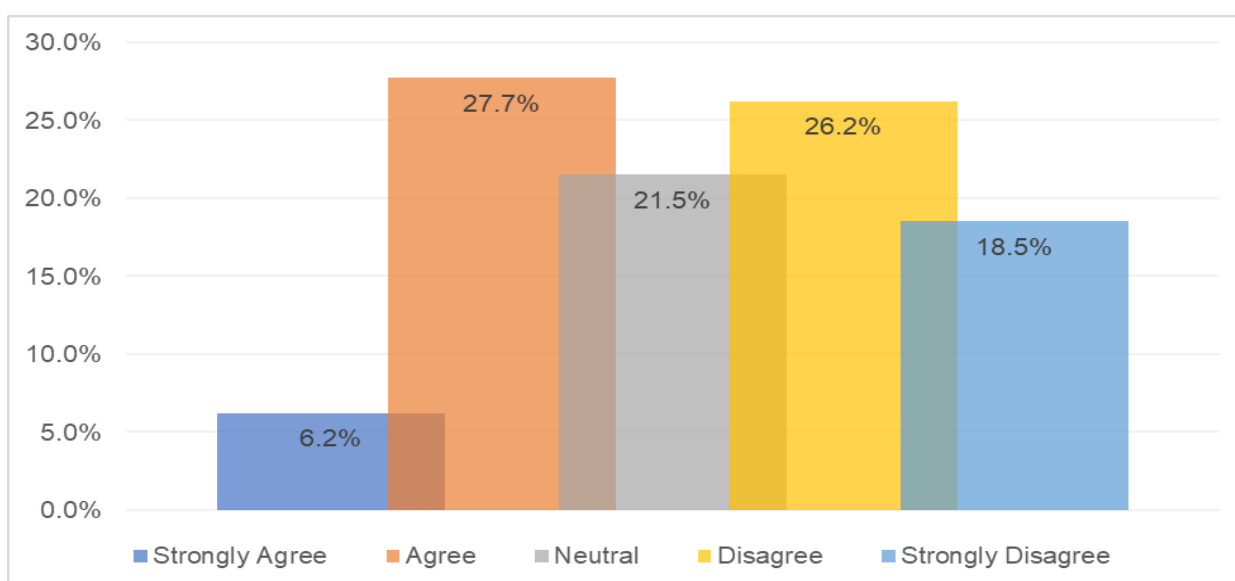
Figure 6.45: Knowledge management measured regularly to assess knowledge management maturity (*n*=65)

6.3.5.12   Knowledge management implementation status

According to the results shown in Table 6.50 and Figure 6.46, 69.2% (*n*=45) of respondents indicated that KM is not fully implemented in their department. As a result, it may be argued that the South African government is not reaping the benefits of KM because it is not fully implemented in all its departments (Ondari-Okemwa & Smith, 2009; Theriou et al., 2011; Igbinovia & Ikenwe, 2017; Hajric, 2018; Koenig, 2018). This explained why KM is treated as an add-on activity rather than a key priority because it is perceived as inefficient and not working.

Table 6.50: Knowledge management is fully implemented in my department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	3	4.6%	4.6%	4.6%
Agree	9	13.8%	13.8%	18.4%
Neutral	8	12.3%	12.3%	30.7%
Disagree	29	44.6%	44.6%	75.3%
Strongly Disagree	16	24.6%	24.6%	100%
Total	65	100%	100%	
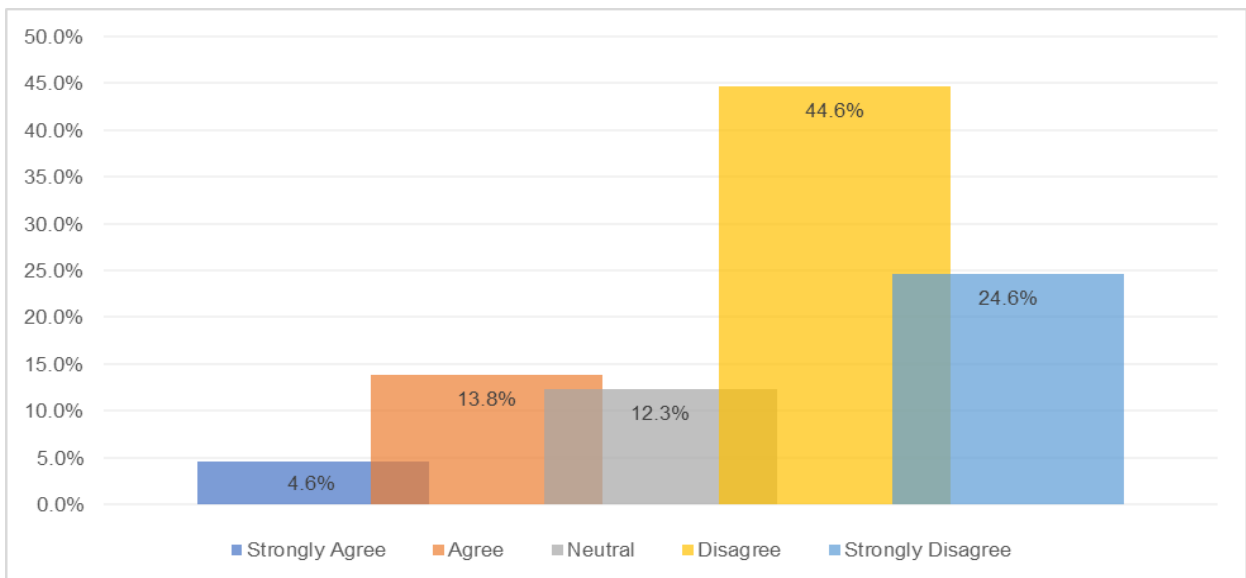
Figure 6.46: Knowledge management is fully implemented in my department (*n*=65)

6.3.6 Sub-objective 5: To explore and identify the South African government's current service delivery frameworks and mechanisms

The themes aligned to Sub-objective 5 are depicted in Figure 6.47. These themes were tested using the survey questionnaire and interview schedule. Sub-objective 5 was achieved by addressing these themes.

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Figure 6.47: Alignment of themes to Sub-objective 5

6.3.6.1 Awareness of service delivery frameworks and mechanisms

Instead of directly asking respondents what the current service delivery frameworks and mechanisms of the South African government were, respondents were asked if their department believed it was critical to regularly reinforce public officials' awareness of the service delivery frameworks and mechanisms. According to Table 6.51 and Figure 6.48, 50% (*n*=32) of respondents agreed. Not all departments were working to raise awareness about service delivery. This is a gap that needed to be addressed. A culture of service must be fostered in government, and this should be always on the minds of all public officials (Murphy, 2017). Part of embedding a service delivery culture is making sure that employees know what their responsibilities are and what mechanisms and frameworks are available to help them provide sustained and consistent service delivery (Murphy, 2017).

Table 6.51: My department believes it is critical to regularly reinforce public officials' awareness of the frameworks and mechanisms used by the government to deliver services

	Frequency	%	Valid %	Cumulative %
Strongly Agree	10	15.4%	15.6%	15.6%
Agree	22	33.8%	34.4%	50.0%
Neutral	17	26.2%	26.6%	76.6%
Disagree	9	13.8%	14.1%	90.7%
Strongly Disagree	6	9.2%	9.4%	100%
Total	64	98.5%	100%	
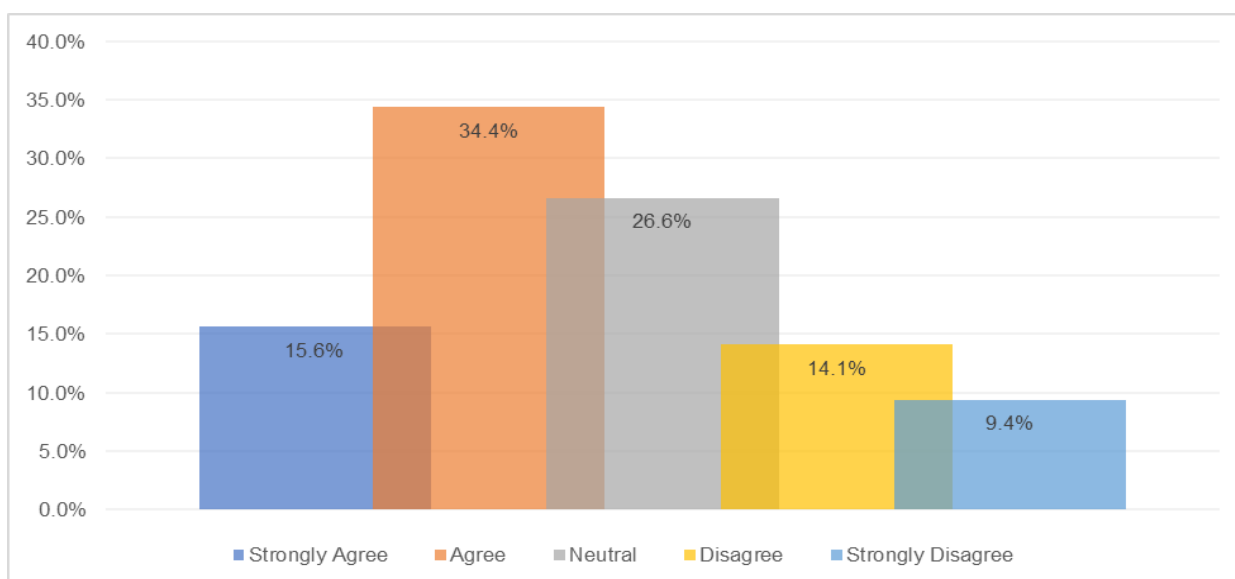
Figure 6.48: My department believes it is critical to regularly reinforce public officials' awareness of the frameworks and mechanisms used by the government to deliver services (*n*=65)

6.3.6.2 Perspective on how Knowledge Management is implemented

This question was asked to establish if respondents were personally committed to making sure the KM implementation is successful. Whether or not they were personally committed depends on how much they perceived their department enabled them to do that. Consequently, when the officials are satisfied, they are more excited about their KM job responsibilities, which is the key to good implementation, as it gives them a sense of purpose, energy and excitement (REACT, 2020). According to Table 6.52 and Figure 6.49, 64.6% (*n*=42) of respondents were dissatisfied with how KM is being implemented in their department.

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Table 6.52: Satisfied with how knowledge management is implemented in the department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	3	4.6%	4.6%	4.6%
Agree	10	15.4%	15.4%	20.0%
Neutral	10	15.4%	15.4%	35.4%
Disagree	27	41.5%	41.5%	76.9%
Strongly Disagree	15	23.1%	23.1%	100%
Total	65	100%	100%	
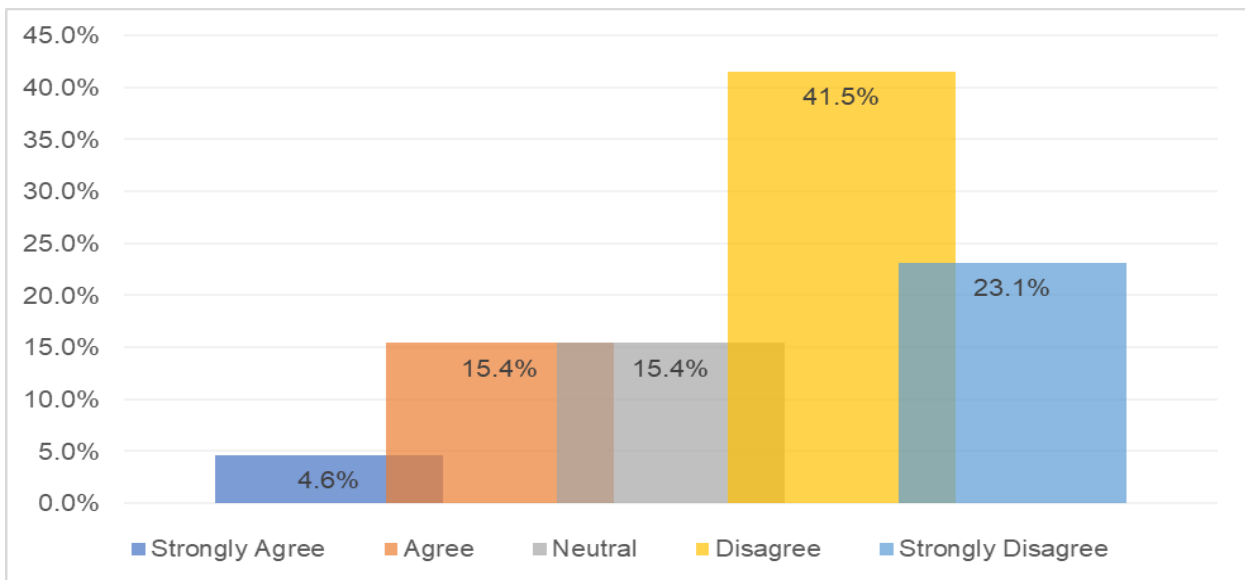
Figure 6.49: Satisfied with how knowledge management is implemented in the department (*n*=65)

Additionally, according to Table 6.53, there is no statistically significant difference between the National or Provincial Government employee groups in terms of the dependent variable "I am satisfied with how KM is being implemented in my department."

Table 6.53: Cross-tabulation of I am satisfied with how knowledge management is being implemented in my department and National or Provincial government employees (*n*=65)

Dependent Variable	Government employee	n	Mean	Std. Deviation	Std. Error Mean
I am satisfied with how Knowledge Management is being implemented in my department.	Provincial	38	2.6	1.6	0.3
	National	27	2.7	1.9	0.4

Since respondents were dissatisfied with how their department is implementing KM, the results indicate that respondents did not feel supported and assisted in conducting this implementation, which explains why the implementation of KM is slow and disjointed.

6.3.6.3   Exposure to government's service delivery frameworks and mechanisms

According to Table 6.54 and Figure 6.50, 50.7% (*n*=33) of respondents said they were exposed to, introduced to, or provided with the government's service delivery frameworks and mechanisms and they know what it is. Interesting though is that 30.8% (*n*=20) of respondents indicated neutral. Either you know or do not know. This shows that the respondents were not sure what government service delivery frameworks and mechanisms were. Adding this statistic with those that agreed, the figure goes up to 49.2% (*n*=32) of respondents. As previously stated, part of embedding a service delivery culture is making sure that employees know what their responsibilities are and what mechanisms and frameworks are available to help them provide sustained and consistent service delivery (Murphy, 2017).

Table 6.54: Never exposed to, introduced to, or provided with government's service delivery frameworks and mechanisms

	Frequency	%	Valid %	Cumulative %
Strongly Agree	3	4.6%	4.6%	4.6%
Agree	9	13.8%	13.8%	18.4%
Neutral	20	30.8%	30.8%	49.2%
Disagree	22	33.8%	33.8%	83.0%
Strongly Disagree	11	16.9%	16.9%	100%
Total	65	100%	100%	
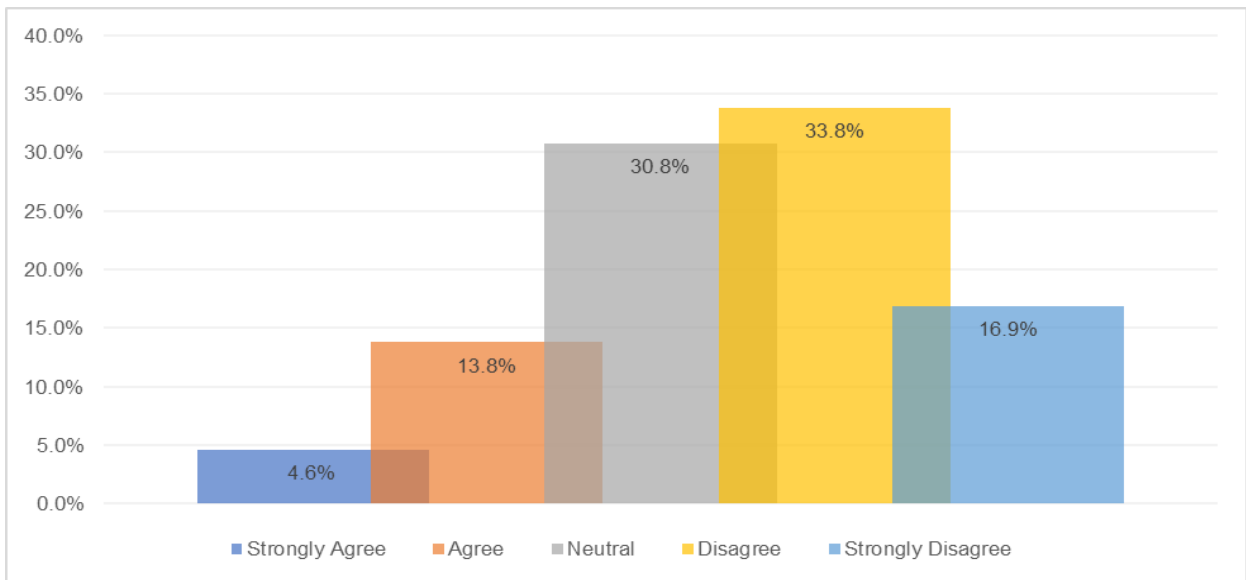
Figure 6.50: Never exposed to, introduced to, or provided with government's service delivery frameworks and mechanisms (*n*=65)

6.3.6.4 Measuring the impact of the government's service delivery frameworks and mechanisms

According to Table 6.55 and Figure 6.51, only 42.2% (*n*=27) of respondents confirmed that the use of service delivery frameworks and mechanisms was regularly measured in their department to determine impact. As previously revealed, a service delivery culture must be embedded in the South African government (Murphy, 2017). To drive this endeavour, proper change management must be employed. The ADKAR model of Prosci is suggested because the R in ADKAR stands for Reinforcement, which is exactly what this endeavour requires to ensure sustained and consistent service delivery (Prosci, 2021).

Table 6.55: Use of service delivery frameworks and mechanisms are regularly measured in my department to determine impact

	Frequency	%	Valid %	Cumulative %
Strongly Agree	6	9.2%	9.4%	9.4%
Agree	21	32.3%	32.8%	42.2%
Neutral	18	27.7%	28.1%	70.3%
Disagree	13	20%	20.3%	90.6%
Strongly Disagree	6	9.2%	9.4%	100%
Total	64	98.5%	100%	
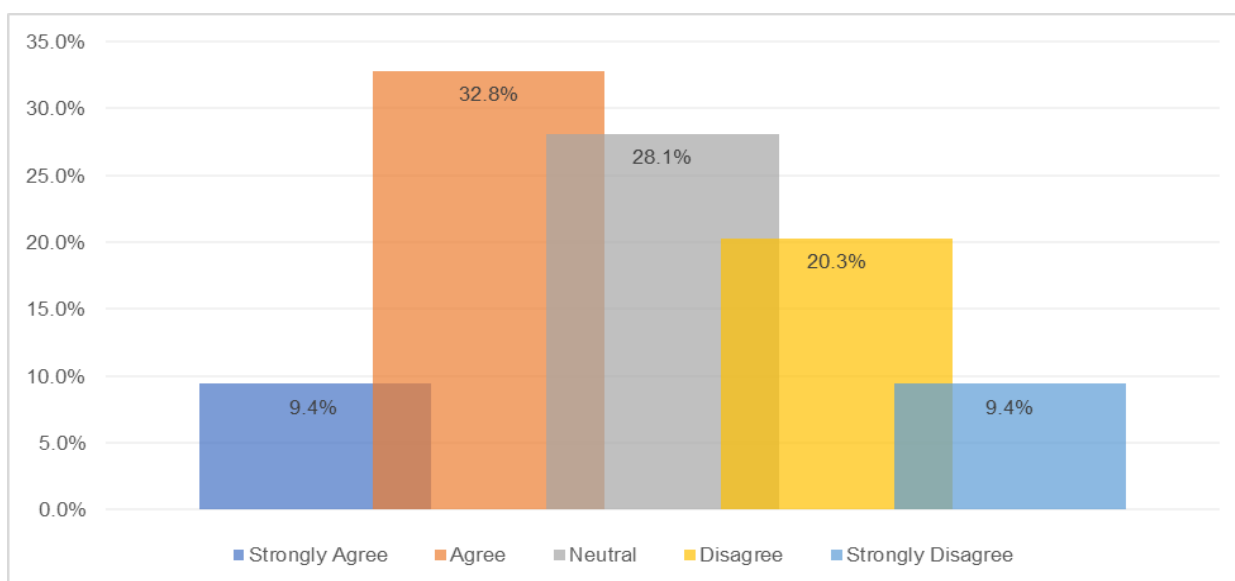
Figure 6.51: The use of service delivery frameworks and mechanisms are regularly measured in my department to determine the impact (*n*=65)

6.3.7 Sub-objective 6: To explore and identify creative and long-term solutions that can improve service delivery in South Africa

The themes aligned to Sub-objective 6 are depicted in Figure 6.52. These themes were tested using the survey questionnaire and interview schedule. Sub-objective 6 was achieved when these themes were addressed.
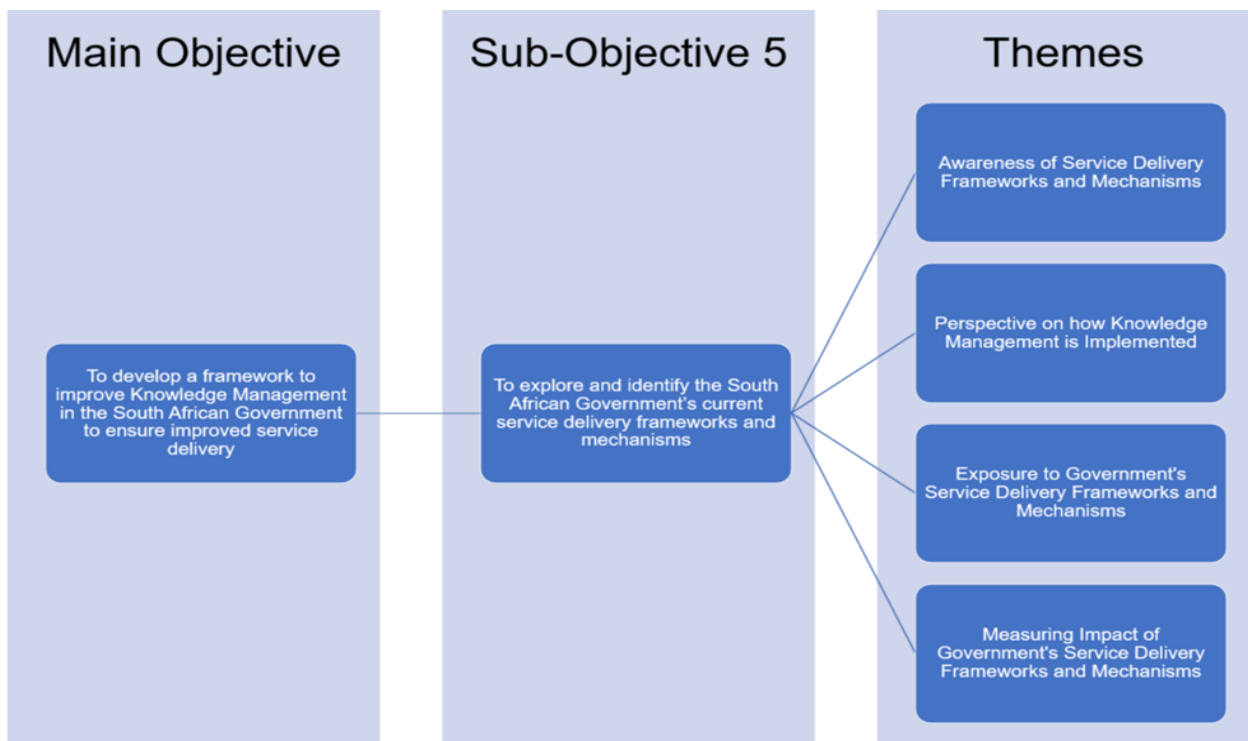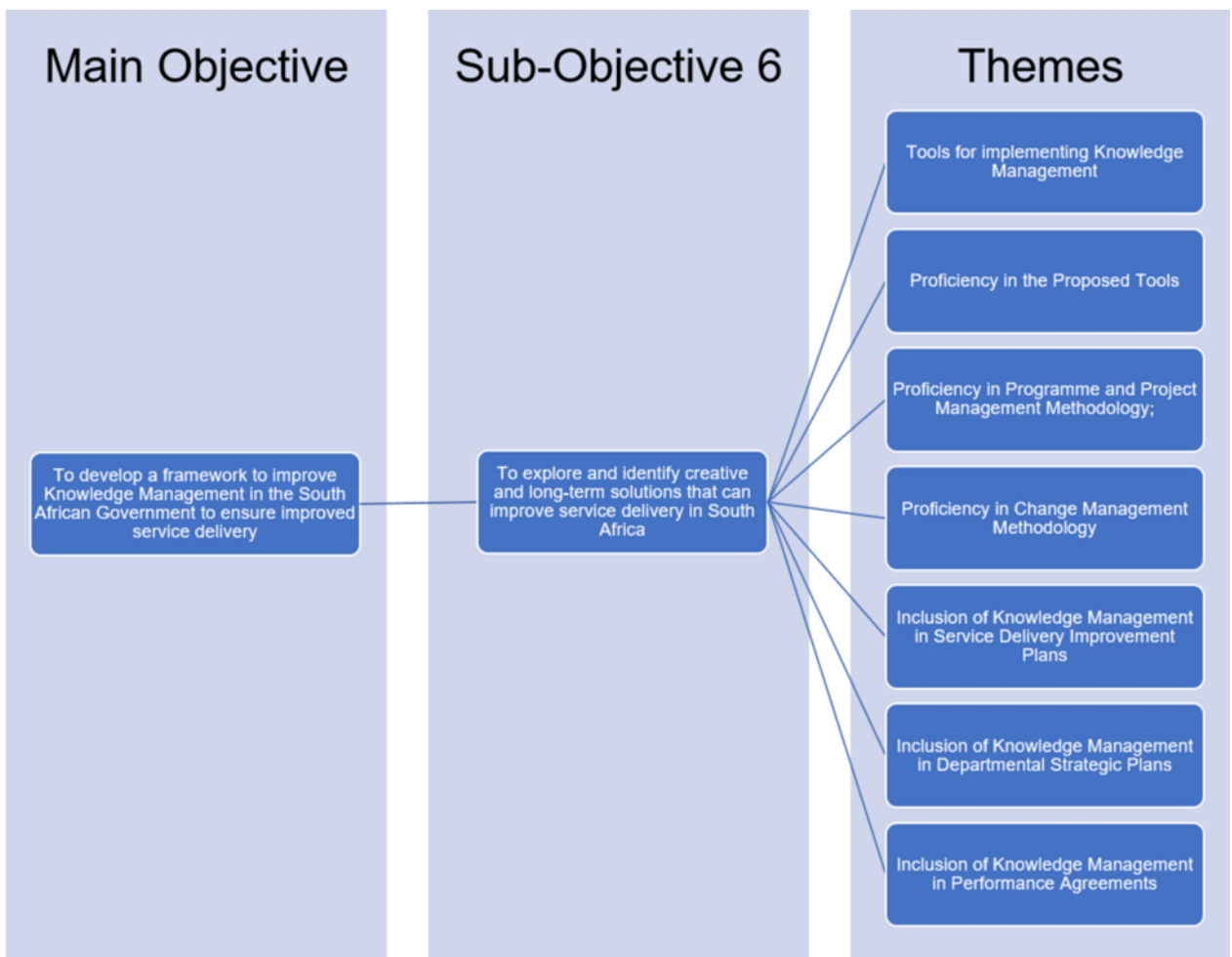
Figure 6.52: Alignment of themes to Sub-objective 6

6.3.7.1 Tools for implementing knowledge management

Tools considered useful for an effective KM implementation according to the literature review are RBM&E, Programme and Project Management, Change Management and Strategic Planning and is presented below. According to the findings, most respondents believe these tools will be quite effective in implementing KM in their department. Additionally, the quality of implementation is critical in achieving outcomes and the proper tools are required for this to occur. If KM is implemented poorly, or even ineffectively, it is unlikely that its objectives will be achieved. The use of useful implementation tools enhances the chance of success (DPSA, 2013).

Results-based monitoring and evaluation

According to Table 6.56 and Figure 6.53, 76.9% (*n*=50) of respondents agreed that RBM&E is a very useful tool for implementing KM in their department.

Table 6.56: Results-based monitoring and evaluation is a very useful tool for implementing knowledge management in my department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	19	29.2%	29.2%	29.2%
Agree	31	47.7%	47.7%	76.9%
Neutral	9	13.8%	13.8%	90.7%
Disagree	5	7.7%	7.7%	98.4%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	
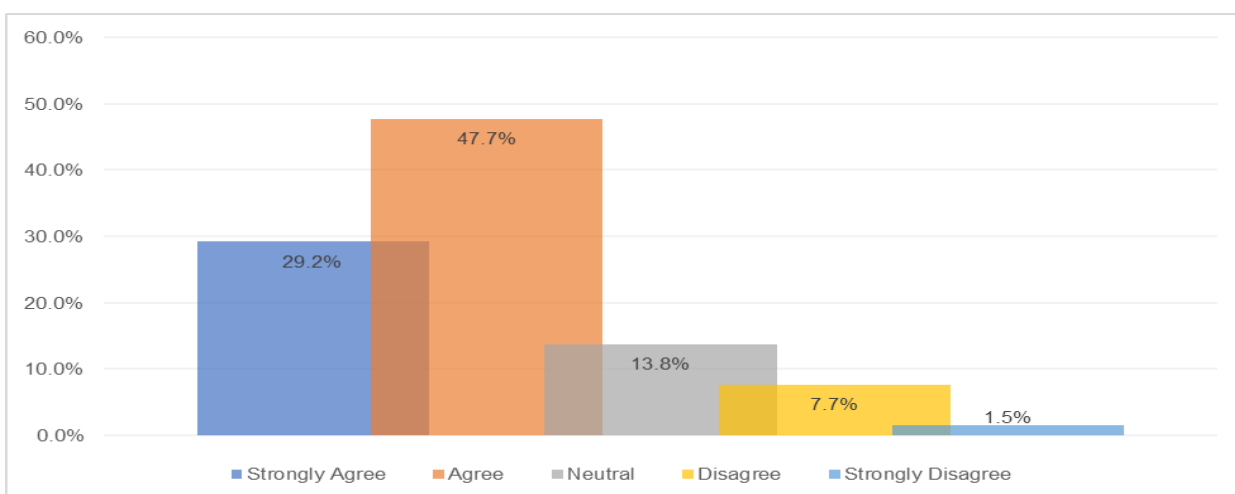
Figure 6.53: Results-based monitoring and evaluation is a very useful tool for implementing knowledge management in my department (*n*=65)

Programme and project management

According to Table 6.57 and Figure 6.54, 76.9% (*n*=50) of respondents agreed that Programme and Project Management is a very useful tool for implementing KM in their department.

Table 6.57: Programme and project management is a very useful tool for implementing knowledge management in my department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	19	29.2%	29.2%	29.2%
Agree	31	47.7%	47.7%	76.9%
Neutral	8	12.3%	12.3%	89.2%
Disagree	6	9.2%	9.2%	98.4%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	
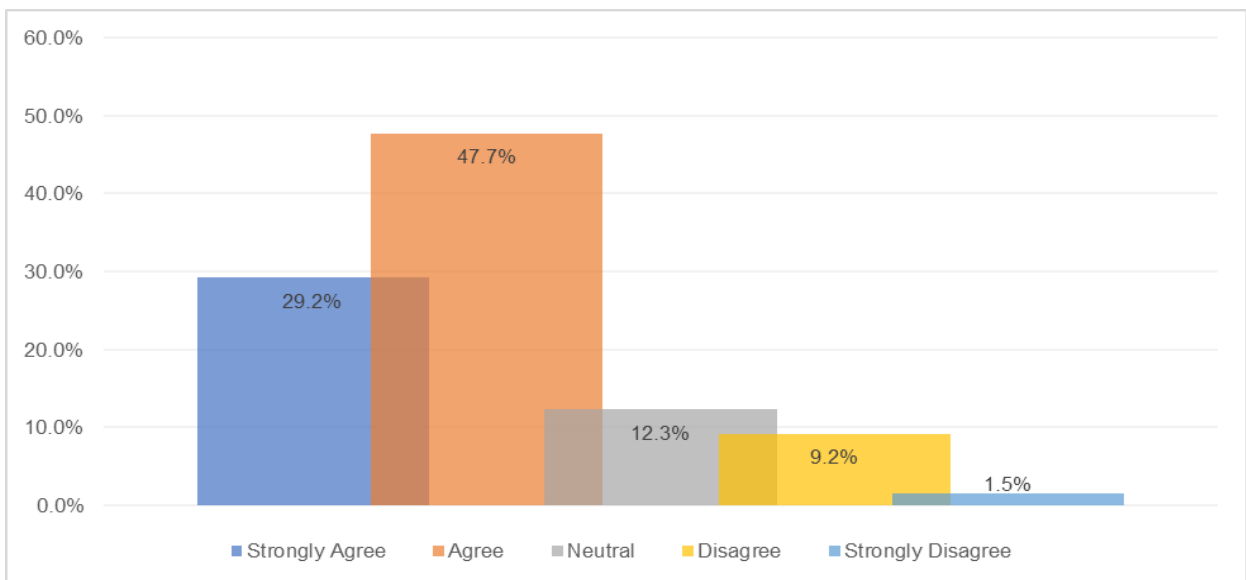
Figure 6.54: Programme and project management is a very useful tool for implementing knowledge management in my department (*n*=65)

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Change management

According to Table 6.58 and Figure 6.55, 80% (*n*=52) of respondents agreed that Change Management is a very useful tool for implementing KM in their department.

Table 6.58: Change management is a very useful tool for implementing knowledge management in my department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	22	33.8%	33.8%	33.8%
Agree	30	46.2%	46.2%	80.0%
Neutral	7	10.8%	10.8%	90.8%
Disagree	5	7.7%	7.7%	98.5%
Strongly Disagree	1	1.5%	1.5%	100%
Total	65	100%	100%	
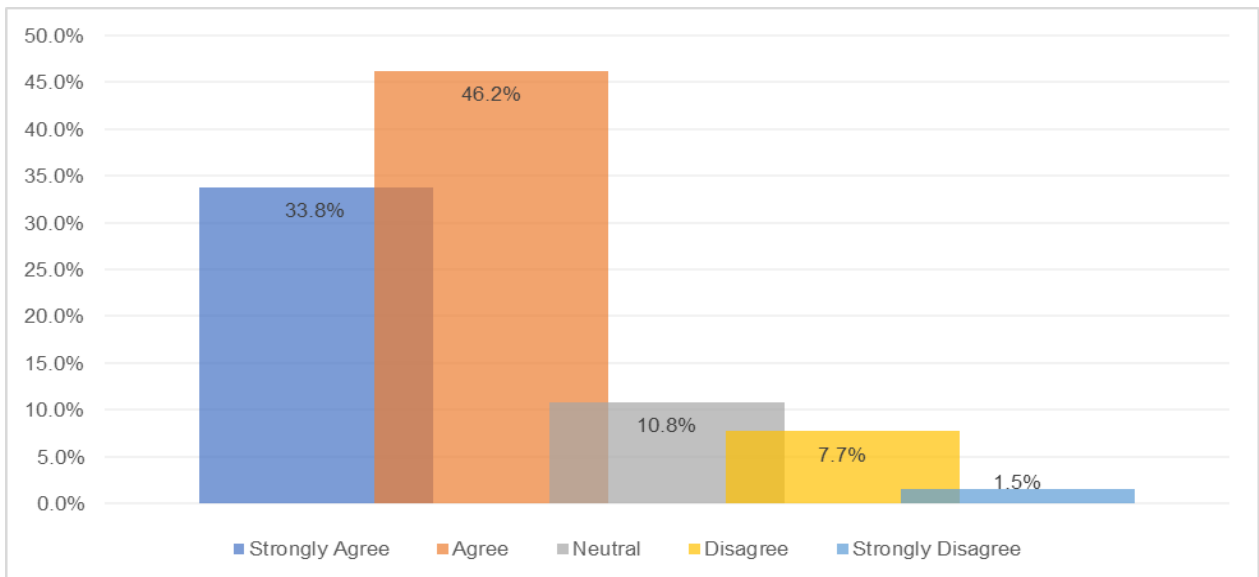
Figure 6.55: Change management is a very useful tool for implementing knowledge management in my department (*n*=65)

Strategic planning

According to Table 6.59 and Figure 6.56, 80% (*n*=52) of respondents agreed that Strategic Planning is a very useful tool for implementing KM in their department.

Table 6.59: Strategic planning is a very useful tool for implementing knowledge management in my department

	Frequency	%	Valid %	Cumulative %
Strongly Agree	24	36.9%	36.9%	36.9%
Agree	28	43.1%	43.1%	80.0%
Neutral	7	10.8%	10.8%	90.8%
Disagree	4	6.2%	6.2%	97.0%
Strongly Disagree	2	3.1%	3.1%	100%
Total	65	100%	100%	
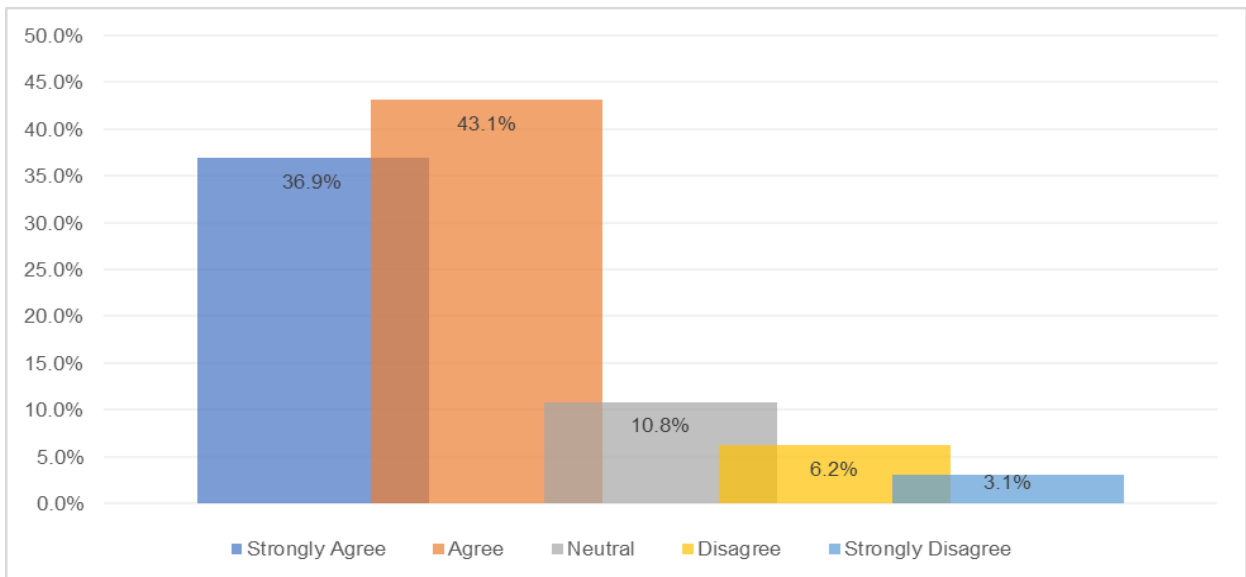
Figure 6.56: Strategic planning is a very useful tool for implementing knowledge management in my department (*n*=65)

6.3.7.2   Proficiency in the proposed tools

How proficient the government officials were in RBM&E, Programme and Project Management, Change Management and Strategic Planning is presented next. Since the need for the tools was established, the next critical factor was to determine how proficient the respondents were in using these tools. Based on the results presented below, most respondents indicated a medium proficiency for the said tools, indicating a gap that must be filled. Their lack of proficiency is an indicator of why KM implementation is slow and disjointed. Hence, it was recommended that when the KMIF is developed, ensuring government officials' proficiency in these tools is a critical component (Promberger & Rauskala, 2003; Kalimullah et al., 2012; El-Ghalayini, 2016).

Results-based monitoring and evaluation

According to Table 6.60 and Figure 6.57, 56.9% (*n*=37) of respondents reported that their proficiency in RBM&E is average (medium).

Table 6.60: Rate your proficiency in results-based monitoring and evaluation (1 is least proficient and 10 most proficient)

Selection	Proficiency	Frequency	%	Valid %	Cumulative %
0	Low	5	7.7%	7.7%	7.7%
1	Low	2	3.1%	3.1%	10.8%
2	Low	3	4.6%	4.6%	15.4%
3	Low	4	6.2%	6.2%	21.6%
4	Medium	10	15.4%	15.4%	37.0%
5	Medium	13	20%	20%	57.0%
6	Medium	9	13.8%	13.8%	70.8%
7	Medium	5	7.7%	7.7%	78.5%
8	High	9	13.8%	13.8%	92.3%
9	High	3	4.6%	4.6%	96.9%
10	High	2	3.1%	3.1%	100%
Total		65	100%	100%	
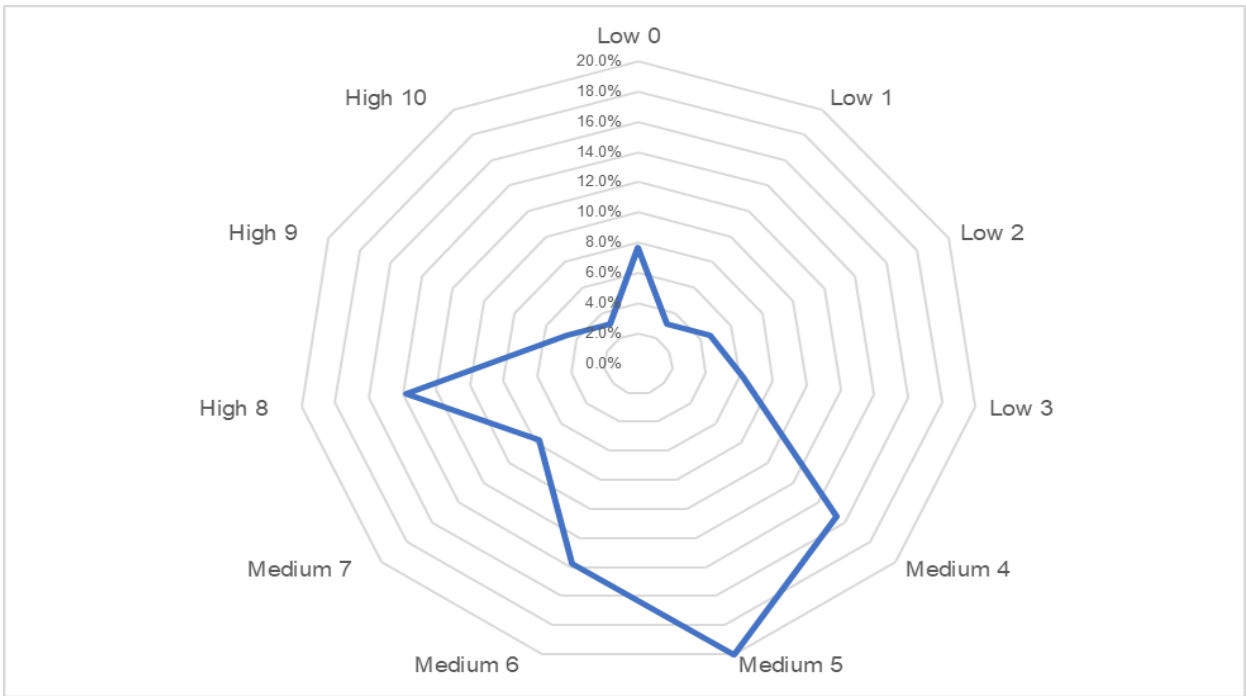
Figure 6.57: Rate your proficiency in results-based monitoring and evaluation (1 is least proficient and 10 most proficient) (*n*=65)

Programme and project management

According to Table 6.61 and Figure 6.58, 58.5% (*n*=38) of respondents reported that their proficiency in Programme and Project Management is average (medium).

Table 6.61: Proficiency rating in programme and project management

Selection	Proficiency	Frequency	%	Valid %	Cumulative %
0	Low	2	3.1%	3.1%	3.1%
1	Low	0	0%	0%	3.1%
2	Low	2	3.1%	3.1%	6.2%
3	Low	2	3.1%	3.1%	9.3%
4	Medium	5	7.7%	7.7%	17.0%
5	Medium	11	16.9%	16.9%	33.9%
6	Medium	15	23.1%	23.1%	57.0%
7	Medium	7	10.8%	10.8%	67.8%
8	High	12	18.5%	18.5%	86.3%
9	High	6	9.2%	9.2%	95.5%
10	High	3	4.6%	4.6%	100%
Total		65	100%	100%	
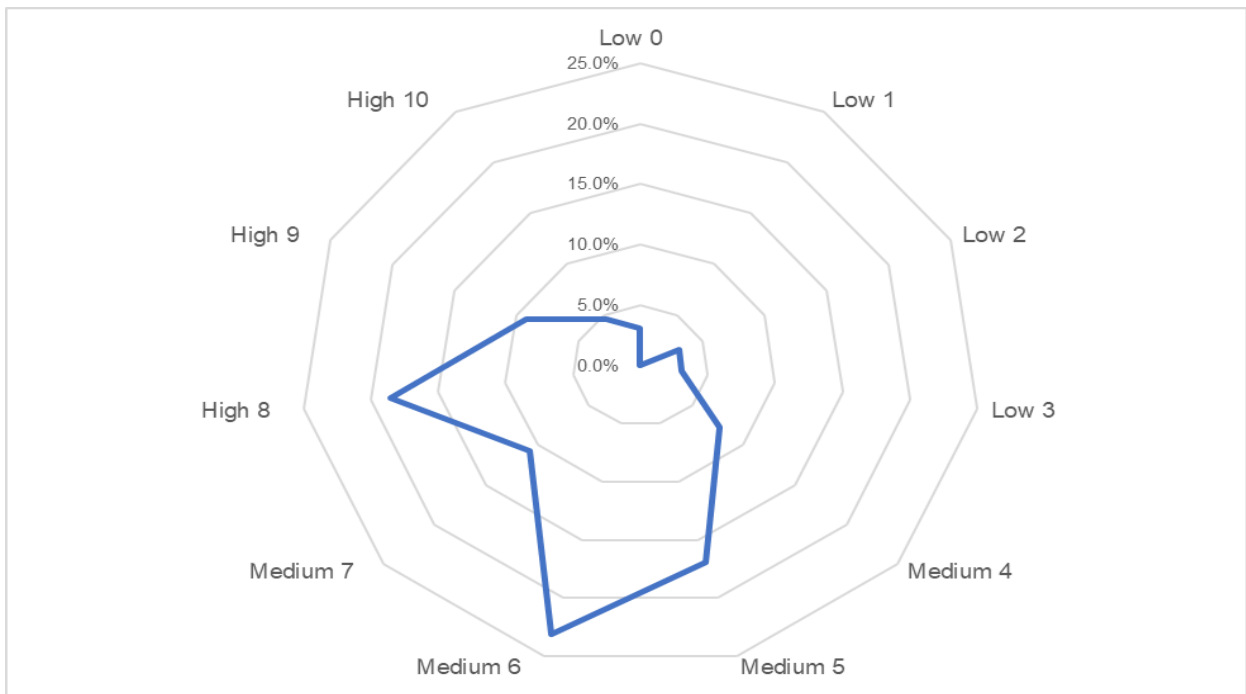
Figure 6.58: Proficiency rating in programme and project management (*n*=65)

Change management

According to Table 6.62 and Figure 6.59, 66.1% (*n*=43) of respondents reported that their proficiency in Change Management is average (medium).

Table 6.62: Proficiency rating in change management

Selection	Proficiency	Frequency	%	Valid %	Cumulative %
0	Low	1	1.5%	1.5%	1.5%
1	Low	0	0%	0%	1.5%
2	Low	2	3.1%	3.1%	4.6%
3	Low	8	12.3%	12.3%	16.9%
4	Medium	5	7.7%	7.7%	24.6%
5	Medium	13	20%	20%	44.6%
6	Medium	16	24.6%	24.6%	69.2%
7	Medium	9	13.8%	13.8%	83.0%
8	High	8	12.3%	12.3%	95.3%
9	High	3	4.6%	4.6%	99.9%
10	High	0	0%	0%	100%
Total		65	100%	100%	
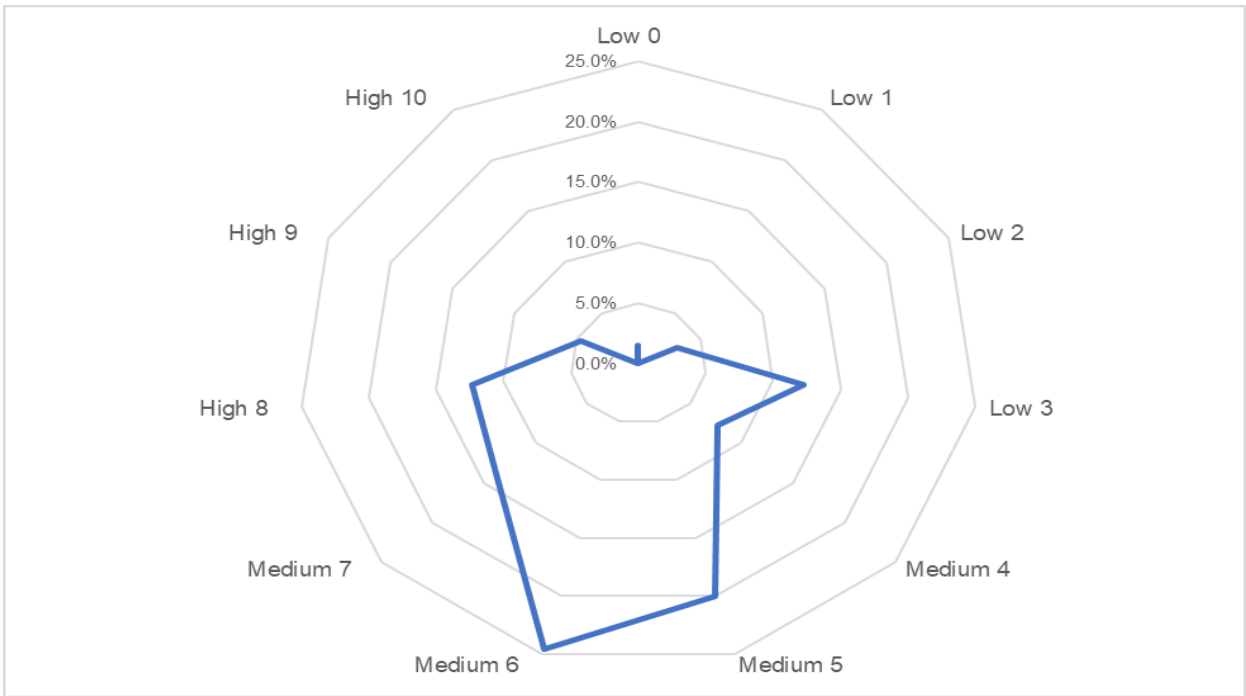
Figure 6.59: Proficiency rating in change management (*n*=65)

Strategic planning

According to Table 6.63 and Figure 6.60, 60% (*n*=39) of respondents reported that their proficiency in Strategic Planning is average (medium).

Table 6.63: Proficiency rating in strategic planning

Selection	Proficiency	Frequency	%	Valid %	Cumulative %
0	Low	2	3.1%	3.1%	3.1%
1	Low	1	1.5%	1.5%	4.6%
2	Low	1	1.5%	1.5%	6.1%
3	Low	2	3.1%	3.1%	9.2%
4	Medium	5	7.7%	7.7%	16.9%
5	Medium	11	16.9%	16.9%	33.8%
6	Medium	16	24.6%	24.6%	58.4%
7	Medium	7	10.8%	10.8%	69.2%
8	High	8	12.3%	12.3%	81.5%
9	High	8	12.3%	12.3%	93.8%
10	High	4	6.2%	6.2%	100%
Total		65	100%	100%	
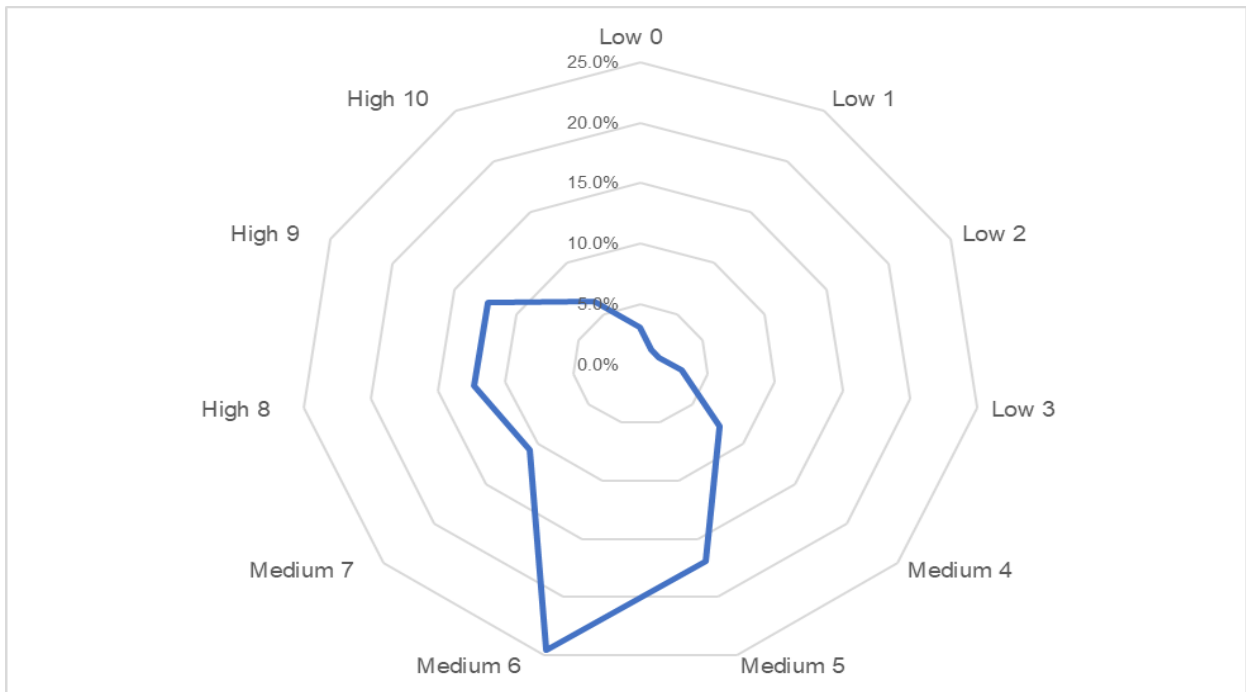
Figure 6.60: Proficiency rating in strategic planning (*n*=65)

6.3.7.3 Proficiency in programme and project management methodology

According to Table 6.64 and Figure 6.61, 40% (*n*=28) of respondents were most proficient in PMBOK, whereas 43.1% (*n*=28) were not proficient in any Programme and Project Management Methodology.

Table 6.64: Programme and project management methodology most proficient in

	Frequency	%	Valid %	Cumulative %
PMBOK	26	40%	40%	40.0%
PRINCE2	6	9.2%	9.2%	49.2%
AGILE	5	7.7%	7.7%	56.9%
None	28	43.1%	43.1%	100.0%
Total	65	100%	100%	
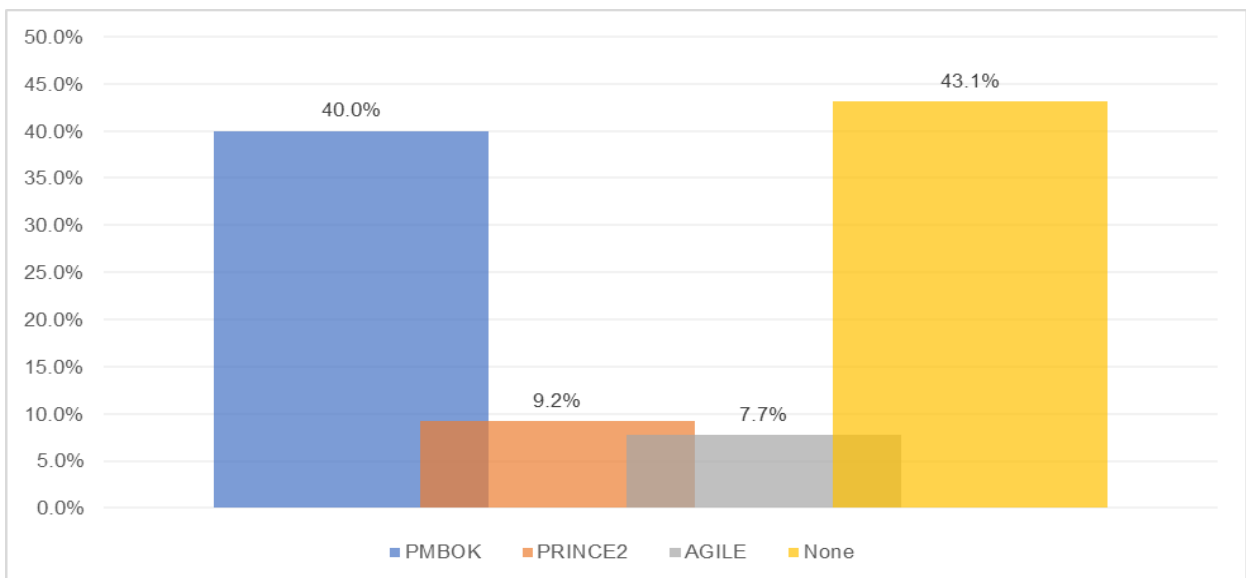
Figure 6.61: Programme and project management methodology most proficient in (*n*=65)

6.3.7.4 Proficiency in change management methodology

According to Table 6.65 and Figure 6.62, 41.5% (*n*=27) of respondents were not proficient in any Change Management Methodology.

Table 6.65: Change management methodology in which most proficient

	Frequency	%	Valid %	Cumulative %
Kotter's 8 Steps Change Management Model	14	21.5%	21.5%	21.5%
ADKAR Prosci	13	20%	20%	41.5%
McKinsey 7s Model	6	9.2%	9.2%	50.7%
Kurt Lewin's Change Management Model	5	7.7%	7.7%	58.4%
None	27	41.5%	41.5%	100%
Total	65	100%	100%	
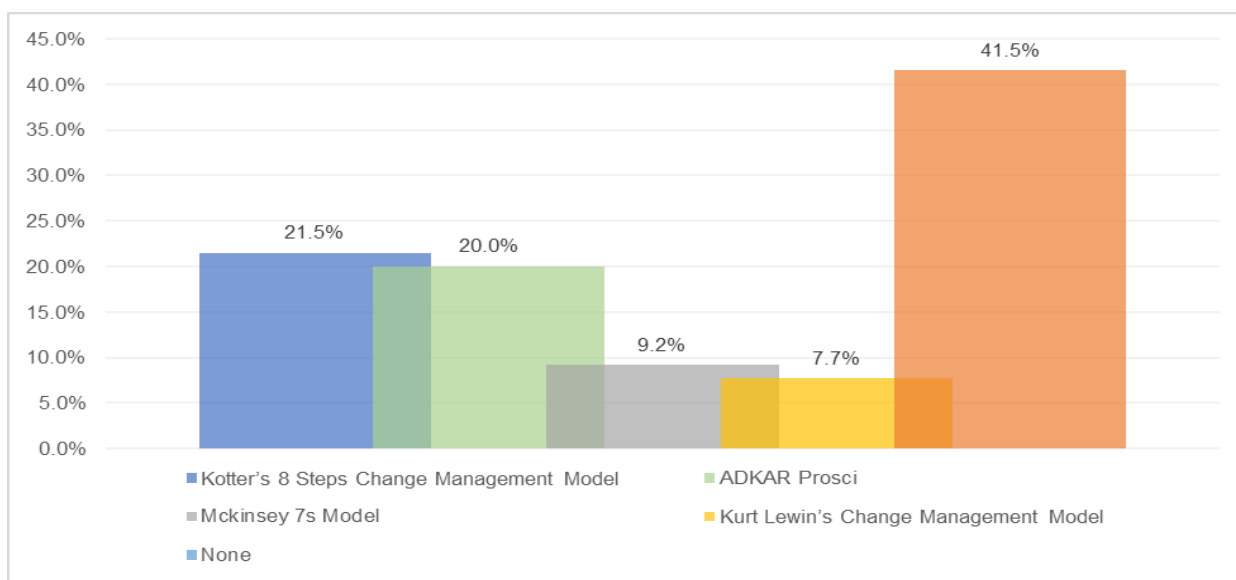
Figure 6.62: Change management methodology in which most proficient (*n*=65)

6.3.7.5   Inclusion of knowledge management in service delivery mechanisms

It was necessary to establish if KM is included in Service Delivery Improvement Plans, Departmental Strategic Plans and Performance Agreements. This was done to determine whether respondents were using the existing service delivery mechanisms to implement KM in their respective departments. According to the literature review, the establishment of these mechanisms was motivated by a desire to assist public officials in making the transition from knowing to doing, as well as to ensure that the most important aspects of service delivery receive the appropriate impetus and commitment (International Labour Office, 2011; DPSA, 2013). The findings presented below to reveal an important issue. Respondents reported that they seldom

use service delivery mechanisms while implementing KM in their respective departments. As a result, the KMIF should incorporate this as one of its components.

Service delivery improvement plans

According to Table 6.66 and Figure 6.63, 53.9% (*n*=35) of respondents said KM is not included in their department's Service Delivery Improvement Plans.

Table 6.66: Inclusion of knowledge management in service delivery improvement plans

	Frequency	%	Valid %	Cumulative %
Strongly Agree	3	4.6%	4.6%	4.6%
Agree	15	23.1%	23.1%	27.7%
Neutral	12	18.5%	18.5%	46.2%
Disagree	28	43.1%	43.1%	89.3%
Strongly Disagree	7	10.8%	10.8%	100%
Total	65	100%	100%	
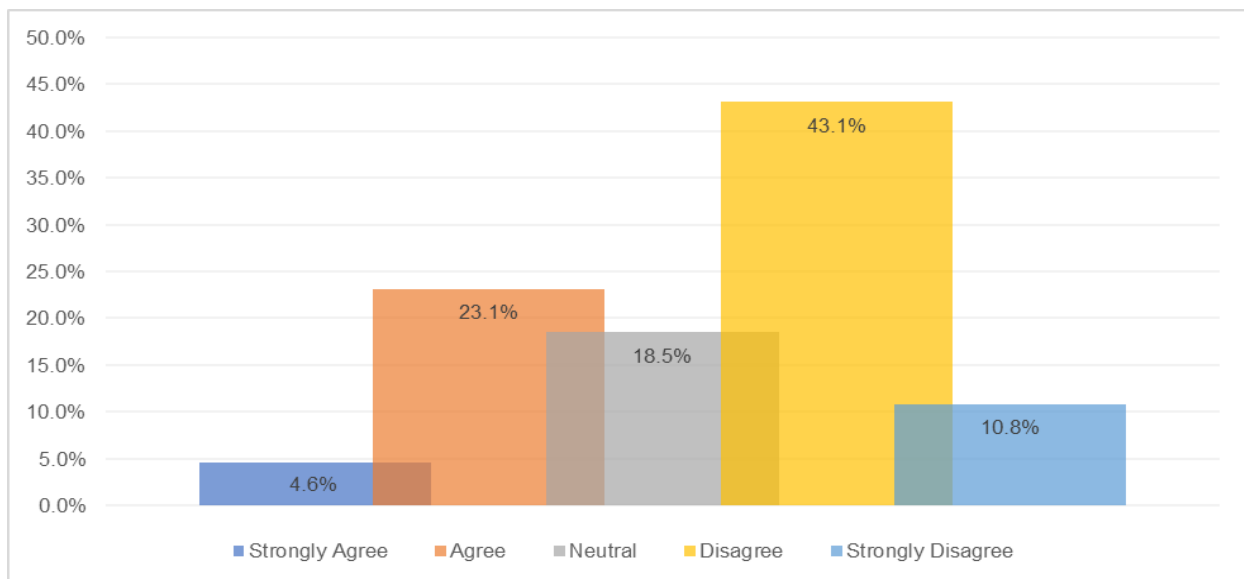
Figure 6.63: Inclusion of knowledge management in service delivery improvement plans (*n*=65)

Departmental strategic plans

According to Table 6.67 and Figure 6.64, 38.5% (*n*=25) of respondents agreed that the implementation of KM is included in their departmental strategic plans, as a service standard/indicator. But 43.1% (*n*=28) of respondents stated that the implementation of KM is not

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included in their department's strategic plans, as a service standard/indicator.

Table 6.67: Inclusion of knowledge management listed in departmental strategic plans, as a service standard/indicator

	Frequency	%	Valid %	Cumulative %
Strongly Agree	8	12.3%	12.3%	12.3%
Agree	17	26.2%	26.2%	38.5%
Neutral	12	18.5%	18.5%	57.0%
Disagree	18	27.7%	27.7%	84.7%
Strongly Disagree	10	15.4%	15.4%	100%
Total	65	100%	100%	
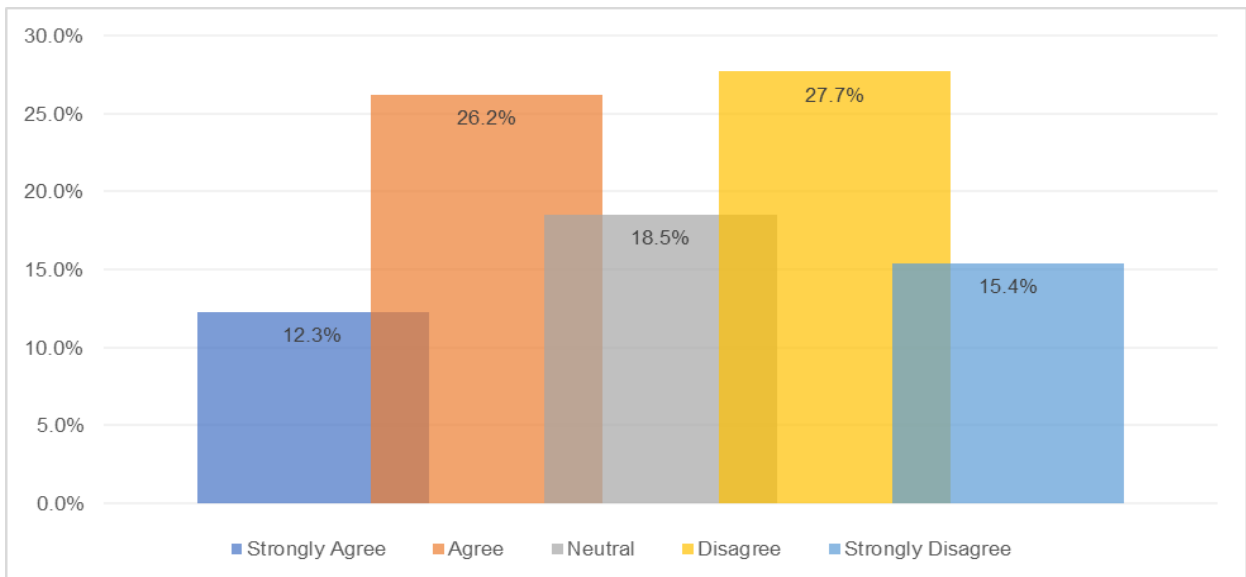
Figure 6.64: inclusion of knowledge management listed in departmental strategic plans, as a service standard/indicator (*n*=65)

Performance agreements

According to Table 6.68 and Figure 6.65, 49.2% (*n*=32) of respondents report that their performance agreements include a KPI for their department's KM implementation initiative. 36.9% (*n*=24) stated that their performance agreements did not and 13.8% (*n*=9) stated neutral.

Table 6.68: Inclusion of knowledge management performance agreements

	Frequency	%	Valid %	Cumulative %
Strongly Agree	13	20%	20%	20.0%
Agree	19	29.2%	29.2%	49.2%
Neutral	9	13.8%	13.8%	63.0%
Disagree	15	23.1%	23.1%	86.1%
Strongly Disagree	9	13.8%	13.8%	100%
Total	65	100%	100%	
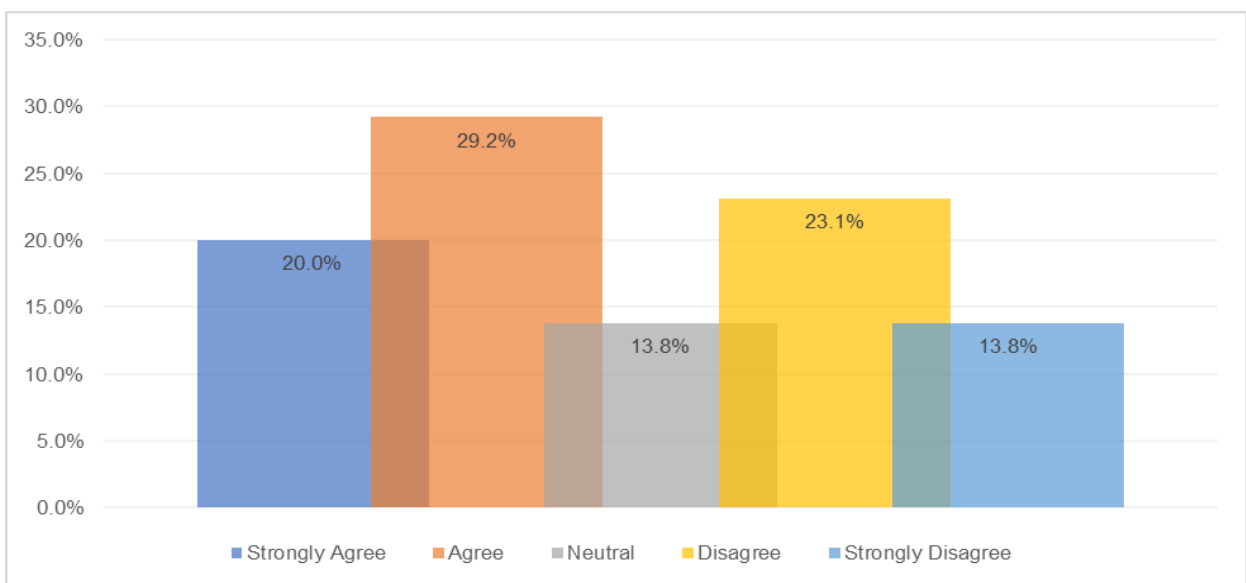
Figure 6.65: Inclusion of knowledge management performance agreements (*n*=65)

6.4 Results: Qualitative personal interview

When doing a mixed analysis, a minimum of one qualitative analysis is required (Combs & Onwuegbuzie, 2010). Consequently, a qualitative interview was performed via the Internet with a DPSA employee who was responsible for coordinating KM implementation across the country and for coordinating the DPSA National Knowledge Management Forum. The outcome of the interview was as follows.

6.4.1 What is your understanding of the role of knowledge management in improving service delivery?

The response to this question by the interviewee was:

> Knowledge Management assists with providing factual and evidence-based knowledge that is needed to bridge the gap between the one who is providing a service and the one who is receiving a service. This means that the government must be knowledgeable of the precise needs of service recipients. For example, if the government wants to build toilets in a certain area, do they have adequate and accurate information about that area? That is, whether it has water and the other right infrastructure required to build toilets. Because making a promise and then failing to deliver on it due to a lack of such knowledge is unacceptable.

The interviewee had a good understanding of the role of KM in improving service delivery and justified the importance of being knowledgeable so that good services are provided. This statement is corroborated by the opinion of Hajric (2018:5):

> Knowledge management is not about capturing, storing, or using knowledge for the sake of capturing, storing, or using knowledge but about ensuring the correct knowledge reaches the correct government official at the correct time so that well-informed decisions are made, among other things.

According to the quantitative survey questionnaire, only 44% to 55% of respondents understand how to use the most basic KM components and tools.

6.4.2 What are the success factors that help contribute to the coordination of knowledge management in all national and provincial government departments?

The interviewee answered:

> It is management buy-in and management understanding of what KM seeks to achieve. The support that is needed for the implementation of KM in government is key. Currently, we have ad-hoc acceptance throughout the government. Some departments are welcoming, and some departments are not. Most leaders do not understand the link between KM and the NDP goals. The championing of KM by the DPSA is key. As a result, the DSPA must understand that the only way to successfully implement KM in the South African government is to ensure that KM is properly staffed and structured inside the DPSA. When I started, we were twelve employees driving KM. Today is is only me.

The interviewee stated that a success factor that will help contribute to successful KM is "management buy-in and management understanding of what KM seeks to achieve." The interviewee also emphasised the lack of support from the very department (DPSA) responsible for embedding KM in the South African government, sharing the same sentiments as the quantitative survey questionnaire findings where 44.6% (n=29) of respondents stated that management is unsure how KM improves service delivery, which is more than those who disagreed (36.9%, n=24) and the rest who answered neutral (18.5%, n=12).

6.4.3 What challenges do you experience when coordinating knowledge management in all national and provincial government departments?

The interviewee answered:

> There are external challenges and internal challenges. External challenges include high staff turnover. I'm never sure who I'm dealing with. Is is always a new employee, as the one who was implementing KM in the respective department left. Either a new employee has been assigned to take over and now has no clue what to do or where we are in the implementation process, or there is no one to take up the task. Also, the consistency by departments to complete the work requested. Internally the challenges are the lack of understanding of the government officials on the KM work that is to be done and the placement of the KM function. KM should also not be placed in an Information Communication Technology (ICT) environment, which is happening. This is to prevent bias in any functional area in the organisation, but it is to support the entire organisation. KM must be placed in the organisation that looks not the issues of government, like the Monitoring and evaluation (M&E) of government and their performance. If this happens, then KM can appropriately advise the government in terms of what to do i.e., policy development, human resources, labour and M&E. From what is extracted in departments, KM will be able to give the correct information. If we are well capacitated, will also be able to develop guides and tools that will capacitate the department, to be able to provide excellent services. The policy papers we develop will provide the correct context and correct content that will inform the government's plans and everything else. Then the governments' strategies will provide value. We, KM, will also at the same time develop tools that will support the government's strategies. The reflection of what is happening at the DPSA coordination centre reflects what is happening at the implementation level (departmental level).

According to the interviewee, the biggest issues were high staff turnover, officials who did not understand what KM is or how to apply it i.e., they lack skills. This includes the DPSA, which is responsible for implementing KM in the South African government that does not provide sufficient human resources to support the implementation. According to the interviewee, all these key challenges explained why KM is incorrectly positioned in the organisation because it is not valued. These statements are supported by the quantitative survey questionnaire findings, namely:

- Only 46.1% (n=30) of respondents claimed their department values KM, which is less than half of the rest;
- 52.3% (n=34) of respondents want training on how to implement KM because they claimed they lack the necessary skills and expertise (64.7%, n=42); and
- 69.2% (n=45) of respondents indicated that their department does not have the human resources to implement KM.

6.4.4   In your opinion, does the senior management staff in the respective national and provincial government departments comprehend how knowledge management, which is available to them, can help improve service delivery? Why?

The interviewee answered:

> No, they do not. Because they do not understand this. One person I spoke with yesterday said, public service managers are not readers. People are confined to achieving targets and they do not want to look at smart ways that can enable them to achieve targets better. When you manage your knowledge properly you won't make mistakes and you won't repeat your projects twice. You will be able to have the relevant information in the right context, to improve what you are doing. But we like going back, referring, yes backwards is good but we do not even learn from the past, for us to improve going forward. We, as the government have confined our learning to only learning as in formal learning. But the informal learning is not taken as key. We are hoarders even at that level. We work in silos, which is the subject KM is trying to break. We do not work in an integrated manner. We ended up abusing resources, wasting resources and redoing work. The learning of previous projects can be used in new projects. To shorten the timeframe and to be able to do well-informed projects.

According to the interviewee, the senior management staff in the respective national and provincial government departments does not comprehend how KM, which is available to them, can help improve service delivery. This statement is supported by the findings of the quantitative survey questionnaire, which indicate that 44.6% (*n*=29) of respondents agreed that management is unsure how KM improves service delivery, which is more than those who disagreed (36.9%, *n*=24) and those who answered neutral (18.5%, *n*=12).

6.4.5   Do you have enough staff to coordinate knowledge management in the South African government?

The interviewee answered:

> No, I am alone. If you are one person, you are unable to do justice to what you are doing. You hold there and there, and you take pieces from there and over there. Previously the unit had twelve people before I came, then we were three and now we are one. This is also a true demonstration of the lack of understanding of the work involved in the coordination of KM in this country.

The interviewee expressed the same sentiments as the quantitative survey questionnaire findings, in which 69.2% (*n*=45) of respondents claimed that their department lacks the human resources to implement KM. Open-ended data, including interview data, concur.

6.4.6   In your opinion, do you think government officials in the respective national and provincial government departments have the necessary expertise/skills to implement knowledge management in the South African government?

The interviewee answered:

> Not all of them. Because departments do not have a sense of KM, its importance and its value, they assign the function of KM to an employee who they think is not busy. All because they want to comply. Also, some departments think that if they have a library, they should assign the librarian to conduct KM work, because to them it fits in the KM space. Yes, records are a building block. What I am trying to say, is that the skilling is not at the place where it is supposed to be. So, the people assigned the KM function in departments are clueless about what KM work they are supposed to do. It is uneven, 80% not, 20% yes.

The interviewee echoes the findings of the quantitative survey questionnaire, in which 52.3% (*n*=34) of respondents stated they require training in KM since they lack the necessary skills and over 50% stated their department does not value KM.

6.4.7 In your opinion, is the implementation of knowledge management in the South African government slow? Why?

The interviewee answered:

> In the public service, the implementation of KM is very slow. Not in the country but in government. On a scale from 1 to 5, 5 being fast and 1 slow, we are at 1.5. This is due to a lack of understanding and the value of KM. It is not a priority even though we are in a developmental state that is supposed to be learning. We think learning can only happen in an academic zone without learning from what we have done and achieved. We want to reach targets but the plans and strategies we develop are not well informed. We develop strategies that are baseless. We have strategic planning as a ritual or as a religion if I may say this. But we do not sit and look at what we are lacking. We do not even understand the knowledge we have as a public service. We also do not know what critical knowledge we need to achieve our objectives. We just say these are our objectives, let's develop operational plans and APPs. Some of these plans are not informed. We plan from an uninformed space.

The implementation of KM is slow, according to the interviewee. The quantitative survey questionnaire confirms this claim, with 72.3% (*n*=47) of respondents agreeing that KM implementation in the South African government Departments is slow.

6.4.8 In your opinion, is the implementation of knowledge management in the South African government disjointed? Why?

The interviewee answered:

> The implementation of KM in the South African government is disjointed because currently, we have departments who do things just for compliance purposes. For example, some departments developed their KM strategies without doing knowledge audits and then some departments hire consultants to develop some of their KM products. I used the KM Maturity Assessments to determine how mature KM is in the various departments. I have done this so that there can be a standardised approach to implementing KM in the South African government.

The implementation of KM is disjointed, according to the interviewee. The quantitative survey questionnaire confirms this claim, with 72.3% (*n*=47) of respondents stating that KM

implementation in the South African government Departments is disjointed (i.e., it is not conducted the same throughout all departments).

6.4.9 Is the organisational structure for knowledge management across government standardised?

The interviewee answered:

"No – it is not. Some departments have a KM unit. It is in different places."

According to the interviewee, the organisational structure for KM across government is not standardised. The quantitative survey questionnaire confirms this claim, with the following open-ended answers: "Knowledge Management must be structured correctly," "Design the Departmental structure to favour KM personnel/unit," and "By now have formalised a staff structure to support KM and equip it with the necessary tools," "Place it correctly in the Organizational Structure and allocate enough relevant human resources to the unit."

6.4.10 What suggestions for improvements to the Knowledge Management Implementation Framework would you make?

The interviewee answered:

> The KMIF must ensure that the KM KPIs must be included in the performance agreements of government officials. Others must be on correct KM staff, correct KM structure, Departmental KM definitions, vision and mission statements.

What the interviewee said is similar to what was derived from the quantitative survey questionnaire's open-ended answer: "Ensure that KM is embedded in the Performance Agreement of each employee to enforce the contribution."

6.5 Chapter summary

Descriptive statistics were used in this chapter to organise, summarise and understandably present the data in a narrative text, supported by frequency tables, clustered column graphs and radar maps. The frequency table showed the relative and absolute frequencies of the variables, as well as percentages, valid percentages and cumulative percentages. These percentages were based on the number of times an event and value occurred. That is, which variables appeared more frequently and less frequently in the data. This set the basis for the discovery of data patterns and trends. Even though the qualitative interview and quantitative survey questionnaire results were reviewed to complement and validate each other, no conclusions were drawn from them in this chapter. This is the role of inferential statistics, which is addressed in the following chapter.

CHAPTER 7

SYNTHESIS, ANALYSES and INTERPRETATION OF RESULTS

7.1   Introduction

The previous chapter presented the results of both the quantitative survey questionnaire and qualitative personal Internet-based interview using descriptive statistics. This chapter is a synthesis, analysis and interpretation of both the quantitative and qualitative findings. The results are carefully merged to expose similarities and differences between the quantitative and qualitative findings. Additionally, when using inductive reasoning, the generalisations made were probable and not guaranteed, as other scholars may interpret the same data differently depending on their perspectives and background.

7.2   Synthesis and analysis of qualitative and quantitative data

Figure 7.1 depicts a data analysis plan diagram listing three steps. Step 1 was completed in the previous chapters. Step 2, the merging of qualitative and quantitative data, is depicted in Table 7.1 below and shows the alignment of the research sub-objectives, themes, literature review, survey questionnaire and the interview. Only the most significant qualitative and quantitative findings that addressed the research sub-objectives were extracted, merged (synthesised) and analysed. In the third and last step, the merged (analysed) findings are interpreted and generalisations pertinent to the research sub-questions are made.
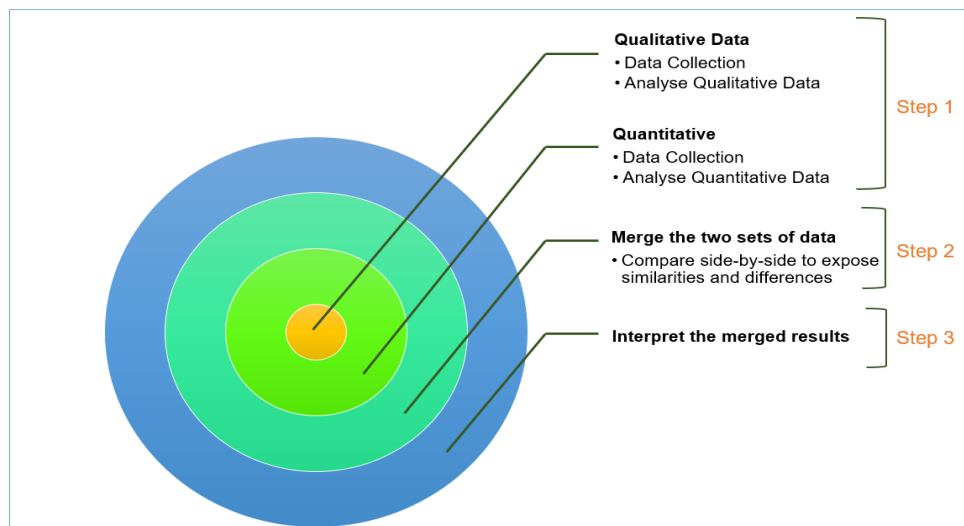
Figure 7.1: Data analysis plan - triangulation using a mixed-method design
Source: Adapted from Hediansah and Surjono (2019:4) and Williams et al. (2018:3)

Table 7.1: Merging of qualitative and quantitative findings

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
• Sub-objective 1: To explore Knowledge Management, its components and how it is designed to improve service delivery	• Knowledge Management lifecycle familiarity; • Knowledge Management components and tools familiarity; • Relationship between Knowledge Management and service delivery; • Shared Knowledge Management Definition and Goal; • Understanding the Importance of Enterprise Content Management; • Understanding the importance of Community of Practice Initiatives • Understanding the importance of Lessons Learned Initiatives; • Employees' skills in using basic Knowledge Management tools.	• Knowledge Management is so diverse and complex, that there is no universally accepted definition of Knowledge Management – capture, store, use Knowledge. • When Knowledge Management is done well, knowledge is easy to find, store and share with the rest of the workforce. When Knowledge Management is not done well, it is hard to find, store, or share knowledge with the rest of the workforce. This leads to bad decisions and bad governance. • The basic Knowledge Management components are: ○ Enterprise Content Management; ○ Expertise Locator System; ○ Lessons Learned; ○ Communities of Practice; and ○ Knowledge Retention and Retirees.	• 89.2% (*n*=58) said Knowledge Management is critical to improving service. • 70.7% (*n*=46 stated that they understand and were familiar with Knowledge Management, its components and its tools. • 87.7% (*n*=57) believe that Community of Practices Initiatives is not a waste of everyone's time; • 95.4% (*n*=62) agreed that all departments must have an Enterprise Content Management solution; • Only 27.7% (*n*=18) stated that they were skilled in Expertise Locator Systems; and • A statistically significant relationship exists between 'Management is unsure how Knowledge Management improves service delivery,' and 'I am satisfied with how Knowledge Management is being	• "Knowledge Management assists with providing factual and evidence-based knowledge that is needed to bridge the gap between the one who is providing a service and the one who is receiving a service. This means that the government must be knowledgeable of the precise needs of service recipients."	• Knowledge management is so diverse and complex, that there is no universally accepted definition of Knowledge Management and the simplest way to comprehend what Knowledge Management is, is to remember the following three points: ○ Knowledge management is not about accumulating knowledge for the sake of accumulating knowledge; ○ the right information must reach the right individual at the right time; and ○ the ultimate goal of Knowledge Management is to add value to an organization through well-informed decision-making so that organizational objectives can be achieved i.e., the gap between the one who is providing a service and the one who is receiving a service is reduced. • A statistically significant finding is that only 27.7% (*n*=18) stated that they were skilled in Expertise Locator Systems. • One of the most widely discussed types of explicit knowledge-sharing tools in the Knowledge management literature is Expertise Locator Systems. • The fact that most respondents were unfamiliar with Expertise Locator Systems suggests a significant knowledge gap and unequivocally indicates that the vast majority of South African government departments lack this basic

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments

		• Advantages of Knowledge Management:
		   o Eliminate the time, money and resource wastage by allowing informed decision-making and reducing knowledge duplication;
		   o Assist citizens in successfully participating in public decision-making;
		   o Increase the competitiveness of society's intellectual powers;
		   o Create a knowledge-based workforce that is competitive;
		   o Speed up the ability to make organizations work smarter;
		   o Enable the government to "do more with less;"
		   o Address the skills gap;
		   o Empower employees to grow and innovate;
		   o Facilitate government to be faster and more efficient;
		   o Reduce duplication of effort;
			implemented in my department.'		component of Knowledge Management.
					• Knowledge management is designed to use the intellectual capital of government to increase efficiency through improved decision-making.
					• Knowledge management implementation in the South African government is slow and disjointed and as a result, the benefit of Knowledge Management cannot be fully realised because:
					   o Lack of skill in basic Knowledge Management components and tools;
					   o Expertise Locator Systems not implemented in all departments;
					   o Government officials were not knowledgeable of the precise needs of service recipients.
					• The core benefit of Knowledge Management is that it improves service delivery.

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
		○ Prevent mistakes or malpractice; ○ Improve processes and work methods; and ○ Reduce dependency on consultants.			
• Sub-objective 2: To identify the factors that contribute to or deter the implementation of Knowledge Management in the South African government	• Implementation skills and expertise; • Departmental Knowledge Management vision and mission; • A management perspective on Knowledge Management and Service Delivery; • Sufficient human resources in departments; and • Other potential Implementation Issues.	• Service Delivery mechanisms were developed to help the South African government react to public expectations more effectively. • One of the most important reasons for the establishment of these mechanisms was to address a challenging task faced by the South African government, which was to move public officials from "knowing" to "doing", which implied that a substantial proportion of public officials lacked implementation skills. • Knowledge Management provides new alternatives, skills and activities that have the potential to have a considerable influence on and aid the South African government to be	• 52.3% (*n*=34) request Knowledge Management training because they feel they lack the necessary skills; • 64.7% (*n*=42) feel they have the necessary expertise to implement Knowledge Management in their department; • 81.5% (*n*=53) stated they need a framework to guide them on how to implement Knowledge Management in their department; • 44.6% (*n*=29) agreed that management is unsure how Knowledge Management improves service delivery, which is more than those who disagreed (36.9%, *n*=24). The rest answered neutral (18.5%, *n*=12).	• "It is management buy-in and management understanding of what Knowledge Management seeks to achieve. The support that is needed for the implementation of Knowledge Management in government is key. Currently, we have ad-hoc acceptance throughout the government…Most leaders do not understand the link between Knowledge Management and the NDP goals. The championing of Knowledge Management by the DPSA is key. As a result, the DPSA must understand that the only way to successfully implement Knowledge Management in the South African government is to	• There is a clear distinction between knowing how to implement Knowledge Management and implementing it. If officials knew how to practically implement Knowledge Management in their department, a high number of respondents would not have requested a framework as a guide; • The reason the "implementation of Knowledge Management in the South African government" is slow and disjointed is that the wrong perspective is at play. Hence, the two conflicting viewpoints on the nature of Public Administration, integral and managerial perspectives, according to the literature review must be regarded as factors that either contribute to or deters the "implementation of Knowledge Management in the South African government." • Distinct benefits to implementing Knowledge Management in the South African government exist and Knowledge Management provides new alternatives, skills and activities that have the potential to have a considerable influence on and aid the South African government to be competitive, function well and achieve the targets of its NDP 2030; • Service Delivery mechanisms (were a significant factor that contributes to

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
		competitive, function well and achieve the targets of its NDP 2030. • Two conflicting viewpoints on the nature of Public Administration, integral and managerial perspectives must be regarded as factors that either contribute to or deters the "implementation of Knowledge Management in the South African government."		ensure that Knowledge Management is properly staffed and structured inside the DPSA. When I started, we were twelve employees driving Knowledge Management. Today it is only me;" • "…high staff turnover. I am never sure who I am dealing with. It is always a new employee, as the one who was implementing Knowledge Management in the respective department left. Either a new employee has been assigned to take over and now has no clue what to do or where we are in the implementation process, or there is no one to take up the task. Also, the consistency by departments to complete the work requested. Internally the challenges are the lack of understanding of the government officials on the Knowledge Management work	the implementation of Knowledge Management; • Lack of implementation skills is a significant deterrent; • Respondents' implementation skills and expertise must be assessed; • The managerial perspective will not be as effective as the integral perspective in terms of implementation. This lends credence to the literature review's contention that the implementation of Knowledge Management in the South African government would be more successful with an integrated approach that includes a collaborative effort of all team members rather than simply allowing it to be driven from the top down; • Lack of management buy-in for Knowledge Management because management does not understand how Knowledge Management improves service delivery, how it is linked with the NDP goals, or what Knowledge Management intends to achieve overall; • A significant finding is that the DPSA, which is responsible for driving Knowledge Management from the top-down, is not leading by example. If they were, they would have a fully staffed and structured unit that will drive Knowledge Management in this country; • Other factors that deter the implementation of Knowledge Management in the South African government were identified, namely: ○ Lack of departmental vision and mission;

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
				that is to be done and the placement of the Knowledge Management function...If we are well capacitated, will also be able to develop guides and tools that will capacitate the department to provide excellent services."	o Lack of value placed on Knowledge Management by management o Lack of implementation training o Lack of human resources; o Lack of management support o Lack of implementation skills o High staff turnover o Incorrect placement of Knowledge Management • The DPSA National Knowledge Management Office limitations.
• Sub-objective 3: To determine how the implementation of a Knowledge Management framework can improve service delivery in the South African government.	• Need for a Knowledge Management Implementation Framework; • Status of Knowledge Management in the South African government; and • Knowledge Management and improved Service Delivery.	• Institutional coherence and standardisation will happen throughout all national and provincial government departments because of this framework. • Service delivery will be improved.	• 81.5% (*n*=53) want such a framework to help guide them implement Knowledge Management in their department; • 95.4% (*n*=62) believe that such a framework will help them not only fully implement Knowledge Management in their respective departments, but it will help improve service delivery in the South African government; • 76.9% (*n*=50) believe that with this framework institutional coherence and standardisation will happen throughout all national and provincial	• "We do not work in an integrated manner. We ended up abusing resources, wasting resources and redoing work. The learning of previous projects can be used in new projects. To shorten the timeframe and to be able to do well-informed projects."	• Knowledge Management Implementation Framework is needed. • This framework will assist respondents in fully implementing Knowledge Management in their departments. • Knowledge Management Implementation Framework will ensure institutional coherence and standardisation across all national and provincial government departments. • Knowledge Management Implementation Framework most importantly will aid in improving service delivery in the South African government.

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
			government departments; and • 69.2% (*n*=45) believe Knowledge Management will be fully implemented in their department.		
• Sub-objective 4: To ascertain the extent of the implementation of Knowledge Management in the South African government	• Knowledge Management Critical Success Factors: ○ Knowledge Management Objective; ○ Knowledge Management Pillars (People, Process, Technology); and ○ Knowledge Management Enablers. • Focus will be: ○ Knowledge Management Strategy; ○ Knowledge Management Strategy Promotes Skills Development; ○ Implementation of Knowledge Management Strategy; ○ Knowledge Management Strategy Promotes Learning and Innovation;	• It is easier to tell if government officials follow the Knowledge Management systems that are in place than it is to see if people share their knowledge. • In other words, the most effective way to determine to what extent Knowledge Management is implemented in the South African government is to assess the status of the Knowledge Management Critical Success Factors in departments. • In this study, the Knowledge Management Critical Success Factors are three distinct but interrelated components: Knowledge Management Objectives, Knowledge Management Pillars and Knowledge Management	• 76.9% (*n*=50) said that their department has a shared Knowledge Management definition and is working toward the same Knowledge Management Goal (objective) as the rest of all the other national and provincial government departments; • 64.6% (*n*=42) were unsatisfied with the way Knowledge Management is being implemented in their department; • Although most departments (67.7%, *n*=44) stated that they have a Knowledge Management Strategy and that it will enable their department to become a learning and innovative organization (61.5%, *n*=40), barely half of these departments stated their strategy is strategically	• "In the public service, the implementation of Knowledge Management is very slow…We want to reach targets but the plans and strategies we develop are not well informed...We plan from an uninformed space…The implementation of Knowledge Management in the South African government is disjointed because currently, we have departments who do things just for compliance purposes...some departments developed their Knowledge Management strategies without doing knowledge audits and then some departments hire consultants to develop some of their Knowledge Management	• Knowledge Management is not fully implemented in most departments of the South African government; • Knowledge Management Critical Success Factors were an integral aspect of the successful implementation of Knowledge Management in the South African government and ignorance of this will hinder the South African government's efforts to successfully implement Knowledge Management; • The culture of Knowledge Management in the South African government is one of dissatisfaction i.e., poor Knowledge Management culture exists; • No baseline Knowledge Management maturity assessments were done. • The situational analysis must be undertaken to ascertain not only whether employees were adhering to existing Knowledge Management systems but also whether these systems exist. • The situational analysis must assess the three components of the Knowledge Management Critical Success Factors: Knowledge Management Objective, Knowledge Management Pillars (People, Process, Technology) and Knowledge Management Enablers.

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
	o Knowledge Management Strategy aligned with DPSA National Knowledge Management Strategy Framework; o Dedicated Knowledge Management Unit; o Clearly Defined Knowledge Management Responsibilities; o Knowledge Management Activity; o Knowledge Management Implementation Framework; o Institutional Coherence and Standardisation in the South Africa Government; o Knowledge Management Maturity; and o Knowledge Management Implementation Status.	Enablers. Collectively, these three factors collaborate to embed a Knowledge Management Culture in the South African government.	aligned with the DPSA's National Knowledge Management Strategy Framework (50.8%, n=44), that their strategy is being implemented in their department (52.3%, n=34) and that their Knowledge Management Strategy supports skill development (55.4%, n=36); • Regardless of having a dedicated unit to implement Knowledge Management (60%, n=39) with clearly defined Knowledge Management responsibilities (63.1%, n=41), Knowledge Management is not fully implemented in most departments of the South African government (69.2%, n=45). • Reasons provided by respondents (sic): "support it by investing in human resources", "provide basic resources to ensure that it is properly institutionalised and sustainable", "ensure we have all the	products." The interviewee also said expressed her dissatisfaction and unhappiness as follows: "If you are one person, you are unable to do justice to what you are doing. You hold there and there, and you take pieces from there and over there. Previously the unit had twelve people before I came, then we were three and now we are one. This is also a true demonstration of the lack of understanding of the work involved in the coordination of Knowledge Management in this country."	• Apart from determining whether a department has implemented the five essential Knowledge Management tools, which are Enterprise Content Management, Expertise Locator System, Lessons Learned initiatives, Communities of Practice initiatives and Knowledge Retention and Retirees initiatives, the following must be measured regularly in each department: o Knowledge Management Strategy; o Knowledge Management Strategy Promotes Skills Development; o Implementation of Knowledge Management Strategy; o Knowledge Management Strategy Promotes Learning and Innovation; o Knowledge Management Strategy aligned with DPSA National Knowledge Management Strategy Framework; o Dedicated Knowledge Management Unit; o Clearly Defined Knowledge Management Responsibilities; o Knowledge Management Activity; o Knowledge Management Implementation Framework; o Institutional Coherence and Standardisation in the South Africa Government; o Knowledge Management Maturity; and o Knowledge Management Implementation Status. • Restructuring Knowledge Management in the South African government departments: • This includes properly locating Knowledge Management within the

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
			resources needed to implement the tools and to include them in the APP and strategic plan of the department" and "place it correctly in the organizational structure and allocate enough relevant human resources." • Lack of human resources is the main factor for the dissatisfaction (69.2%, n=45).		department, providing additional Knowledge Management staff, measuring Knowledge Management maturity regularly and not treating Knowledge Management as an add-on activity.
• Sub-objective 5: To explore and identify the South African government's current service delivery frameworks and mechanisms	• Awareness of Service Delivery Frameworks and Mechanisms; • Perspective on how Knowledge Management is Implemented; • Exposure to Government's Service Delivery Frameworks and Mechanisms; and • Measuring Impact of Government's Service Delivery Frameworks and Mechanisms.	• Frameworks are an extensive corpus of enabling laws such as Acts, Regulations, White Papers and bargaining council judgments, among others. Everything centres around the nine ideals listed in section 195 of Chapter 10 of the South African Constitution, 1996. • The Service Delivery Mechanisms are the Batho Pele Revitalisation Strategy, Service Delivery Improvement Plans, the Public Service Charter and Service Standards	• Only 50.7% (n=33) were aware of the various service delivery frameworks and mechanisms; • Only half (50%, n=32) believe that their department must regularly reinforce the awareness of these service delivery frameworks and mechanisms; and • Only 42.2% (n=27) confirmed that they regularly measure the impact of these frameworks and mechanisms on service delivery.	• "If you are one person, you are unable to do justice to what you are doing. You hold there and there, and you take pieces from there and over there. Previously the unit had twelve people before I came, then we were three and now we are one. This is also a true demonstration of the lack of understanding of the work involved in the coordination of Knowledge Management in this country." • "They do not want to look at smart ways that can enable	• Respondents were unaware that service delivery frameworks and mechanisms may be used to aid them in successfully implementing Knowledge Management in their respective departments. • Batho Pele Revitalisation Strategy, Service Delivery Improvement Plans, the Public Service Charter and Service Standards were four key service delivery frameworks and mechanisms available to government officials to aid them in successfully implementing Knowledge Management in their respective departments.

Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
				them to achieve targets better."	
• Sub-objective 6: To explore and identify creative and long-term solutions that can improve service delivery in South Africa	• Tools for implementing Knowledge Management; • Proficiency in the Proposed Tools; • Proficiency in Programme and Project Management Methodology; • Proficiency in Change Management Methodology; • Inclusion of Knowledge Management in Service Delivery Improvement Plans; • Inclusion of Knowledge Management in Departmental Strategic Plans; and • Inclusion of Knowledge Management in Performance Agreements.	• Even though the dramatic transformation of the South African public service has been one of the most remarkable achievements since the end of apartheid in 1994, today the South African government is under intense pressure to deliver and salvage a failing public service in a VUCA environment. • According to the literature review, transforming and reforming the South African government in a VUCA environment is a complicated task and a major challenge. • A VUCA environment is fast-paced, constant and unpredictable. VUCA stands for Volatile, Uncertain, Complex and Ambiguous. • Budgets were shrinking, public officials were agitated, destabilised and overworked, self-motivation is sapped, long-term programmes and projects were constantly at risk,	• 95.4% (*n*=62) said Knowledge Management is a creative and long-term solution that would improve service delivery; • 53.9% (*n*=35) reported that Knowledge Management is not included in their department's SDIPs. • 43.1% (*n*=28) reported that Knowledge Management implementation is not included in their department's strategic plans. • 49.2% (*n*=32) stated that their PAs include a key performance indicator for their department's Knowledge Management implementation initiative. • 76.9% (*n*=50) agreed that RBM&E is an extremely useful tool; • 76.9% (*n*=50) agreed that PPM is an extremely useful tool; • 80% (*n*=52) agreed that Change Management is an extremely useful tool; and	• "Knowledge Management assists with providing factual and evidence-based knowledge that is needed to bridge the gap between the one who is providing a service and the one who is receiving a service... Most leaders do not understand the link between Knowledge Management and the NDP goals... Knowledge Management will be able to give the correct information. If we are well capacitated, will also be able to develop guides and tools that will capacitate the department, to be able to provide excellent services. The policy papers we develop will provide the correct context and correct content that will inform the government's plans and everything else. Then the governments' strategies will	• With declining budgets, the South African government is under intense pressure to find creative and long-term solutions to improve service delivery. They may not, however, completely comprehend how Knowledge Management, which is available to them, can help; • RBM&E, Strategic Planning, PPM and Change Management methodologies and frameworks were important skills for public officials to have that will assist them to implement Knowledge Management in their respective government departments. • Knowledge Management is a creative and long-term solution that would improve service delivery. • To reap the full benefits of Knowledge Management, aside from what was already mentioned must happen, every effort must also be made to ensure that Knowledge Management is included in the department's Service Delivery Mechanisms (SDIPs, Strategic Plans, PAs); • All government officials responsible for implementing Knowledge Management must have a key performance indicator that speaks to their department's Knowledge Management implementation initiative included in their PAs; • Respondents must be trained in RBM&E, Strategic Planning, PPM and Change Management methodologies and frameworks; • Respondents must obtain certification in a globally recognized

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Sub-objective	Themes	Literature Review (Qualitative)	Survey Questionnaire (Quantitative)	Interview (Qualitative)	Analysis Comments
		skilled labour is limited and, worst of all, relative deprivation has made South Africa renowned worldwide as the protest capital of the world.	• 80% (*n*=52) agreed that Strategic Planning is an extremely useful tool. • 43.1% (*n*=28) were not proficient in any PPM Methodology; • 41.5% (*n*=27) were not proficient in Change Management Methodology; and • Table 7.5 shows that the same respondents (*n*=19) who reported a lack of proficiency in Change Management also reported a lack of proficiency in PPM Methodology.	provide value. We, Knowledge Management, will also at the same time develop tools that will support the government's strategies… To shorten the timeframe and to be able to do well-informed projects."	best practice Change Management and PPM Methodology. • ADKAR Prosci and PMBOK for all national and provincial government departments since the Western Cape Government uses them and it appears to work well is recommended; and • Since the South African government uses a hybrid of the two most recent Public Administration Models, the Knowledge Management Implementation Framework when developed will be a cutting-edge long-term solution to improved service delivery.

7.3　Interpretation of key findings

Key findings relevant to the research sub-questions were extracted from Table 7.1 above and interpreted below. Importantly, generalisations that address the research sub-questions were made. Answering these sub-questions meant answering the main research question.

The following sub-questions were addressed:

- What is KM, its components and how does it improve service delivery?
- What factors contribute to or deter the implementation of KM in the South African government?
- How can the implementation of a KM framework improve service delivery in the South African government?
- To what extent is KM implemented in the South African government?
- What are the South African government's current service delivery frameworks and mechanisms?
- What creative and long-term solutions exist that can improve service delivery in South Africa?

What is KM, its components and how does it improve service delivery?

According to the literature review, because KM is so complex and diverse, there is no one definition that everyone agrees on. The best way to understand KM was to think about what it involves, which is collecting knowledge, storing knowledge and using knowledge. When KM is done well, knowledge is easy to find, store and share with the rest of the workforce. When KM is not done well, it is hard to find, store, or share knowledge with the rest of the workforce. This leads to bad decisions, bad governance, mismanagement and disorganisation.

For effective KM, the literature listed five basic KM components the South African government must have, namely:

- Enterprise Content Management;
- Expertise Locator System;
- Lessons Learned;
- Communities of Practice; and
- Knowledge Retention and Retirees.

Having these basic KM components in place was not enough. For effective KM, the government officials responsible for implementing KM in their respective departments must be knowledgeable

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and skilled in it. During the qualitative Internet-based personal interview, the interviewee shared the same sentiments:

> The challenges are the lack of understanding of the government officials on the KM work that is to be done... new employee has been assigned to take over and now has no clue what to do.

This is supported by quantitative findings depicted in Table 7.2 below.

When properly executed, KM has the potential to generate a sizeable number of beneficial outcomes. The following, according to the findings of the research, were the key advantages:

- Eliminates time, money and resource wastage by allowing informed decision-making and reduction in knowledge duplication;
- Assist citizens in successfully participating in public decision-making;
- Increases the competitiveness of society's intellectual powers;
- Creates a knowledge-based workforce that is competitive;
- Speeds up the ability to make organisations work smarter;
- Enables government to "do more with less";
- Addresses the skills gap;
- Empowers employees to grow and innovate;
- Facilitates government to be faster and more efficient;
- Reduces duplication of effort;
- Prevents mistakes or malpractice;
- Improves processes and work methods; and
- Reduces dependency on consultants.

Most importantly, the ultimate benefit of effective KM will be to ensure the South African government successfully fulfils its service delivery goals, as defined in Section 195 of Chapter 10 of the South African Constitution, 1996, namely:

a)   A high standard of professional ethics must be promoted and maintained.

b)   Efficient, economic and effective use of resources must be promoted.

c)   Public administration must be development-oriented.

d)   Services must be provided impartially, fairly, equitably and without bias.

e)   People's needs must be responded to, and the public must be encouraged to participate in policy-making.

f)   Public administration must be accountable.

g)   Transparency must be fostered by providing the public with timely, accessible and accurate information.

h)   Good human-resource management and career-development practices, to maximise human potential, must be cultivated.

i)   Public administration must be broadly representative of the South African people, with employment and personnel management practices based on ability, objectivity, fairness, and the need to redress the imbalances of the past to achieve broad representation.

Identification of gaps

The gaps listed below have been identified and must be addressed by the proposed KM implementation framework:

- Government officials responsible for implementing KM in their respective departments were unfamiliar with Expertise Locator Systems;
- Most departments did not have Expertise Locator Systems implemented;
- No review is performed to measure whether each department has implemented all five basic KM components;
- No review was performed to measure whether each departments government official responsible for implementing KM is skilled in implementing all five basic KM components;
- Most of the government officials implementing KM were not competent to do so;
- Most departments lack a vision or mission for KM; and
- No support from management because of their ignorance regarding KM.

What factors contribute to or deter the implementation of KM in the South African government?

As stated, the literature review revealed that distinct benefits to implementing KM in the South African government exist. The most important one is the achievement of Section 195 of Chapter 10 of the *South African Constitution, 1996*. Additional to this, KM provides new alternatives, skills and activities that have the potential to have a big influence on and aid the South African government to be competitive, function well and achieve the targets of its NDP 2030.

However, the literature review highlighted South Africa's challenge of providing effective and efficient service delivery. It was said that the public officials know what to do, they have brilliant strategies, plans and policies but cannot put them into action. That was, they lacked implementation skills. To solve this issue, Service Delivery Mechanisms were developed to assist

public officials in transitioning from "knowing" to "doing," allowing them to respond to public expectations more effectively and successfully. However, the quantitative results showed that only 50.7% (*n*=33) of respondents said they were exposed to, introduced to, or provided with the government's service delivery frameworks and mechanisms and they know what it was. Interesting though was that 30.8% (*n*=20) of respondents indicated neutral. Either you know or do not know. This tells that the government officials were not sure what government service delivery frameworks and mechanisms were. During the qualitative Internet-based personal interview, the interviewee shared the same sentiments:

> No, they do not. Because they do not understand this. One person I spoke with yesterday said, public service managers are not readers. People are confined to achieving targets and they do not want to look at smart ways that can enable them to achieve targets better.

Because there was a distinct difference between knowing how to implement and doing so, one of the first tasks was to establish whether the government officials responsible for implementing KM have the necessary implementation skills or if they require a framework to guide them in doing so. Results showed that if the officials knew how to practically implement KM in their department, a high number of respondents would not have requested a framework as a guide. During the qualitative Internet-based personal interview, the interviewee shared similar sentiments: "Either a new employee has been assigned to take over and now has no clue what to do." This is supported by quantitative findings depicted in Table 7.2 below.

Table 7.2: Cross-tabulation between "I do not need to be trained on how to implement knowledge management. I have the skills to do so" and "I need a framework to guide me on how to implement knowledge management in our department"

		I need a framework to guide me on how to implement knowledge management in our department.					
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
I do not need to be trained on how to implement knowledge management. I have the skills to do so.	Strongly Agree	2	2	1	0	1	6
	Agree	3	9	1	2	0	15
	Neutral	3	4	2	1	0	10
	Disagree	10	10	1	0	0	21
	Strongly Disagree	6	4	0	3	0	13
	Total	6	15	10	21	13	65

Hence, the research study identified several factors that contribute to or deter the implementation of KM in the South African government, namely:

- Departmental vision and mission;
- The value placed on KM by management (buy-in);
- Managements perspective (integral and managerial);
- Training and skills;
- Human resources;
- Employee morale; and
- Staff turnover.

Identification of gaps

The gaps listed below have been identified and are addressed by the proposed KMIF:

- The Service Delivery Improvement Plans were not used by departments to drive the implementation of KM;
- There was a lack of implementation skills and expertise among those officials responsible for implementing KM;
- An integrated approach that includes a collaborative effort of all team members rather than simply allowing it to be driven from the top down was needed;
- There was a lack of buy-in for KM from management due to management's lack of understanding of how KM improves service delivery, how it is associated with the goals of the NDP, or what KM seeks to achieve overall; and
- KM units were not properly structured, well-staffed and well-capacitated, especially the DPSA unit.

How can the KMIF improve service delivery in the South African government?

The results show that most respondents (81.5%, n=53) want a KMIF. 95.4% (n=62) of the respondents who answered the survey questionnaire want a framework like this to help them successfully implement KM in their department. To them, it will help the South African government improve service delivery and to 76.9% (n=50) of them, institutional coherence and standardisation will happen throughout all national and provincial government departments because of this framework. During the qualitative Internet-based personal interview, the interviewee shared similar sentiments: "To shorten the timeframe and to be able to do well-informed projects." A Chi-Square test was done to confirm and validated these results. According to Table 7.3, a statistically

significant relationship between the statements "Knowledge Management if done correctly can improve service delivery" and "I need a framework to guide me on how to implement Knowledge Management in our department" exist.

Table 7.3: Chi-Square test between 'Knowledge management if done correctly can improve service delivery' and 'I need a framework to guide me on how to implement knowledge management in our department'

	Value	Degrees of Freedom	P-value. (2-sided)
Chi-Square Test	23.5	8	.003
N of Valid Cases	65		

Identification of gaps

The gap listed below has been identified and is addressed by the proposed KMIF:

- No framework exists to guide employees on how to implement KM in their department.

To what extent is knowledge management implemented in the South African government?
According to the literature review, it is easier to tell if government officials follow the KM systems that are in place than it is to see if people share their knowledge. In other words, the most effective way to determine to what extent KM was implemented in the South African government was to assess the status of the KM CSFs in departments. In this study, the KM CSFs are three distinct but interrelated components: KM objectives, KM pillars and KM enablers. Collectively, these three factors collaborate to embed a KM Culture in the South African government.

Results showed KM was not fully implemented in the South African government (69.2%, *n*=45) and the culture of KM in the South African government was one of dissatisfaction and unhappiness. This explained why the implementation of KM in the South African government was slow and disjointed. Respondents (64.6%, *n*=42) were unsatisfied with the way KM was being implemented in their department. During the qualitative Internet-based personal interview, the interviewee shared similar sentiments:

> In the public service, the implementation of KM is very slow…We want to reach targets but the plans and strategies we develop are not well informed...We plan from an uninformed space…The implementation of KM in the South African government is disjointed because currently, we have departments who do things just for compliance purposes...some departments developed their KM strategies without doing knowledge audits and then some departments hire consultants to develop some of their KM products.

The interviewee also expressed their dissatisfaction and unhappiness as follows:

> If you are one person, you are unable to do justice to what you are doing. You hold there and there, and you take pieces from there and over there. Previously the unit had twelve people before I came, then we were three and now we are one. This is also a true demonstration of the lack of understanding of the work involved in the coordination of KM in this country.

Overall, the KM CSFs are an integral aspect of the successful implementation of KM in the South African government and ignorance of this will hinder the South African government's efforts to successfully implement KM.

Identification of gaps

The gaps listed below have been identified and are addressed by the proposed KMIF:

- The status of each department's KM CSFs is not measured annually;
- A situational analysis is not established annually to ascertain:

  - KM Strategy;
  - KM Strategy Promotes Skills Development;
  - Implementation of KM Strategy;
  - KM Strategy Promotes Learning and Innovation;
  - KM Strategy aligned with DPSA National KM Strategy Framework;
  - Dedicated KM Unit;
  - Clearly Defined KM Responsibilities;
  - KM Activity;
  - KM Implementation Framework;
  - Institutional Coherence and Standardisation in the South Africa Government;
  - KM Maturity; and
  - KM Implementation Status.

- A poor KM culture exists;
- The KM function is incorrectly structured; and
- Most departments were treating KM as an add-on activity.

What are the South African government's current service delivery frameworks and mechanisms?

The Service Delivery frameworks are an extensive corpus of enabling laws such as Acts, Regulations, White Papers and bargaining council judgments, among others. Everything, however, centres around the nine ideals listed in section 195 of Chapter 10 of the South African Constitution, 1996.

As previously stated, the literature review indicated that public officials know what to do, they have brilliant strategies, plans and policies but cannot put them into action. In response, the government has developed four key service delivery mechanisms to help public employees transition from

"knowing" to "doing." These mechanisms were meant to help government officials successfully implement strategies, plans and policies. The Service Delivery Mechanisms are the Batho Pele Revitalisation Strategy, Service Delivery Improvement Plans, the Public Service Charter and Service Standards.

The challenge though was only half of the respondents (50.7%, *n*=33) aware that these service delivery frameworks and mechanisms exist to assist them in successfully implementing KM in their respective departments. This finding is supported by similar sentiments expressed by the interviewee during the qualitative Internet-based personal interview: *"They do not want to look at smart ways that can enable them to achieve targets better."*

Identification of gaps

The gaps listed below have been identified and are addressed by the proposed KMIF:

- Most government officials were unaware of the Service Delivery Frameworks and Mechanisms that are available to help them implement KM more efficiently and effectively; and
- Most government officials were unaware of the Batho Pele Revitalisation Strategy, Service Delivery Improvement Plans, the Public Service Charter and Service Standards that are available to help them implement KM more efficiently and effectively.

What creative and long-term solutions exist that can improve service delivery in South Africa?

Even though the dramatic transformation of the South African public service has been one of the most remarkable achievements since the end of apartheid in 1994, today the South African government is under great pressure to deliver and salvage a failing public service, particularly in a Volatile, Uncertain, Complex and Ambiguous (VUCA) environment. Transforming and reforming itself in such an environment is a difficult task and a significant challenge because it is fast-paced, constant and unpredictable. What makes matters worse, according to the literature review, budgets were shrinking, public officials were agitated, destabilised and overworked, self-motivation is sapped, long-term programmes and projects were constantly at risk, skilled labour is limited and, worst of all, relative deprivation has made South Africa worldwide renowned as the protest capital of the world. Additionally, the literature review also revealed that most of South Africa's problems come from the government's inability to provide good services. This was because of poor mismanagement, governance and capability. All of this had a negative image on international investors, who were paying close attention to how this country was governed.

The significance of finding creative (innovative) and long-term (sustainable) solutions to improve service delivery in South Africa was underscored by the aforementioned factors. Given this, 95.4% (*n*=62) of respondents were adamant that the South African government must leverage KM, as it is a creative (innovative) and long-term (sustainable) solution to improve service delivery in South Africa. The interviewee shared similar sentiments during the qualitative Internet-based personal interview:

> KM assists with providing factual and evidence-based knowledge that is needed to bridge the gap between the one who is providing a service and the one who is receiving a service… Most leaders do not understand the link between KM and the NDP goals… KM will be able to give the correct information. If we are well capacitated, will also be able to develop guides and tools that will capacitate the department, to be able to provide excellent services. The policy papers we develop will provide the correct context and correct content that will inform the government's plans and everything else. Then the governments' strategies will provide value. We, KM, will also at the same time develop tools that will support the government's strategies… To shorten the timeframe and to be able to do well-informed projects.

Identification of gaps

The gaps listed below have been identified and were addressed by the proposed KMIF:

- Knowledge Management was not embedded in Service Delivery Improvement Plans;
- Most departments did not include the implementation of KM in their Departmental Strategic Plans;
- Most government officials responsible for implementing KM in their department fulfil this function as an add-on activity and, as a result, did not include it in their Performance Agreements;
- Most government officials were not skilled or proficient in RBM&E, Programme and Project Management, Change Management and Strategic Planning;
- There is no standardisation among government departments regarding the instruments required for the successful implementation of KM, namely Programme and Project Management and Change Management; and
- Most government officials in South Africa were not certified in any standard Programme and Project Management methodology or Change Management methodology. As a result of the various methodologies used, silos exist because of confusion among all departments when collaborating.

7.4   Chapter summary

The researcher limited himself in this chapter to synthesizing, analysing and interpreting only the most important findings from both quantitative and qualitative data sources. Inductive reasoning

was used to formulate generalisations and these claims were then presented within the context of the corresponding sub-question. Hence, the researcher was able to effectively answer the main research question by addressing its respective sub-questions in this manner. The following chapter provides an overview of each chapter of the thesis and outlines a framework for implementing KM in the South African government.

CHAPTER 8

PROPOSED FRAMEWORK AND RECOMMENDATIONS

8.1   Introduction

The research question and objectives were addressed in the preceding chapter. This chapter provides an overview of the chapters, presents a framework for implementing KM in the South African government and summarises the key findings. This chapter also makes several recommendations and suggests areas for future research.

8.2   Overview of thesis chapters

This section provides an overview of everything that has been covered in each of the chapters.

Chapter 1 began with an introduction that detailed the approach used to explore the research study. The chapter gave an overview of the research problem and identified several research questions, which led to the establishment of specific research objectives. Following this, the research methodology was explained to illustrate the researcher's approach to answering the research questions and attaining the study's objectives. Furthermore, research gaps were highlighted, and the significance of this research study was elaborated on. This chapter established the foundation for the subsequent chapters.

The theoretical context of Public Administration was discussed in Chapter 2. Because Public Administration is a body of knowledge that translates government policy into action, this chapter explored how and why it has changed over time and where it is now. The chapter showed that one of the main motivations for Public Administration reform was to respond to people's ongoing requests for better service delivery, which is reliant on a well-functioning Public Administration. Three forms of Public Administration were highlighted: From the early 1900s to the 1980s, there was TPA, from the late 1980s to the early 2000s, there was NPM and most recently, NPG. The chapter revealed that, while these three models introduced new ideas to Public Administration, they had certain similarities with the preceding model. An example was the adoption of private-sector practices, particularly KM. Today, governments worldwide either embrace NPM or NPG as their preferred method of Public Administration for modernising and reforming themselves. It was found that the South African government use a mix of the two most recent models. In addition, this chapter revealed the importance of applying the correct Public Administration perspective. Perspective, as stated in the study, leads to action and the wrong perspective can produce the wrong action. Hence, this chapter revealed that the implementation of KM in the South African government was probably slow and disjointed probably because the wrong perspective was at

play, namely the managerial perspective and stated that perhaps a holistic approach, such as the integral perspective, can provide better implementation outcomes and in turn, contribute to the research question on how the implementation of a KM framework can improve service delivery in the South African government. Furthermore, this chapter also looked at why the government feels it was vital to behave more like the private sector to be more successful and efficient.

Chapter 3 explored KM a private sector practice that has been adopted in the public sector in recent years. It addressed three of the six sub-questions of the research study: (i) what KM is, its components and how does it improve service delivery; (ii) what is the factor that contributes to or deters the implementation of KM in the South African government; and (iii) to what extent is KM implemented in the South African government. Overall, the purpose of this chapter was to explore why KM became popular as a key to success in the private sector, i.e., how KM accelerates efficiency and effectiveness of private sector service delivery and whether it will do the same in the South African government. The concept of KM was discussed in much detail. As a result, the following important points emerged:

(i)   There are distinct benefits to implementing KM in the South African government;

(ii)   KM provides new alternatives, skills and activities that have the potential to have a big influence on and aid the South African government to be competitive, function well and achieve the targets of the NDP 2030;

(iii) It was fair to assert that to implement KM in the South African government, public employees would require more than mere knowledge of how to do this i.e., there was a distinct difference between knowing and doing;

(iv) Wisdom requires more than just knowledge, it takes a mixture of experience, judgment, intellect, cognition, values and beliefs for an individual to be wise;

(v)   KM CSFs was an essential function for a successful implementation of KM in the South African government;

(vi) Ignorance of the KM CSFs can deter the South African government's effort to successfully implement KM;

(vii) KM tools are an important factor that contributes to the implementation of KM in the South African government; and

(viii) The identification of KM tools across South Africa's national and provincial government departments can serve as a benchmark for determining the extent to which KM is implemented in the South African government.

The theoretical context of service delivery was explored in greater depth in Chapter 4, with a particular emphasis on the South African government. Understanding service delivery, the contrast between private and public sector service delivery and why South Africa must transition from the old to the new was the subject of this chapter. It was stated categorically that Section 195 of Chapter 10 of the South African Constitution is the goal of the South African government in terms of service delivery. According to this section, the South African government must transition from a regulatory bureaucratic structure to a competitive, results-driven public sector that focuses on providing citizens with meaningful services. Nonetheless, as illustrated in this chapter, South Africa operates in a VUCA environment, which was exacerbated by the country's lack of relevant capabilities to achieve the stated purpose. Furthermore, this chapter indicated that KM has the potential to significantly improve service delivery in South Africa, but the South African government has been unable to implement it successfully after more than 15 years of trying, justifying the need for a KMIF.

The goal of Chapter 5 was the development of a reliable and credible research methodology and approach. The layers of Saunder's Research Onion were used as the framework to achieve this. This chapter delved into the research design and methodology employed to explore the research question. It explained why using a mixed-method research approach was a good idea. It explored the various research designs and presents reasons for the methodology followed. Some of the topics covered in this chapter were research philosophy, research assumptions, research paradigms, research designs, research strategies and so forth. Furthermore, the descriptive and exploratory approaches used in this study were discussed. This chapter gave reasons why the mixed method of research was the best method to use in terms of meeting the research objectives of this study. It stated why the survey questionnaire was used for quantitative purposes and the personal Internet-based interview was used for qualitative purposes.

In Chapter 6, descriptive statistics were used to convey the results of the survey questionnaire and personal Internet-based interview in an understandable format. This involved organising, summarising and statistically calculating the results using DATAtab. DATAtab was a comprehensive web-based statistical analysis software tool that ran in a browser window and provides an alternative to statistical software like SPSS and STATA. The measures of central tendency, such as mean, median and mode, as well as measures of variability, such as range, variance and standard deviation were used to identify data sets, trends and patterns. The emerging data sets, trends and patterns were illustrated using frequency tables, radar charts and clustered column graphs. Additionally, both statistically significant and insignificant findings were presented in this chapter.

The results of the research were addressed in Chapter 7. The researcher employed inferential statistics to conduct a comprehensive analysis and interpretation of the results presented in Chapter 6. The interpreted results were meticulously synthesised with the literature review and using inductive reasoning generalisations and conclusions were made about the entire research population. Overall, this chapter established the validity of the research study's assumptions.

Chapter 8 summarises the research study. It provides an overview of each chapter of the thesis. The key findings and recommendations are given. It also discusses and presents the proposed framework for implementing KM in the South African government. The recommendation for further research concludes the study.

8.3 Framework for implementing knowledge management in the South African government

The central argument of this research study was based on the premise that improved KM would result in improved service delivery. Consequently, a substantial study was conducted, which culminated in the recommendation of the framework depicted in Figure 8.4, which can improve KM and, ultimately, service delivery.

This framework will assist government officials in implementing KM in their respective national and provincial government departments.

The KMIF's three core components are Assess, Address and Action. These elements form a recurring lifecycle, beginning with Assess, moving on to Address and culminating with Action. The lifetime is an annual cycle that corresponds to the financial year of the South African government, which spans from 1 April to 31 March.

Both the 'Assess' and 'Address' components of the proposed KMIF must be completed within four months of the start of each new financial year. The remainder of the year must be spent on the 'Action' part.

Each of the three components addresses specific deliverables and in turn, produces a tangible product. The data collected from one component feeds the subsequent component and so on. When viewed together, Figure 8.4 and Table 8.1 offer a clearer picture of how the KMIF is designed to work.

8.3.1 Summary of gaps the Knowledge Management Implementation Framework will address

The key findings of this research study revealed gaps. In response to these deficiencies, the

proposed KMIF was developed. Implementing the framework will improve both KM and service delivery.

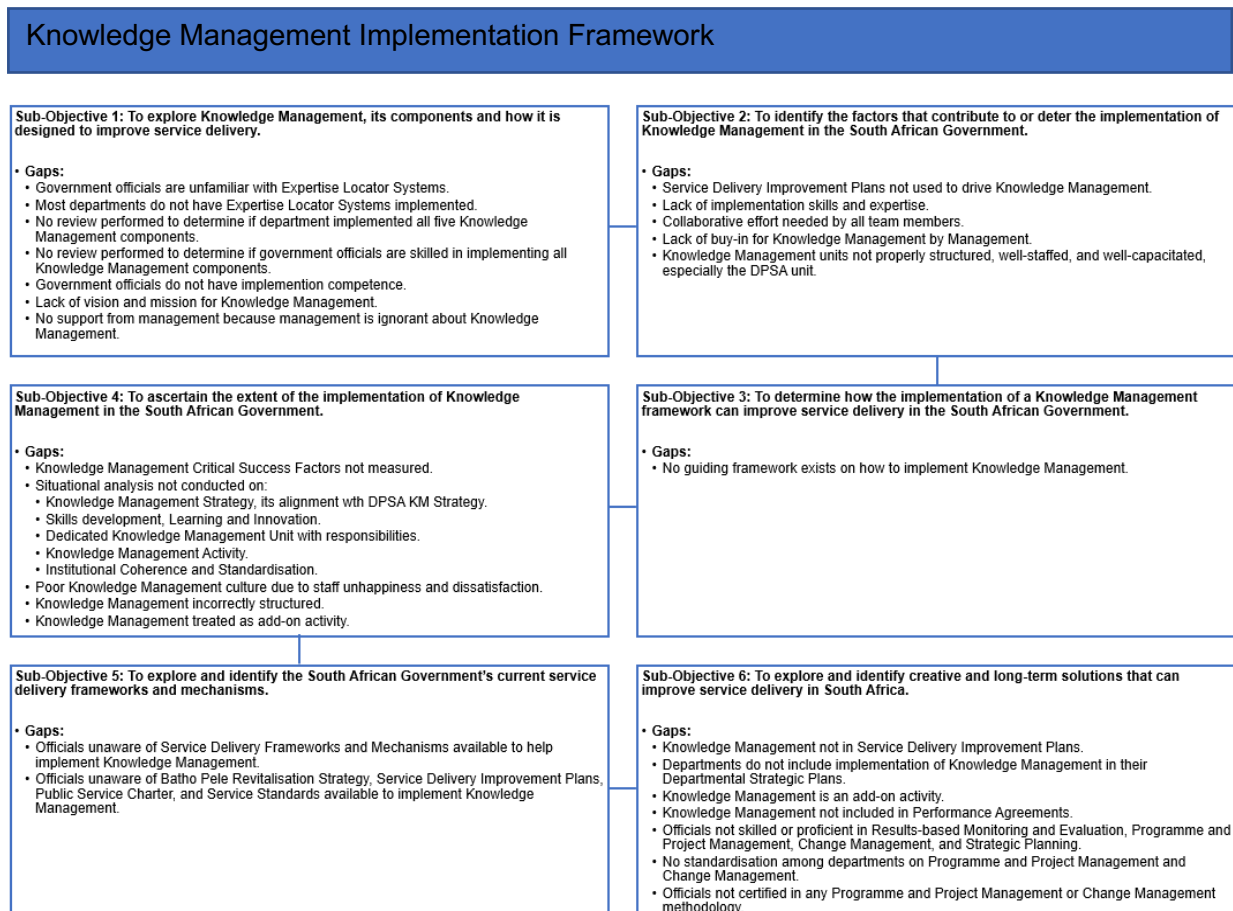**Figure 8.1** provides a summary of these gaps in relation to their corresponding sub-objective.

Knowledge Management Implementation Framework

Sub-Objective 1: To explore Knowledge Management, its components and how it is designed to improve service delivery.

- Gaps:
  - Government officials are unfamiliar with Expertise Locator Systems.
  - Most departments do not have Expertise Locator Systems implemented.
  - No review performed to determine if department implemented all five Knowledge Management components.
  - No review performed to determine if government officials are skilled in implementing all Knowledge Management components.
  - Government officials do not have implemention competence.
  - Lack of vision and mission for Knowledge Management.
  - No support from management because management is ignorant about Knowledge Management.

Sub-Objective 2: To identify the factors that contribute to or deter the implementation of Knowledge Management in the South African Government.

- Gaps:
  - Service Delivery Improvement Plans not used to drive Knowledge Management.
  - Lack of implementation skills and expertise.
  - Collaborative effort needed by all team members.
  - Lack of buy-in for Knowledge Management by Management.
  - Knowledge Management units not properly structured, well-staffed, and well-capacitated, especially the DPSA unit.

Sub-Objective 4: To ascertain the extent of the implementation of Knowledge Management in the South African Government.

- Gaps:
  - Knowledge Management Critical Success Factors not measured.
  - Situational analysis not conducted on:
    - Knowledge Management Strategy, its alignment wth DPSA KM Strategy.
    - Skills development, Learning and Innovation.
    - Dedicated Knowledge Management Unit with responsibilities.
    - Knowledge Management Activity.
    - Institutional Coherence and Standardisation.
  - Poor Knowledge Management culture due to staff unhappiness and dissatisfaction.
  - Knowledge Management incorrectly structured.
  - Knowledge Management treated as add-on activity.

Sub-Objective 3: To determine how the implementation of a Knowledge Management framework can improve service delivery in the South African Government.

- Gaps:
  - No guiding framework exists on how to implement Knowledge Management.

Sub-Objective 5: To explore and identify the South African Government's current service delivery frameworks and mechanisms.

- Gaps:
  - Officials unaware of Service Delivery Frameworks and Mechanisms available to help implement Knowledge Management.
  - Officials unaware of Batho Pele Revitalisation Strategy, Service Delivery Improvement Plans, Public Service Charter, and Service Standards available to implement Knowledge Management.

Sub-Objective 6: To explore and identify creative and long-term solutions that can improve service delivery in South Africa.

- Gaps:
  - Knowledge Management not in Service Delivery Improvement Plans.
  - Departments do not include implementation of Knowledge Management in their Departmental Strategic Plans.
  - Knowledge Management is an add-on activity.
  - Knowledge Management not included in Performance Agreements.
  - Officials not skilled or proficient in Results-based Monitoring and Evaluation, Programme and Project Management, Change Management, and Strategic Planning.
  - No standardisation among departments on Programme and Project Management and Change Management.
  - Officials not certified in any Programme and Project Management or Change Management methodology.

Figure 8.1: Summary of gaps

8.3.2　Knowledge Management Implementation Framework components

The KMIF's core elements are discussed below.

ASSESS

This component consists of the following:

- The current state of KM in departments: The aim is to conduct a situational analysis of the existing condition of KM in each department. At the beginning of each financial year, a new baseline must be established and compared to the preceding baseline. All deficiencies and gaps found during this stage will be transferred to the 'Address' element for resolution.

A Knowledge Management Maturity Assessment is a key output of this process, which must be performed annually to measure the state of each department's KM. Here the CSFs, i.e., KM Objective, KM Pillars (People, Process, Technology and Content) and KM Enablers are assessed.

Figure 8.2 depicts the 'Assess' component of the KMIF.
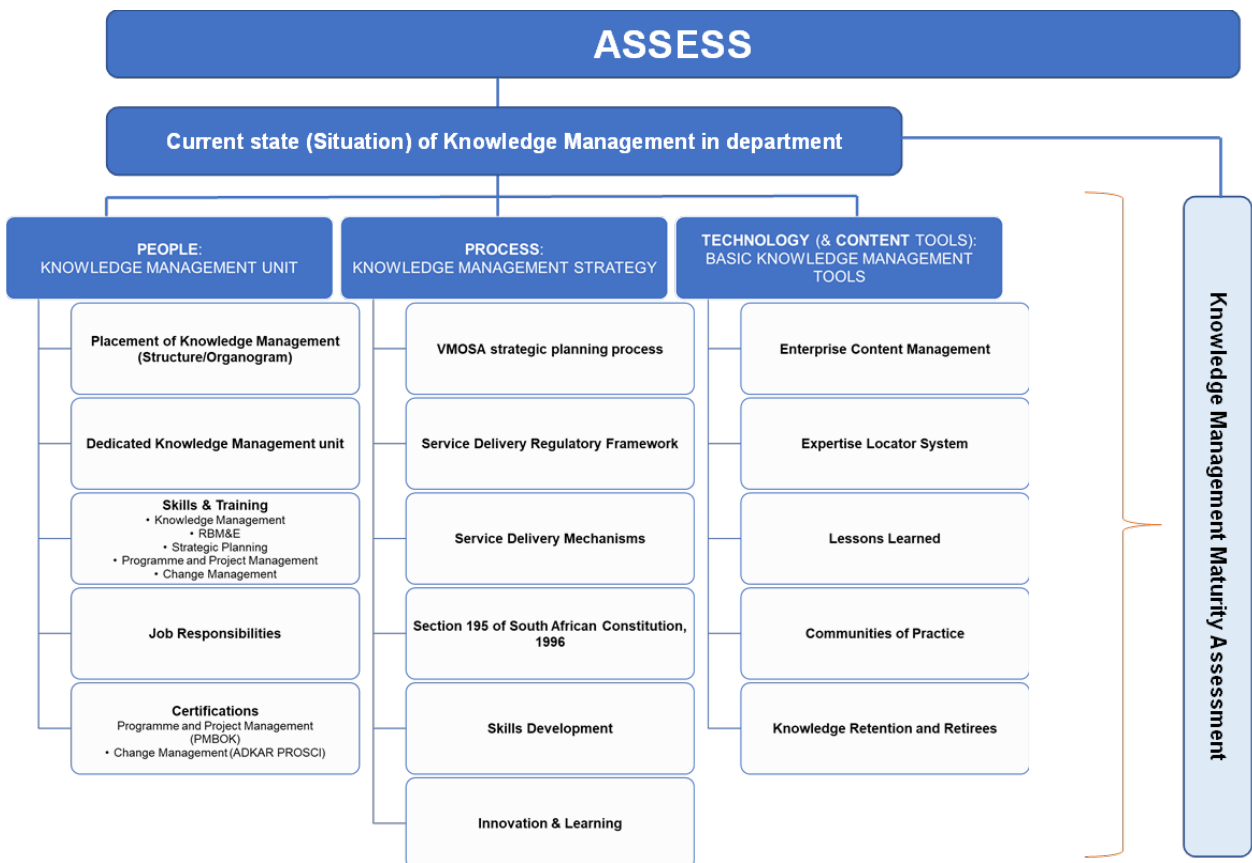
Figure 8.2: Knowledge Management Implementation Framework - Assess element

ADDRESS

The second component of the framework is tasked with the responsibility of developing and/or revising the strategies and plans that will be used by each department to successfully implement KM. The shortfalls and gaps identified from the situational assessment activity conducted in the preceding stage inform this section. Also, besides the KM Strategy, the Project Management Plan is the deliverable that must result from this stage of the process, and it must include the following items:

- People: Knowledge Management unit:

    - Placement of Knowledge Management (Structure/Organogram)
    - Dedicated Knowledge Management unit
    - Skills & Training
        - Knowledge Management;
        - RBM&E;
        - Strategic Planning;
        - Programme and Project Management; and
        - Change Management.
    - Job Responsibilities
    - Certifications
        - Programme and Project Management (PMBOK); and
        - Change Management (ADKAR PROSCI).

- Process: Knowledge Management Strategy (new or revised):

    - VMOSA strategic planning process;
    - Service Delivery Regulatory Framework;
    - Service Delivery Mechanisms;
    - Section 195 of South African Constitution, 1996;
    - Skills Development; and
    - Innovation & Learning.

- Technology and Content:

    - Enterprise Content Management;
    - Expertise Locator System;
    - Lessons Learned;
    - Communities of Practice; and

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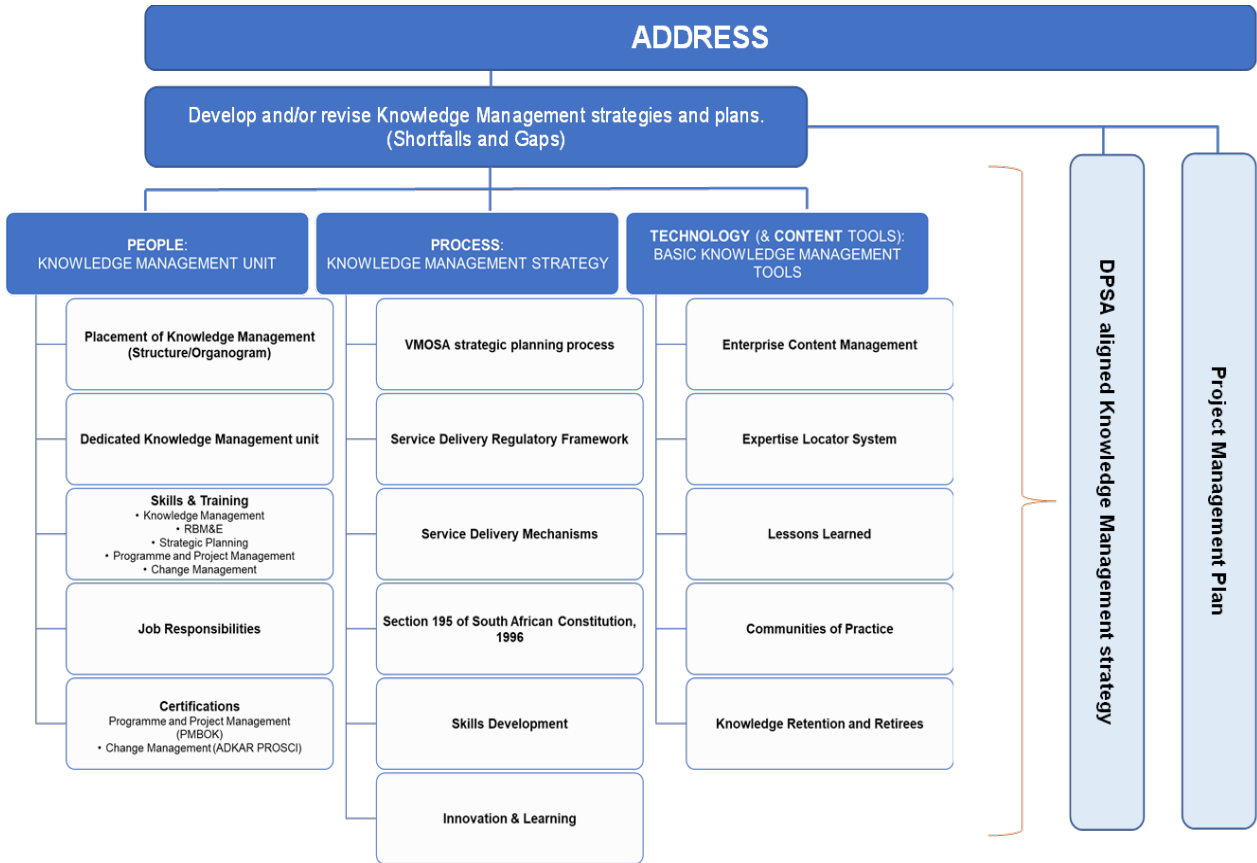
o   Knowledge Retention and Retirees.

Figure 8.3: Knowledge Management Implementation Framework - Address element

ACTION

The KMIF's 'Action' component produces four key product deliverables, namely:

- Project Implementation Plan: The Project Implementation Plan is the project in action;
- Project Management Status Reports;
- Project Scope Changes (if required); and
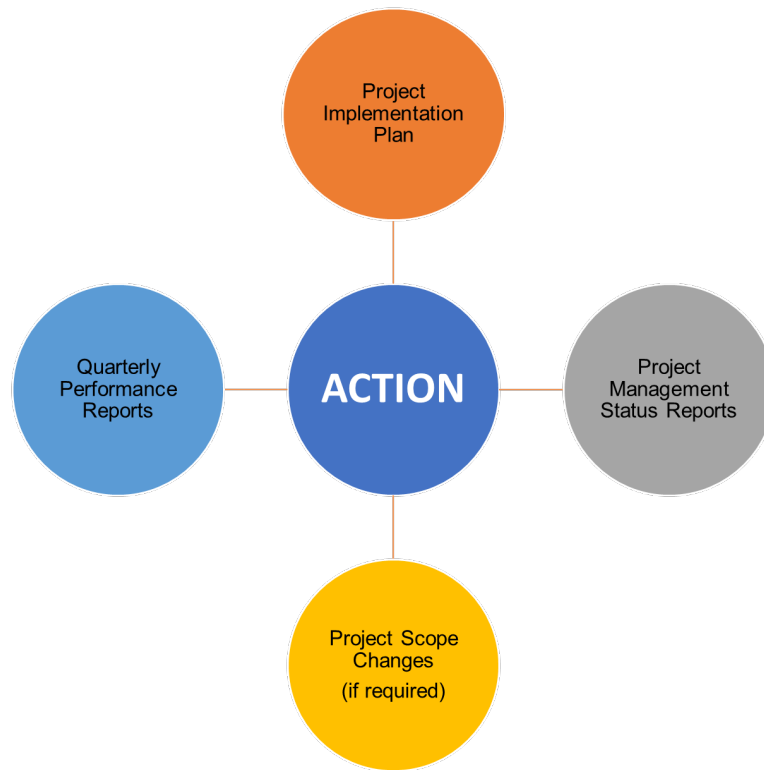- Quarterly Performance reports: These reports must be provided to management as well as the DPSA KM coordinator.

Figure 8.4: Knowledge Management Implementation Framework - Action element

The researcher's proposed model for Knowledge of the Research is outlined in Figure 8.4.
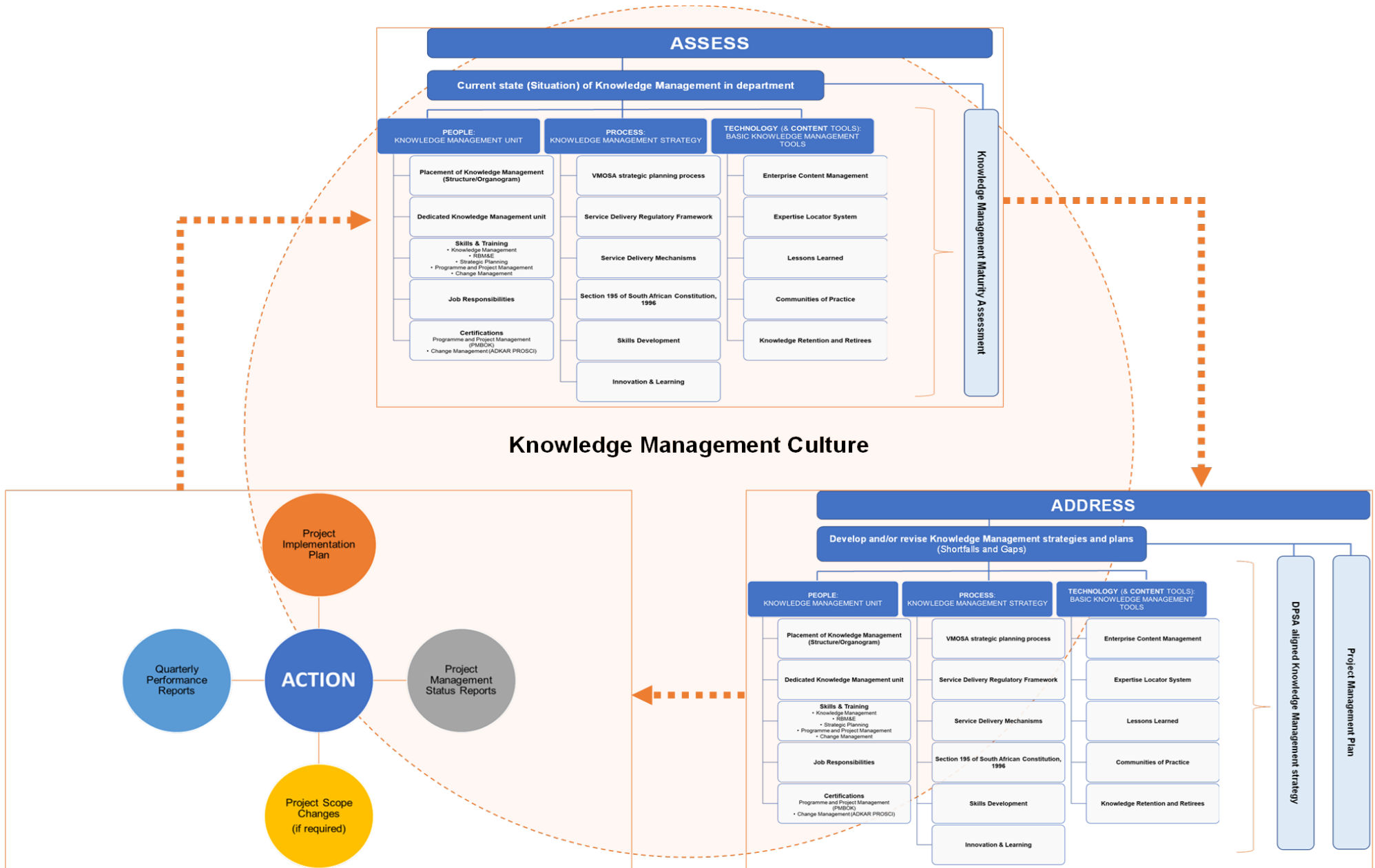
Figure 8.5: Knowledge Management Implementation Framework

8.3.3 Application of the Knowledge Management Implementation Framework

Table 8.1 represents the implementation of the KMIF using the RBM&E framework. For illustrative reasons, just the outcomes, outcome indicators and targets are presented. The government official implementing KM must add their outputs, output indicators and targets to this table, as well as ensure projects are aligned to each output.

Table 8.1: Application of Knowledge Management Implementation Framework using RBM&E framework

Outcome	Outcome indicator	Outcome target	Outcome target
Improved KM in the South African government (**Culture**).	• Fully-fledged and functional KM unit that is structured and placed correctly in the department with fully skilled and certified staff doing only KM work (**People**).	• Correct placement of KM (Structure/Organogram) in the department.	• 100% by 2025/26
		• Fully-fledged and dedicated KM unit.	• 100% by 2025/26
		• Government officials implementing KM are trained and skilled in KM.	• 100% by 2025/26
		• Government officials implementing KM are trained and skilled in RBM&E.	• 100% by 2025/26
		• Government officials implementing KM are trained and skilled in Strategic Planning (VMOSA framework).	• 100% by 2025/26
		• Government officials implementing KM are trained and skilled in Programme & Project Management (PMBOK Methodology).	• 100% by 2025/26
		• Government officials implementing KM are trained and skilled in Change Management (ADKAR Prosci Methodology).	• 100% by 2025/26
		• Government officials implementing KM are certified in PMBOK and ADKAR.	• 100% by 2025/26
		• Government officials implementing KM are certified in PMBOK Methodology.	• 100% by 2025/26

Outcome	Outcome indicator	Outcome target	Outcome target
		• Government officials implementing KM are certified in ADKAR Prosci Methodology.	• 100% by 2025/26
		• Government officials implementing KM are trained and skilled in basic KM tools.	• 100% by 2025/26
	• DPSA aligned KM Strategy developed, implemented and assessed in the department (**Process**).	• Departmental KM Strategy applied VMOSA strategic planning process.	• Departmental KM Strategy implemented in Department; and • Maturity Assessment of KM in the department to assess the impact of Strategy.
		• Service Delivery Regulatory Framework embedded in departments KM Strategy.	
		• All Service Delivery Mechanisms (Batho Pele Revitalisation Strategy, Service Delivery Improvement Plans, the Public Service Charter and Service Standards) are embedded in the department's KM Strategy.	
		• Section 195 of the South African Constitution, 1996 is embedded in the department's KM Strategy.	
		• Skills Development is planned for and reflected in the department's KM Strategy.	
		• Innovation & Learning is planned for and reflected in the department's KM Strategy.	
	• Basic KM tools embedded in the department (**Technology & Content**).	• Department has Enterprise Content Management	• 100% installed and used.
		• Department has an Expertise Locator System 100% installed and is 100% being used.	• 100% installed and used.
		• Department has Lessons Learned initiatives.	• Minimum of 12 Lessons Learned initiatives per annum.

Outcome	Outcome indicator	Outcome target	Outcome target
		• Department has Communities of Practice initiatives.	• Minimum of 12 Communities of Practice initiatives per annum.
		• Department has Knowledge Retention and Retirees initiatives.	• Minimum of 12 Knowledge Retention and Retirees initiatives per annum.

8.3.4 Knowledge Management Implementation Framework outcomes

The expected outcome of the application of the KMIF is improved KM in the South African government. This means that the central argument of this research study, which was based on the premise that improved KM would result in improved service delivery, would happen i.e., good decisions, good governance, good management and good organisation would result in the South African government. Hence, the ideals outlined in Section 195 of Chapter 10 of the 1996 South African Constitution, as well as the NDP 2030 objectives and targets, will be realised. All because Knowledge is well managed.

8.4 Key findings

Based on the statistical tools used in the analysis, this section summarizes the key findings of the study.

8.4.1 Finding 1

Knowledge management was not about accumulating knowledge for the sake of accumulating knowledge. The right information must reach the right individual at the right time. Hence KM must add value to the South African government so that Section 195 of Chapter 10 of the Constitution of the Republic of South Africa, 1996 is achieved.

8.4.2 Finding 2

Most respondents responsible for implementing KM in their respective national and provincial departments were unfamiliar with Expertise Locator Systems.

8.4.3 Finding 3

South African government departments lack Expertise Locator Systems.

8.4.4 Finding 4

The core benefit of KM is that it improves service delivery.

8.4.5 Finding 5

Government officials recognise the critical importance of KM in improving service delivery, but they were uncertain as to how to implement KM.

8.4.6 Finding 6

The Service Delivery Improvement Plan is a significant contributor to the implementation of KM in the South African government, while the lack of implementation skills is a major deterrent.

8.4.7 Finding 7

Most respondents knew how to implement KM but many of them did not know how to do it. Hence, it was fair to assert that to implement KM in the South African government, respondents required more than mere knowledge of how to do this i.e., there was a distinct difference between knowing and doing.

8.4.8 Finding 8

The implementation of KM in the South African government would be more successful with an integrated approach that includes a collaborative effort of all team members, as opposed to a top-down approach.

8.4.9 Finding 9

Key contributors to a successful KM implementation are:

- Departmental KM Vision and mission;
- The value placed on KM by management;
- Implementation training;
- Sufficient human resources;
- Management support; and
- Implementation guidance.

8.4.10 Finding 10

KM CSFs are an integral aspect of the successful implementation of KM in the South African government and ignorance of this will hinder the South African government's efforts to successfully implement KM.

8.4.11 Finding 11

The KM implementation in the South African government was slow and disjointed and as a result, the benefit of KM cannot be fully realised. A KMIF was needed. This framework will assist respondents in fully implementing KM in their departments, it will ensure institutional coherence and standardisation across all national and provincial government departments and, most importantly, it will aid in improving service delivery in the South African government.

8.4.12 Finding 12

The extent of KM implementation in the South African government can be improved by addressing respondents' existing dissatisfaction by restructuring KM in the South African government departments. This includes properly locating KM within the department, providing additional KM staff, measuring KM maturity regularly and not treating KM as an add-on activity.

8.4.13 Finding 13

With declining budgets, the South African government was under intense pressure to find creative and long-term solutions to improve service delivery. They may not, however, completely comprehend how KM, which was available to them, can help.

8.4.14 Finding 14

The South African government adopts a combination of the two most current Public Administration Models because they believe that transforming their public service into a more business-like organization will result in a spate of significant improvements. Consequently, the KMIF when developed will be a cutting-edge long-term solution to improved service delivery.

8.4.15 Finding 15

Respondents were unaware that service delivery frameworks and mechanisms may be used to assist them in successfully implementing KM in their respective departments.

8.4.16 Finding 16

The Batho Pele Revitalisation Strategy, Service Delivery Improvement Plans, the Public Service Charter and Service Standards are four key service delivery frameworks and mechanisms available to government officials to assist them in successfully implementing KM in their respective departments.

8.4.17 Finding 17

Incorporating service delivery skills, service delivery mechanisms and service delivery frameworks

into the KMIF would assist the South African government in realizing Section 195, Chapter 10 of the South African Constitution, 1995.

8.4.18 Finding 18

A significant finding was that the DPSA, which was responsible for driving KM from the top-down, was not leading by example. If they were, they would have a fully staffed and structured unit that will drive KM in this country.

8.5 Recommendations

A summary of the key recommendations is presented below and is derived from the aforementioned findings.

8.5.1 Recommendation 1

The proposed KMIF must include three key provisions (i) an assessment of the existing state of KM within each national and provincial government department; (ii) a strategy to address identified shortfalls and gaps; and (iii) an action plan.

8.5.2 Recommendation 2

Quarterly performance reports must be provided to the DPSA National Knowledge Management forum. Consequently, the DPSA National Knowledge Management forum must have a standing item on its agenda for this.

8.5.3 Recommendation 3

The findings of the KM maturity assessments must be reported to the Director-General of each department with feedback on how the department will address identified shortfalls.

8.5.4 Recommendation 4

Government officials responsible for implementing KM must undergo training in RBM&E, Strategic Planning, Programme and Project Management and Change Management methodologies and frameworks.

8.5.5 Recommendation 5

Government officials responsible for implementing KM must be encouraged to obtain certification in a globally recognized best practice Change Management and Programme and Project

Management Methodology. The researcher recommends ADKAR Prosci and PMBOK for all national and provincial government departments since the Western Cape Government uses them and it appears to work well.

8.5.6 Recommendation 6

The DPSA National Knowledge Management Forum must ensure that the officials who represent their various departments at this forum are employees whose primary function was KM.

8.6 Areas for future research

According to Chawuke (2018) and Akuku et al. (2020), KM has received insufficient attention and there is a dearth of empirical research on KM in the South African government. There is a dearth of research on whether the public sector's adoption of private-sector methods to better itself was effective. None of the examined literature specifically examines how to successfully integrate KM into the South African government to improve service delivery from a Public Administration perspective. As a result, additional research on this topic is required, particularly on the impact of KM on investor confidence and the inflow of FDI.

8.7 Concluding remarks

The research questions were answered, the research objectives were achieved and the proposed framework to improve KM in the South African government to ensure improved service delivery was developed, i.e., the framework for improving KM and service delivery in the South African government. Ultimately, the study proved that service delivery is directly influenced by KM and hence, improved KM would result in improved service delivery.

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APPENDICES

APPENDIX A: CPUT ETHICAL CLEARANCE
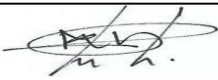
| | **P.O. Box 1906 \| Bellville 7535**
Symphony Road Bellville 7535
South Africa
Tel: +27 21 4603291
Email: fbmsethics@cput.ac.za |

Office of the Chairperson **Research Ethics Committee**	**FACULTY: BUSINESS AND MANAGEMENT SCIENCES**

The Faculty's Research Ethics Committee (FREC) on **14 September 2021**, ethics **APPROVAL** was granted to **Lance Barbier (198080352)** for a research activity for **Doctor of Public Administration** at the Cape Peninsula University of Technology.

Title of dissertation / thesis / project:	**A framework for the implementation of Knowledge Management in the South African Government** Lead Supervisor (s): Prof R Tengeh

Decision: APPROVED

	15 September 2021
Signed: Chairperson: Research Ethics Committee	**Date**

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the CPUT Policy on Research Ethics.

2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study requires that the researcher stops the study and immediately informs the chairperson of the relevant Faculty Ethics Committee.

3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, notably compliance with the Bill of Rights as provided for in the Constitution of the Republic of South Africa, 1996 (the Constitution) and where applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003 and/or other legislations that is relevant.

6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.

7. No field work activities may continue after two (2) years for Masters and Doctorate research project from the date of issue of the Ethics Certificate. Submission of a completed research ethics progress report (REC 6) will constitute an application for renewal of Ethics Research Committee approval.

Clearance Certificate No | 2021 FBMSREC 063

APPENDIX B: EMAIL TO TARGET POPULATION TO COMPLETE THE QUESTIONNAIRE

From: Lance Barbier

Bcc: [hidden]

Subject: Knowledge Management - Survey Questionnaire

Date: Tuesday, March 29, 2022, 11:03:00 AM

Attachments: DPSA letter of consent.pdf; WCG letter of consent.pdf

Dear Colleague,

I am writing to you to request your participation in a brief survey. The survey is part of a research project toward the completion of a doctoral study, which will be submitted to the Cape Peninsula University of Technology. The sample is the DPSA National and Provincial Knowledge Management Forum representatives.

Your responses to this survey will help me analyse the relationship between Public Administration, Knowledge Management and Service Delivery and to understand if improved Knowledge Management in the South African government can improve public sector service delivery. Permission was granted from both my employer, the Western Cape Government, as well as from the DPSA to carry out this survey. The permission letters are available upon request.

The survey is an online questionnaire and is very brief. It will only take about 5 to 10 minutes to complete. Depending on how fast you answer the questions.

The survey can be completed using your mobile phone or desktop computer. The links are below:

Desktop link (web):

https://forms.office.com/Pages/ResponsePage.aspx?id=f790rsPPYEeh_gcxr6pVAhJOJFdIjDtKv Ly00uPuk2hUNkpDUVExSEVWSEw1UlRJMjlGN1U4RVpQRy4u

Mobile link:

I wish to emphasise that the success of this exercise depends on your willingness to be part of this survey.

Thank you for your cooperation.

Yours faithfully,

Lance Barbier

Director: Knowledge Management

Department of Transport and Public Works

Western Cape Government

Room 38, 1st Floor, 9 Dorp Street, Cape Town

Tel: 021 483 4117

Email: lance.barbier@westerncape.gov.za

Website: www.westerncape.gov.za

Be 110% Green. Read from the screen

APPENDIX C: QUANTITATIVE SURVEY QUESTIONNAIRE

Survey Questionnaire: Public
Administration, Knowledge Management and
Service Delivery

- Individual anonymity and input confidentiality are guaranteed; and
- All information will be dealt with in compliance of POPIA.

* Required

1. What is your gender? *

   ○ Male

   ○ Female

2. How old are you? *

   ○ Below 20 years old

   ○ 20 - 40 years old

   ○ 41 - 60 years old

   ○ Over 60 years old

3. What is your highest educational qualification? *

   ○ Grade 12 Diploma

   ○ Uncompleted University

   ○ National Diploma / Vocational

   ○ Bachelors degree

   ○ Masters Degree

   ○ PhD or advanced professional degree such as MD

   ○ [   ]
      Other

4. What is your total work experience? *

   ○ Less than 2 years

   ○ 2 years - 5 years

   ○ 6 years - 10 years

   ○ 10 - 15 years

   ○ 15 years and more

5. What is your total work experience in the public sector? *

   ○ Less than 2 years

   ○ 2 years - 5 years

   ○ 6 years - 10 years

   ○ 10 - 15 years

   ○ 15 years and more

6. What is the level of your employment? *

- ◯ Level 7 or below (Administrative Staff)
- ◯ Assistant Director (Junior Management Staff)
- ◯ Deputy Director (Middle Management Staff)
- ◯ Director or up (Senior Management Staff)

7. Are you employed by National or Provincial Government? *

- ◯ National Government
- ◯ Provincial Government

8. Please state your level of agreement for the following statements: *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am very familiar with the Knowledge Management lifecycle.	◯	◯	◯	◯	◯
I am very familiar with the Knowledge Management components/tools.	◯	◯	◯	◯	◯
Knowledge Management if done correctly can improve service delivery.	◯	◯	◯	◯	◯
To ensure everyone is working toward the same goal, all National and Provincial Government Departments adopted the same Knowledge Management definition.	◯	◯	◯	◯	◯
There must be an Enterprise Content Management (ECM) Solution in every department. This is a very important tool for Knowledge Management.	◯	◯	◯	◯	◯
Being in a Community of Practice is waste of everyone's time.	◯	◯	◯	◯	◯
Prior to launching a new initiative or project, we have lessons learned sessions. Lessons learnt are documented and applied to all new initiatives and projects.	◯	◯	◯	◯	◯

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Knowledge Management is not needed to improve service delivery.	◯	◯	◯	◯	◯

. I am very skilled in the following tools. *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Enterprise Content Management (ECM) Solution	◯	◯	◯	◯	◯
Communities of Practice	◯	◯	◯	◯	◯
Lessons Learned initiatives	◯	◯	◯	◯	◯
Knowledge Retention and Retirees initiatives	◯	◯	◯	◯	◯
Expertise Locator Systems	◯	◯	◯	◯	◯

10. Please state your level of agreement for the following statements: *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My department does not value Knowledge Management.	◯	◯	◯	◯	◯
I don't need to be trained on how to implement Knowledge Management. I have the skills to do so.	◯	◯	◯	◯	◯
My department has a clear Knowledge Management vision and mission.	◯	◯	◯	◯	◯
Management is unsure how Knowledge Management improves service delivery.	◯	◯	◯	◯	◯
We have enough human resources in our unit to implement Knowledge Management in our department.	◯	◯	◯	◯	◯
Public officials have the necessary expertise to implement Knowledge Management in their department.	◯	◯	◯	◯	◯

11. Complete the sentence. In my opinion, if my department values Knowledge Management they would... *

[   ]

12. List a problem that makes it hard for your department to implement Knowledge Management. *

[   ]

13. To what extent do you agree or disagree with the following statements? *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I need a framework to guide me on how to implement Knowledge Management in our department.	○	○	○	○	○
Knowledge Management implementation in both National and Provincial Government Departments are disjointed (i.e. it is not carried-out the same throughout all departments).	○	○	○	○	○
Knowledge Management implementation in my department is slow.	○	○	○	○	○
Knowledge Management is a creative and long-term solution that can improve service delivery.	○	○	○	○	○

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Knowledge Management is an add-on activity in my department.	○	○	○	○	○
Our department has a framework that shows how to implement Knowledge Management.	○	○	○	○	○
We measure Knowledge Management on a regular basis to assess our Knowledge Management maturity and to identify gaps.	○	○	○	○	○
I am satisfied with how Knowledge Management is being implemented in my department.	○	○	○	○	○
Knowledge Management is fully implemented in my department.	○	○	○	○	○
A Knowledge Management implementation framework will promote institutional coherence and standardisation.	○	○	○	○	○

14. To what extent do you agree or disagree with the following statements? *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My department has a Knowledge Management strategy.	○	○	○	○	○
Our Knowledge Management strategy promotes skills development.	○	○	○	○	○
A Knowledge Management strategy is being implemented in our department.	○	○	○	○	○
Our Knowledge Management Strategy aims to enable our department to become a learning and innovative organisation.	○	○	○	○	○
Our department's Knowledge Management strategy is strategically aligned to the DPSA National Knowledge Management Strategy Framework.	○	○	○	○	○
We have a dedicated team/unit (e.g. Directorate Knowledge Management) responsible for implementing Knowledge Management in our department.	○	○	○	○	○
I have clearly defined Knowledge Management responsibilities.	○	○	○	○	○

15. To what extent do you agree or disagree with the following statements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My department believes it is critical to regularly reinforce public officials' awareness of the frameworks and mechanisms used by government to deliver services.	○	○	○	○	○
I was never exposed to, introduced to, or provided with the government's service delivery frameworks and mechanisms. In fact, I have no idea what it is.	○	○	○	○	○
The use of service delivery frameworks and mechanisms are regularly measured in my department to determine impact.	○	○	○	○	○

16. To what extent do you agree or disagree with the following statements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Results-based Monitoring and Evaluation is a very useful tool for implementing Knowledge Management in my department.	○	○	○	○	○
Programme and Project Management is a very useful tool for implementing Knowledge Management in my department.	○	○	○	○	○
Change Management is a very useful tool for implementing Knowledge Management in my department.	○	○	○	○	○
Strategic Planning is a very useful tool for implementing Knowledge Management in my department.	○	○	○	○	○

17. Rate your proficiency in Results-Based Monitoring and Evaluation. *

0	1	2	3	4	5	6	7	8	9	10

Not proficient   Very proficient

22. Select only one Change Management Methodology you are most proficient in. *

○ ADKAR Prosci

○ Kurt Lewin's Change Management Model

○ Kotter's 8 Steps Change Management Model

○ Mckinsey 7s Model

○ None

23. To what extent do you agree or disagree with the following statements? *

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Knowledge Management is included in our departments Service Delivery Improvement Plans.	○	○	○	○	○
The implementation of Knowledge Management in our department is listed in our strategic plans, as a service standard / indicator.	○	○	○	○	○
The implementation of Knowledge Management in our department is listed in our Performance Agreements as a Key Performance Indicator.	○	○	○	○	○

18. Rate your proficiency in Programme and Project Management. *

0	1	2	3	4	5	6	7	8	9	10

Not proficient   Very proficient

19. Rate your proficiency in Change Management. *

0	1	2	3	4	5	6	7	8	9	10

Not proficient   Very proficient

20. Rate your proficiency in Strategic Planning. *

0	1	2	3	4	5	6	7	8	9	10

Not proficient   Very proficient

21. Select only one Programme and Project Management Methodology you are most proficient in. *

○ PMBOK

○ PRINCE2

○ AGILE

○ None

APPENDIX D: QUALITATIVE PERSONAL INTERVIEW SCHEDULE

Name: _____

Date: _____

Time: _____

No.	Question	Response
1	What is your understanding of the role of Knowledge Management in improving service delivery?	
2	What are the success factors that help contribute to the coordination of Knowledge Management in all national and provincial government departments?	
3	What challenges do you experience when coordinating Knowledge Management in all national and provincial government departments?	
4	In your opinion, does the senior management staff in the respective national and provincial government departments comprehend how Knowledge Management, which is available to them, can help improve service delivery? Why?	
5	Do you have enough staff to implement Knowledge Management in your department?	

6	In your opinion, do you think government officials in the respective national and provincial government departments have the necessary expertise/skills to implement Knowledge Management in the South African government?	
7	In your opinion, is the implementation of Knowledge Management in the South African government slow? Why?	
8	In your opinion, is the implementation of Knowledge Management in the South African government disjointed? Why?	
9	Is the organisational structure for Knowledge Management across government standardised?	
10	What suggestions for improvements to the Knowledge Management Implementation Framework would you make?	

APPENDIX E: WCG LETTER OF CONSENT

OFFICE OF THE DIRECTOR-GENERAL

Tel: +27 21 483 6032
Fax: +27 21 483 4715

Western Cape Government
Department of the Premier

REF: 14/1/3/HOD

Lance Barbier
PhD Candidate (Doctor of Public Administration (DGPMTR) degree)
4 Flamingo Close, Tokai,
Cape Town,
7945

Per email: Lance.Barbier@westerncape.gov.za

Dear Mr Barbier

APPROVAL TO CONDUCT RESEARCH WITHIN THE WESTERN CAPE GOVERNMENT

Your letter dated 19 July 2021 has reference.

This letter serves to grant you, as a PhD candidate, permission to conduct research on: *"A framework for the implementation of Knowledge Management in the South African Government"* which will involve staff members in the departments within the Western Cape Government.

It is government policy that information shared, be treated with confidentiality and only be used for the purpose of research as indicated and requested by you and that individuals will participate on a voluntary basis.

It would be appreciated if you share the outcome of your research with the Western Cape Government.

Yours sincerely

DR HC MALILA
DIRECTOR-GENERAL
DATE: 20 JULY 2021

Cc: **Heads of Department**

APPENDIX F: DEPARTMENT OF PUBLIC SERVICE AND ADMINISTRATION
LETTER OF CONSENT

the dpsa

Department:
Public Service and Administration
REPUBLIC OF SOUTH AFRICA

Private Bag X916, PRETORIA, 0001 Tel: (012) 336 1000. Fax: (012) 326 7802
Private Bag X9148, CAPE TOWN, 8000 Tel: (021) 467 5120. Fax:(021) 467 5484

Mr Lance Barbier
Lance.Barbier@westerncape.gov.za

Dear Mr. Barbier

RE: PERMISSION TO USE THE DPSA NATIONAL KNOWLEDGE MANAGEMENT FORUM TO CONDUCT RESEARCH: MR. L BARBIER

Your letter dated 07 May 2021 has reference.

The Department has considered your application and grants approval to your request with the following conditions:

- You shall conduct the research using questionnaires and individual interviews virtually in order to comply with Covid-19 guidelines.

- You shall treat all information obtained from the Department in the strictest confidence.

- You shall complete the research within one month, using questionnaires and individual interviews.

- All information must be dealt with in compliance of the Protection of Personal Information Act, 2013.

- You shall submit the final research paper to DPSA after it is submitted to the Cape Peninsula University of Technology.

- Please note that interviewees may only participate on a voluntary basis.

The Department takes this opportunity to wish you well in your studies.

Kind regards

MS YOLISWA MAKHASI
DIRECTOR-GENERAL
DATE: 05/07/2021

Staatsdiens en Administrasie • Ditselo tsa Puso le Tsamaiso • Ditshebeletso tsa Mmuso le Tsamaiso • uMnyango wemiSebenzi kaHulumeni nokuPhata
Muhasho wa Tshumelo ya Muvuso na Vhulanguli • Kgoro ya Ditirelo tsa Mmuso • Ndzawulo ya Vutirela-Mfumo na Vulawuri
LiTiko le Tekusebenti behulumende nekuPhatsa • Isebe laNkonzo sa Rhulumente noLawulo • UmNyango wemiSebenzi ka Rhulumende nokuPhatsa

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APPENDIX G: GRAMMARIAN LETTER

22 Krag Street
Napier
7270
Overberg
Western Cape

10 July 2022

LANGUAGE & TECHNICAL EDITING

Cheryl M. Thomson

A FRAMEWORK FOR IMPROVING KNOWLEDGE MANAGEMENT AND SERVICE DELIVERY IN THE SOUTH AFRICAN GOVERNMENT

Supervisor: Prof R Tengeh

This is to confirm that I, Cheryl Thomson, executed the language and technical editing of the above-titled Doctoral thesis of **LANCE BARBIER, student number 198080352**, at the CAPE PENINSULA UNIVERSITY OF TECHNOLOGY in preparation for submission of this thesis for assessment.

Yours faithfully

CHERYL M. THOMSON

Email: cherylthomson2@gmail.com

Cell: 0826859545

APPENDIX H: JOURNAL ARTICLE

See link for full article: https://www.forcejournal.org/index.php/force/article/view/45

THE NEXUS BETWEEN PUBLIC ADMINISTRATION, KNOWLEDGE MANAGEMENT AND SERVICE DELIVERY: A LITERATURE ANALYSIS

Lance Barbier & Robertson K. Tengeh

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APPENDIX I: SIMILARITY REPORT

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