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Exploring the Behavioural Competencies Essential for Project Managers to Successfully Deliver Projects in South African Public Sector.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

In this chapter, the research topic is introduced by means of highlighting the background of the study which is then followed by a brief description of the problem statement. Thereafter, the research question is presented, followed by the aim of the study. Research objectives are then detailed followed by the research proposition. Finally, the scope of the study is defined followed by the description of assumptions made.

1.2 Overview

In this fast-paced, interconnected, ever-evolving, competitive modern world, organizations and government institutions are continuously employing new strategies that are delivered via portfolios, programmes, and projects (Curtis, 2010; Morris and Jamieson, 2005; Millhollan, 2009; Van der Waldt, 2011; PMI, 2016). These novel strategies are employed for various reasons that include aligning organizations' demands with their customers' needs, acquiring a competitive advantage, warding off competition, entering new markets, or aligning with the Sustainable Development Goals.

These strategies are implemented to align organizations with their customers' needs, gain competitive advantage, fend off competition, enter new markets or align with Sustainable Development Goals (SDG). In the case of government institutions, these strategies are used as vehicles to operationalize strategic objectives (Van der Waldt, 2011). Thus, successfully delivering projects is of paramount importance to organizations if they are to remain competitive whilst meeting SDGs in an increasingly complex and competitive global market. For government institutions, it is imperative that projects are successfully delivered in order to deliver the government's strategies.

Project management practitioners and academics deem a Project Manager (PM) as the major driving force behind a project and thus the Project Manager's competence is vital as literature has demonstrated a strong correlation between project success and a Project Manager's competence level. (Gruden and Stare, 2018; Erasmus, Joseph and Marnewick, 2016; Dziekoński, 2017; Javed and Liu, 2017). Gruden and Stare, (2018) opine that a PM's competency is one amongst the three most important project management success factors

(with management tools and management techniques being the other two). Also, the Project Management Institute, (2017b), asserts that it is commonly accepted that there is a correlation between project success and a Project Manager's competency. It is thus imperative to identify competencies that are required if a PM is to deliver projects successfully.

As the project management profession continues to grow, more studies conducted have shown that behavioural/soft skills are becoming more important when compared to technical skills for PMs to be successful (Gillard, 2009; Takey and Carvalho, 2015). Gillard, (2009) further posits that technical skills are becoming a minimal requirement for a PM whilst behavioural/soft competencies are a necessary requisite to be a successful PM. Gruden and Stare, (2018) also support this view as they opine that behavioural competencies are becoming more important as the human element and its role in projects has become more important than technical in recent years. According to Vlahov, Klindžić and Radujković, (2019), this is because PMs deliver projects through people, not techniques or hardware. According to El-Sabaa, (2001), a Project Managers' human skills have a greater impact on project management practices than their technical skills. This is attributed to the fact that it is the people who must use their creativity and knowledge to successfully deliver projects, not merely employing techniques and tools.

According to Crawford, (2005), a Project Manager's competence is dependant on the environment where a project is executed and as such, it should not be viewed in isolation. In her study, Crawford, (2005), found that there are many contextual factors (external and internal) that affect the competence of a PM. Internal factors include organizational climate, the nature of the workplace, and geographical location, while external factors include political climate, economics, etc. Lechler and Dvir, (2010) undertook research in Germany and the USA where they identified five project organizational structures (i.e., Projectized, Weak matrix, Functional, Strong matrix, and Balanced matrix) and found that the structure used to execute a project has an impact on project success. They established that in a structure where the Project Manager has higher authority, there is a greater probability of project success. Whilst Project Managers in projectized (project-oriented) structures enjoy high to

total levels of authority, Project Managers in non-projectized (Functional, Weak matrix, Balanced matrix, Multi-divisional, etc.) have none to moderate levels of authority (Project Management Institute, 2017a). Thus, the probability of project success is lower in non-projectized environments as was observed by Lechler and Dvir, (2010). This low project success rate is evident in the South African Public Sector context, as observed by Mosamane, (2023), who observed a staggering 55% project failure rate which is well-above the global project failure rate.

Although extant literature shows that the probability of project success is increased when working in a projectized organizational structure, many organizations in the South African Public Sector that are not projectized/project-based/project-oriented are undertaking projects to deliver strategic goals. Within these organizations, Project Managers are often assigned projects based on their technical expertise and are expected to successfully deliver projects with little to no training (Baccarini, Darrell and Love, 2008). According to Baccarini, Darrell and Love, (2008) and Rwelamila, (2007), these types of appointments of Project Managers are prevalent in the public sector where organizations are not projectized/project-based/project-oriented as has been observed by the author as a practitioner in numerous public sector organizations. Although some public sector organizations claim to be projectized as they have developed Project Management Offices (PMO) to improve project success, the reality is that they do not possess the required project management competences to be considered projectized (Rwelamila, 2007). This disparity has been observed by the author in three organizations within which they have practiced.

Even though projects are regularly undertaken in the public sector and the common acknowledgement amongst project management practitioners and academics that Project Manager's competency has a direct link to project success, very little research has been done on Project Manager's competence in the public sector (Dias *et al.*, 2023). The authors further state that most of the research being done in relation to Project Manager's competency is primarily in the private sector and it is acknowledged that project management in the private sector is different from project management in the public sector due to unique challenges

such as resources constraints, bureaucracy, influence of law, political influence, multitude of stakeholders, among others that projects must navigate. Thus, there is limited understanding of the competencies that Project Managers in the public sector must possess in order to deliver projects successfully. This was underscored by the findings by Selepe and Thusi, (2023) whose study identified inadequate project management skills as the contributing factor to project failure in the South African Public Sector. This notion is supported by Flepisi and Mlambo, (2021), whose study investigated factors contributing factors to project failure in the South African Public Sector and concluded that two factors that contribute to project failure are unsuitably trained project team members including Project Managers.

1.3 Background to the Research Problem

Given the increasing reliance of organizations to deliver strategic objectives using projects (Project Management Institute, 2017c) and project failure remaining prevalent despite the growth of the project management profession (Young and Jordan, 2008; Project Management Institute, 2017c; Dago, 2018; Shabir, Naveed and Cheema, 2023), there exists a need to improve project success in order to deliver return on investment through projects. Literature shows general agreement between project management practitioners and academics that there is a direct link between project success and a Project Manager's competence (Chipulu *et al.*, 2013; Dziekoński, 2017; Gruden and Stare, 2018; Javed and Liu, 2017; Khattak and Mustafa, 2019). Furthermore, over the past several years, there appears to be a shift internationally from technical competence toward behavioural/soft competence, as projects are increasingly relying more on human interactions than tools and techniques to deliver envisaged outcomes (Gruden and Stare, 2018; Vlahov, Klindžić and Radujković, 2019).

Existing literature on Project Managers' competency is predominantly conducted in developed countries, and primarily concentrated in the private sector (Dias *et al.*, 2023). Literature also shows that the environment (i.e., geographical location, workforce diversity, etc.) within which a project is executed has an impact on the behavioural competencies that a Project Manager must have to deliver projects successfully (Crawford, 2005; Skulmoski and Hartman, 2009; Dogbegah, Omoteso and Owusu-Manu, 2013; Vlahov, Klindžić and Radujković, 2019).

Thus, behavioural competencies need to be contextualized to the unique South African Public Sector environment. However, very limited studies have been conducted to identify the competencies that Project Managers in the South African Public Sector must possess to successfully deliver projects. This is evidenced by the relatively high project failures in the South African Public Sector which has resulted in government institutions' inability to operationalize their strategic objectives (Van der Waldt, 2011).

Similar to their global counterparts, Project Managers in the South African Public Sector face unique challenges, such as having little to no authority over the project teams, political influence, resource constraints, bureaucracy, regularly changing top management, etc. Despite these challenges, Project Managers are expected to deliver projects, and some Project Managers have managed too successfully to do so.

1.4 The Research Problem Statement

The research problem statement is:

> *Despite research indicating that there is a direct link between project success and a Project Manager's behavioural competence, the South African Public Sector seems to focus on Project Manager's technical competence which has resulted in evident undesirable project failures, thus* it is imperative to identify the essential behavioural competencies that are required to successfully deliver projects in the context *of the South African Public Sector.*

1.5 Research Question

The research question of this study is*:*

> *"What are the essential behavioural competencies that a Project Manager must have in order to successfully deliver projects in the South African Public Sector?"*

1.6 Research Aim

The aim of this study is:

To explore key behavioural competencies that are essential for Project Managers to successfully deliver projects in the South African Public Sector.

1.7 Research Objectives

The objectives of this study are therefore to:

- Establish behavioural competencies that are essential for a Project Manager to successfully deliver projects in the South African Public Sector.
- Establishing key factors that determine the project management behavioural competencies required to successfully deliver a project in the South African Public Sector.
- Explore project management practitioners' perception of project success in the South African Public Sector context.

1.8 Research Proposition

Leadership is the key behavioural competence essential to successfully delivering projects in the South African Public Sector.

1.9 Scope of Study

There are generally three categories of project management competencies that have been previously identified, namely, (1) Performance (which is, the manner in which the project manager uses their expertise to accomplish project goals, (2) Personal/Behavioural (which entails a Project Manager's attitudes and fundamental personality traits when they carry out tasks in the project setting), and (3) knowledge (which includes a Project Manager's understanding of how to implement processes) (Project Management Institute, 2017b). Although all three of these competencies can influence project success, this research will be limited to behavioural competencies.

According to Young and Jordan, (2008), there are numerous other factors, such as top management support, user involvement, and high-level planning, that can affect project success in practice when undertaking projects. This study will only focus on the impact that PM's behavioural competency has on project success. Additionally, the study will be limited

to organizations geographically located within South African borders. Also, only English-published works will be considered for the research.

Furthermore, the research will be limited to project management practitioners who have practised or are practising in the South African Public Sector.

1.10 Research Design

To achieve the objectives of this exploratory research, the study will comprise three phases as follows:

- Phase 1: Literature review – a literature review will be conducted to establish generally accepted behavioural competencies amongst project management academics and practitioners. This will also include a literature survey to develop an understanding of key factors that affect the required behavioural competencies for PMs to deliver projects successfully. A questionnaire will then be developed informed by literature and a survey will be conducted to collect data from project management practitioners in the South African Public Sector.
- Phase 2: Survey – aimed at assessing the applicability of behavioural competencies identified in Phase 1. Data collected from this phase will be analyzed and a new list of essential PM's behavioural competencies will be generated to be used in phase 3.
- Phase 3: Personal interviews - aimed at developing an in-depth understanding of the identified PM's behavioural competencies and validating the developed list of behavioural competencies.
- Findings from the above phases will then be analyzed and discussed, followed by conclusions and recommendations.

1.11 Reliability and Validity

Prior to distributing the questionnaire to wider survey participants, it shall be circulated via email to a smaller sample (three to five) participants and the supervisor for critical analysis to confirm that the formulated questionnaire will serve to answer the research questions in line with the research objectives. This will also ensure that the questions are comprehensible. Feedback from these participants will be affected prior to distribution to a larger audience.

The face validity of the questionnaire that will be used to gather the data will be guaranteed in this way.

1.12 Ethical Considerations

Research participants will be contacted and offered the opportunity to freely engage in the study. Additionally, they will have the freedom to leave the study whenever they choose. Participants will also receive information to ensure that they comprehend the purpose of the study, and the intended use of the data gathered. A formal informed consent will then be requested without coercion. The participants' information will be kept confidential, and they will be treated with decency and respect. Additionally, in order to preserve their privacy, participants will be referred to by their allocated code (i.e., Participant-001, Participant-002, etc.) rather than their names.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In this section, available literature published in English is critically reviewed with the aim of reviewing applicable studies that have already been done and identifying existing gaps. Furthermore, the literature review is aimed at understanding the current state of knowledge regarding project management behavioural competencies and thus informs the formulation of the research question to address existing gaps with regard to behavioural competencies in the context of the South African Public Sector. Finally, the literature review is aimed at establishing a context upon which the study can contribute toward existing knowledge in project management behavioural competencies in the South African Public Sector.

2.2 Project Management Competencies

2.2.1 What is a Project Manager?

The PMI defines a Project Manager as an individual who is assigned by a performing organization to manage a project team that is responsible for delivering project goals (Project Management Institute, 2021). The PMI further states that a Project Manager is responsible for performing a wide array of functions which includes the facilitation of project teamwork with the aim of delivering envisaged project outcomes. Additionally, they posit that the specific role that a Project Manager plays in the project depends on the organization within which a project is undertaken. However, typically, the role involves the application of tools, skills and techniques during project lifecycles in order to meet project requirements.

According to Giri, (2019), the most common responsibilities of a project manager involve ensuring customer/client satisfaction by delivering good quality work within the agreed schedule and budget constraints. The author further states that a Project Manager is responsible for managing day-to-day operations within a project, providing leadership in planning and organizing project team efforts, as well as coordinating project team activities. Additionally, a Project Manager is charged with the responsibility of motivating a project team

and effectively planning, controlling, and monitoring a project to achieve objectives within resource limitations.

Academics commonly agree that a Project Manager plays one of the most critical roles in delivering project expectations and goals (Gasemagha and Kowang, 2021). Traditionally, a Project Manager was deemed as the individual who is overall responsible for delivering a project within budget, schedule, and quality. However, the role has evolved since it was first coined in the 1950s where Project Managers are now not only responsible for delivering projects in time, budget and quality, but rather are holistically responsible for delivering project outcomes (Project Management Institute, 2021).

According to Giri, (2019), a Project Manager is a single individual who is overall responsible for the planning and execution of a project. The project management literature widely recognizes the Project Manager as the primary driving force behind projects (Gruden and Stare, 2018).

2.2.2 Project Management Competences

Literature shows that there is no universal agreement on the definition of individual competence, thus different definitions exist among academics and practitioners (Takey and Carvalho, 2015). According to Gruden and Stare, (2018), competency is the capacity of a person to use and incorporate learned information and experience in a variety of intricate, multidimensional, and diverse contexts. Furthermore, they assert that competence is more expansive than skill since it encompasses a person's capacity to apply knowledge, abilities, and personal traits to accomplish a goal. In their Project Manager Competency Development (PMCD), the Project Management Institute, (2017b) defines competence as the ability of a project manager to utilize their unique set of skills and knowledge. The Association for Project Management, (2009) in their Competence Framework describes competence as the expected outcome that is achieved when one applies a combination of skills, personal attitude, knowledge, and experience in a given function. Similarly, the International Project Management Association, (2015) in their Individual Competence Baseline (ICB) version 4.0

defines a Project Manager's individual competence as the application of one's skills, knowledge, and abilities to accomplish a desired outcome. Crawford, (2005) asserts that competence can be inferred from a variety of characteristics, including personality traits, attitudes, and behaviours, as well as knowledge, abilities, and experience..

As can be seen from the paragraph above, there is no consensus amongst project management practitioners and academics on the definition of individual competence. The definition by three of the world's largest project management professional associations (i.e., PMI, APM, and IPMA) is focused on the outcome whilst the definition by Gruden and Stare, (2018) is focused on application and integration, and the definition by Crawford, (2005) is broader in its approach. This lack of unified definition emphasizes the complex nature of individual competence and highlights the need for contextualized interpretation of individual competence in project management.

2.2.3 The Link Between Project Manager Competencies and Project Success

It is commonly acknowledged in project management literature that a PM is the primary force responsible for driving a project forward (Gruden and Stare, 2018). It is thus imperative for a PM to possess the competencies required to lead a project team to deliver projects. Thus, the success probability of a project is dependent on the level of competence of a Project Manager. Dziekoński, (2017) asserts that there is a strong correlation between a PM's competence and project success. Crawford, (2005) contends that project management personnel's competency is crucial as it significantly affects project success and ultimately, business performance. Additionally, according to Ahsan, Marcus and Khan, (2013), choosing a project manager is one of the most important project decisions because it is generally accepted that a Project Manager has the greatest influence on the project's outcome.

Pacheco *et al.*, (2023) carried out a methodical literature review to investigate the link between project success and a Project Manager's competence and concluded that higher levels of Project Manager's competence is directly related to improved project success. This is further supported by Blom, Steyn and Bond-Barnard, (2023) findings as they drew a similar

conclusion that organizations with competent Project Managers have the tendency to execute projects more successfully than those with less competent Project Managers.

From the paragraph above, it can be seen that there is a common agreement that a Project Manager's competence is a critical success factor for projects as they not only drive projects but also significantly affect whether or not the project will be successful.

2.2.4 Project Manager Competency Categories

The Project Management Institute divides competencies into three categories as follows (Project Management Institute, 2017b);

a) Performance - which is, the manner in which the project manager uses their expertise to accomplish project goals. This can be demonstrated by assessing a Project Manager's actions and outcomes.
b) Personal/Behavioural - entails a Project Manager's attitudes and fundamental personality traits when they carry out tasks in the project setting. This is demonstrated by assessing a Project Manager's behaviour.
c) Knowledge - which includes a Project Manager's understanding of how to implement processes). This can be demonstrated by passing the Project Management Professional (PMP) exam.

The International Project Management Association (IMPA) categorizes competencies into three different categories, namely; (1) Technical (i.e., the skills, knowledge, and ability to manage the technical aspects of a project such as risk management, scope management, etc.), (2) Contextual (the ability to understand the environment within which the project is being executed including external factors that can impact project success, and (3) Behavioural (which involves the behaviours and attitudes that are necessary to effectively manage and lead a project (International Project Management Association, 2015).

The Association for Project Management (APM) identifies in their competence framework, three domains of project management competence as (1) Technical (which includes

functional project management contains the functional project management competence elements, (2) Behavioural (which includes a Project Manager's personal competence including their skills and attitude), and (3) Contextual (which includes organizational competence). Gruden and Stare, (2018) assert that because project management competencies are very diverse, they are typically divided into a number of categories by project management professionals, including behavioural and technical. These categories are summarized in the table below.

Table 1: Project Management Competency Categories.

	PMI	APM	IPMA
1.	Knowledge	Technical	Technical
2.	Performance	Contextual	Contextual
3.	Personal/ Behavioural	Behavioural	Behavioural

As can be seen from the paragraph above, various project management organizations provide multi-faceted approaches for assessing Project Managers' competencies which can be used as a foundation from which one can build upon in exploring specific competencies in their context. These frameworks collectively emphasize the importance of a combination of performance, knowledge, and personal/behavioural attributes.

2.2.5 Influence of Behavioural/ Soft Competencies on Project Delivery

In their study, Sampaio *et al.*, (2022) found that behavioural competency directly and significantly affects project success, specifically (in no particular order) communication, leadership, emotional intelligence, creativity, ethics, motivation, and results orientation. Gruden and Stare, (2018) drew a similar conclusion as their research confirmed that project performance is influenced significantly by Project Manager's behavioural competence as opposed to technical competence.

Additionally, over the past several years, there has been a shift from technical toward behavioural/soft competence, as projects are increasingly relying more on human interactions than tools and techniques to deliver outcomes (Gruden and Stare, 2018; Vlahov, Klindžić and

Radujković, 2019). Although technical project management skills are essential for project management, research indicates that they are insufficient in today's complex and competitive global economy (Project Management Institute, 2017a). In keeping with this development, the PMI, the IPMA, and the APM as the three of the largest project management global professional associations (Construction Placement, 2024), have each identified behavioural competencies as can be seen in Table 2 below.

Table 2: Behavioural Competencies Identified by the Three Largest Project Management Global Professional Associations (PMI, IPMA, and APM).

	PMI (Project Management Institute, 2017b)	**IPMA** (International Project Management Association, 2015)	**APM** (Association for Project Management, 2008)
1.	Professionalism	Engagement and motivation	Human resource management
2.	Cognitive ability	Self-control	Teamwork
3.	Communicating	Values appreciation	Communication
4.	Managing	Assertiveness	Leadership
5.	Effectiveness	Relaxation	Conflict management
6.	Leading	Openness	Learning & development
7.		Leadership	Professionalism & ethics
8.		Negotiation	Negotiation
9.		Results-orientation	Behavioural characteristics
10.		Reliability	
11.		Creativity	
12.		Ethics	
13.		Efficiency	
14.		Consultation	
15.		Conflict and crisis management	

These project management global professional associations have identified these general behavioural competencies as essential for Project Managers to successfully deliver projects. However, there is a general agreement amongst researchers and practitioners that competencies must be contextualized to the performing organization (Crawford, 2005; Dogbegah, Omoteso and Owusu-Manu, 2013; Vlahov, Klindžić and Radujković, 2019; Sima,

2024). Thus, one cannot simply assume that these competencies as shown in the table above will be applicable in their environment, and as such, one must contextualize them to their respective environments.

2.3 Key Factors That Determine the Essential Project Management Behavioural Competencies

2.3.1 Geographic Location (Country) of Performing Organization

According to the research by Gruden and Stare, (2018) in Slovenia, leadership, assertiveness, consultation, and relaxation are the most important behavioural competencies required for project success. However, Vlahov, Klindžić and Radujković, (2019) found that the most important behavioural competencies in Croatia are self-management, leadership, and teamwork. Khattak and Mustafa, (2019) conducted their research in Pakistan and concluded that essential competencies for a Project Manager are leadership, management skills, communications, reliability, and honesty & integrity among others.

These three studies demonstrate the difference in necessary behavioural competencies to deliver projects in different countries. Leadership is the only behavioural competence consistently appearing across various geographical locations. However, the rest of the competencies appear to be the subject of the country within which the performing organization is located. Similar observations were made by Chipulu *et al.*, (2013) in the United Kingdom, the United States of America, India, China, Malaysia, Hongkong, and Singapore where key competencies varied depending on geographic locations and industry sectors.

2.3.2 Project Organizational Structure of Performing Organization

San Cristóbal, Fernández and Diaz, (2018) describe a project organizational structure as an organizational form that is based on temporary groups assembled to carry out a specific task after which the team will be disbanded. The authors further state that the selected project organizational structure dictates how; (1) project team members relate to one another, (2) how project members relate to other projects within the organization, and (3), how they

relate to the outside world. Additionally, they assert the chosen project organizational structure determines the authority of each project member as well as channels of communication.

According to the Project Management Institute, (2017a), organizational structures can appear in various forms depending on several elements such as physical location, cost, and adaptability, among others. PMI further asserts that no one size fits all, as numerous variables (i.e., cost consideration, physical location, delegation capabilities, etc.) unique to the organization must be considered when setting up an organizational structure.

Lechler and Dvir, (2010) opine that commonly accepted amongst academics and practitioners that the project organizational structure employed to deliver projects can affect the likelihood of project success. They further state that a number of academics have observed a strong correlation between project success and a Project Manager's authority level. According to the study conducted by Nieto-Rodriguez and Evrard, (2004), there exists a correlation between project performance and the types of organizational structure employed. The authors concluded that "*organizational structure influences the performance and outcome of projects*". They further observed that organizations that employed Strong matrix structures where a PM is afforded moderate to high authority (see Table 3) performed better comparatively. This better performance was attributed to the PM being recognized by organizations as the main driving force for the organization's success and the subsequent influence they have on projects. On the contrary, they observed that when Weak and Balanced matrix structures where Project Managers have low to moderate (see Table 3) performed relatively poorly. This poor performance was attributed to the Project Manager's little to no authority in these structures.

Extant literature commonly shows that there are generally three types of project organizational structure and these are; (1) Functional, (2) Matrix, and (3) Projectized/ project-base/ pure project (Lechler and Dvir, 2010; Tahri and Drissi-Kaitouni, 2013; San Cristóbal,

Fernández and Diaz, 2018). Table 3 shows the different types of project organizational structures as well as the authority of the Project Manager for each one.

Table 3: Project Organizational Structures (Lechler and Dvir, 2010; Tahri and Drissi-Kaitouni, 2013; Project Management Institute, 2017a).

Category	Project Organization Structure Type		Project Manager's Authority
1. Non-Projectized	Functional		Little or none
	Matrix	Strong	Moderate to high
		Balanced	Low to moderate
		Weak	Low
2. Projectized	Project-oriented/ Project-based		High to almost total

The three generally accepted project organizational structures are discussed in detail in the ensuing sections.

2.3.2.1 Functional Project Organizational Structure

San Cristóbal, Fernández and Diaz, (2018) define a Functional organizational structure as a structure where various temporary teams exist in parallel with a stable hierarchical structure. According to Ghenwa, Rabih and Joseph, (2019), this structure sorts its employees based on their specific skills and is best suited for small companies where Project Managers will have their core function in the structure, over and above being responsible for managing projects which is usually secondary. The authors further opine that this structure provides optimized flexibility as individuals' expertise is accessible to several projects rendering the technical knowledge of the organization available to the various project teams. Additionally, the reporting lines are clear as only one line manager exists, thus minimizing the possibility of conflict of interest that would otherwise occur should there be more than one line manager in the structure.

2.3.2.2 Matrix Organizational Structure

According to Ruth Leigh Kennedy, (2013). a matrix organization divides authority among several managers, as opposed to a conventional vertical hierarchical authority structure with a single line manager or supervisor at the top. In order to maximize the benefits of a projectized organization, minimize the shortcomings of a functional organization, and reduce the distinctions between functional and projectized organizations, a matrix structure was developed. Kishore, Pretorius and Chattopadhyay, (2019) stated that matrix structures were introduced to overcome the challenges of a top-down hierarchy. In a matrix structure, dual management comprises a Line Manager and a Functional Manager and can exist in three forms as follows (Kishore, Pretorius and Chattopadhyay, 2019):

a) Weak Matrix – where a Line Manager has full control and the Project Manager works part-time to oversee projects.
b) Strong Matrix – where a Project Manager works full-time on projects and has complete control and authority over project personnel.
c) Balanced – where a Line Manager and a Project Manager share power and a project manager works part-time to oversee a project.

2.3.2.3 Projectized (Project-oriented/ Project-based) Organizational Structure

Projectized organizational structures emerged as organizations in modern days tend to undertake multiple projects simultaneously (Gemünden, Lehner and Kock, 2017). The authors further state that this type of project management structure is best suited to accommodate flexible client needs, mitigating project risks, as well as integrating a wide variety of knowledge and expertise. Additionally, the authors posit that this type of structure is best suited for undertaking complex projects such as delivering novel complex innovative systems.

A Project Manager operating in this organizational structure usually has total authority to control and manage resources to deliver projects (Project Management for Development Organizations, 2017). The author further states that project team members have a Project Manager as their direct Line Manager, thus granting them complete line management authority which leads to improved responsiveness.

In his study, Hobday, (2000) compared the effectiveness and efficiency of the three structures (i.e., Functional, Matrix, and Projectized) and concluded that the Projectized structure is best suited to deliver complex projects and attributes this to the high level of authority that the Project Manager has over the project team.

Lechler and Dvir, (2010) argue that assuming a linear relationship between the Project Manager's authority and the project management structure is flawed as it does not take into consideration the compensation effects that might be in place that give a Project Manager higher level of authority in delivering critical projects. To overcome this flaw, they proposed a multi-dimensional approach to categorize project management structures as this takes into account potential non-linearity between project management structures. For their study, they derived several structural attributes with the aim of identifying multi-dimensional project management structures. These attributes are (Lechler and Dvir, 2010);

1) Project Manager's authority scale - which describes the level of authority that is delegated to the Project Manager and includes different critical decisions made or influenced by the Project Manager,
2) The Project Manager's functional responsibility scales - which assesses the Project Manager's formal position within the performing organization,
3) The Project Manager's personnel authority scale - which assesses whether or not the Project Manager has the authority to reward the project team members,
4) The Project Manager's project responsibility scale – which is used to differentiate the Project Manager's project responsibilities from others within the performing organization, and
5) The Influence of the steering committee – which measures the level of influence by of top management in project-related decisions.

From their study, Lechler and Dvir, (2010) developed five clusters which are based on the five attributes as detailed above. These structures are titled based on the attributes of Project

Managers responsible for projects within the performing organization. These clusters are shown in Table 4.

Table 4: A Typology of Project Management Structures (Lechler and Dvir, 2010)***.***

Cluster No.	Cluster Name	Description
1.	Project Coordinator	Distributed responsibility (no single person is responsible for the project), the PM role focuses on coordination.
2.	Supervised Project Coordinator	Similar to Cluster 1 except that this is supported by a steering committee comprising of senior managers.
3.	Autonomous Project Manager	Exhibits high levels of project responsibility, project authority, and personnel authority, PM implements independently of the functional organization.
4.	Supervised Functional Project Manager	High functional responsibility, PM supported by a steering committee.
5.	Autonomous Functional Project Manager	High functional responsibility, PM implements independently without a steering committee.

2.3.3 Industry of Performing Organization

Whilst there are inherent similarities in the structure and the conduct of projects, different industries require different project management competencies for a Project Manager to successfully deliver projects (Stevenson and Starkweather, 2010). This notion is supported by Müller and Turner, (2010) as they stated that project management literature shows that projects from other industries differ from those undertaken in the construction industries and thus require different approaches to management procedures employed, and as such, a Project Manager's competence must be chosen accordingly in order to meet the requirements of the specific industry of such project. For example, Varajão, Silva and Pejic-Bach, (2019), conducted a study on Information System (IS) projects and found that the top competencies are; (1) Communication, (2) Engagement & Motivation, (3) Project requirements & objectives management, (4) Leadership, (5) Reliability, (6) Results orientation, (7) Conflict & crisis management, (8) Project orientation, (9) Teamwork, (10) Stakeholder management, (11) Resilience, and (12) Ethics. Aliu *et al.*, (2022), conducted a similar study in the Construction

industry and found that; (1) Innovative thinking, (2) Problem-solving skills, (3) Dependability, (4) Emotional maturity and control, and (5) Confidence to be the most important competencies. For a Project manager in the engineering industry to be successful, Müller and Turner, (2010) identified that they must demonstrate strong competencies such as (1) Critical thinking, (2) Developing others, (3) Motivation, and (4) Conscientiousness.

These three studies collectively demonstrate that different industries require different project management behavioural competencies to deliver projects successfully. Thus, behavioural competencies must be contextualized to the industry within which a project is being undertaken.

2.4 South African Public Sector Context

The South African Public Sector regularly undertakes projects with the primary aim of improving its service offerings to the public (Selepe and Thusi, 2023). Executing projects in the public sector context is generally different from executing in the private sector as public sector project teams must navigate a unique set of challenges to deliver projects (Dias *et al.*, 2023).

2.4.1 State of Project Delivery in the South African Public Sector

According to Van der Waldt, (2011), South African government institutions are increasingly operationalizing their strategic objectives through projects. Although the South African Government has invested a substantial amount of capital funding post-apartheid era, the projects undertaken as vehicles to deliver envisaged benefits have not yielded the set governmental objectives and the insufficient project management skills and experience in the public sector was identified as one of the contributing factors (Selepe and Thusi, 2023). According to Mugumbate and Kruger, (2022), project failure is very common in the South African Public Sector and there is a need to identify the cause of these failures with the aim of turning the tide.

One example of such failure is the Social housing program which is currently being deemed a failure as it has not met end-user expectations which is mainly attributed to ineffective

project management during project execution (Amoah, Kajimo-Shakantu and van Schalkwyk, 2020). Another example of project failure is the e-NATIS (electronic National Traffic Information System) which was delayed and negatively impacted the registration of 150 000 vehicles nationwide, and the cause of the project failure was attributed to inadequate project management (Nyansiro, Mtebe and Kissaka, 2021).

Flepisi and Mlambo, (2021) conducted a study aimed at investigating factors that contribute towards project failure in the South African Public Sector and they identified several factors, two of which were lack of delegation of authority to the Project Manager and unsuitably trained project team members including a Project Managers. These two factors link directly to the Project Manager's authority (or lack thereof) and the competence of the Project Manager respectively. Aiyetan and Das, (2021) also conducted a study to explore factors affecting the delivery of infrastructure projects (most of which are the responsibility of the South African Public Sector) in South Africa and found that poor project management is one of the contributing factors. Particularly, they found the lack of competent resources (including Project Managers) to be a contributing factor.

These project failures can no longer be ignored and are acknowledged by the government and in an attempt to remedy the situation, the South African government aims to improve project management competency in the public sector (Selepe and Thusi, 2023).

2.4.2 Project Management Challenges in the South African Public Sector

Despite its aspirations to deliver strategic objectives (most of which are delivered through projects), the South African Public Sector has in recent years experienced several challenges that have hindered the effective implementation of these objectives (Maleka, 2023). The author further states that one of these challenges is political influence which can result in frequent policies, strategic, and direction changes as new leaders are installed to lead organizations. Project teams led by Project Managers must be able to adapt in order to deliver projects in line with these new changes or run the risk of delivering projects that do not comply with updated policies or are not aligned with organizations' new direction and

strategy. Additionally, these frequent changes can introduce disruptions at project levels as project budgets can be affected by political decisions (Maleka, 2023). Thus, Project Managers in the public sector must possess the competence required to marshal projects through these potentially disruptive changes.

According to Maleka, (2023), opine that another prevalent challenge in the South African Public Sector is the issue of resources (financial and human) constraints. Seeing as projects require both human and financial resources, lack of either or both introduces a challenge that Project Managers must be competent enough to be able to navigate projects through if they are to successfully deliver projects in the South African Public Sector. The author further argues that one of the challenges with human resources in the South African Public Sector is that they are not adequately trained. This further exacerbates the challenges that Project Managers have to deal with as the project teams they lead are often not suitably trained to deliver projects even worse, the Project Managers themselves are not properly trained to deliver projects as they are appointed as an "Accidental Project Manager" (Baccarini, Darrell and Love, 2008). This is supported by Selepe and (Thusi, 2023), as they opine that project management and engineering disciplines are negatively impacted as competent resources tend to resign from the public sector due to the implementation of new unfavourable government policies.

Another challenge for Project Managers to contend with in the South African Public Sector is that of authority residing with political employees who do not have the necessary insight to make informed decisions on project matters (Selepe and Thusi, 2023). This takes away authority from the project team and can have a negative impact on project delivery unless Project Managers possess the competence required to influence the individual with authority to make decisions that best serve a project.

2.4.3 Project Management Competency in Public Sector Context

According to Dias *et al.*, (2023), although projects are commonly undertaken in the public sector using established project management tools and practices, project failure remains

prevalent. However, there is very little research that has been done on Project Manager's competencies in the public sector even though it has been demonstrated by several academics that there is a direct link between project success and a Project Manager's competence. They further opine that projects in the public sector are different from those in the private sector as they have to navigate unique challenges such as resource constraints, bureaucracy, influence of law, political influence, multitude of stakeholders, among others. The research showed that the essential competencies for a Project Manager in the public sector are Communication skills, Knowledge of project management, Motivation, Emotional intelligence, and an Attitude of confidence. Gasemagha and Kowang, (2021) argue that the role of a Project Manager depends on several factors as project stakeholders. They argue that the role that a Project Manager plays in the public sector is different from the one that their private sector counterparts. Thus, it begs to reason that the behavioural competencies required to successfully deliver a project will be different between private and public sector projects.

2.4.4 Project Manager's Competence in General South African Context

The two studies highlighted in section 2.4.1 (i.e. Flepisi and Mlambo, (2021), and Mugumbate and Kruger, (2022) demonstrated the link between project management competence and project performance in the South African context. Additionally, Selepe and Thusi, (2023) posit that there is a need for competencies beyond technical abilities in the South African Public Sector to improve the efficiency and effectiveness of project delivery. However, there are very limited studies undertaken to explore the impact of Project Manager's competence in the South African Public Sector.

Semple, (2011) conducted an empirical study in South Africa to explore the expected project management competencies that will be required in the next decade. The study found that respondents (i.e., Program Managers, Project Managers, Functional Managers, Engineering Managers, project team members, and members of PMO) expected the following behavioural competencies (in order of importance) to grow in importance in the next decade: *"Efficiency, Leadership, Creativity, Openness, and Engagement & Motivation".* Furthermore, Respondents

expect the following behavioural competencies to become less important (in order of importance) in the next decade; *"Ethics, Values Appreciation, Appreciation, Reliability, Conflict & Crisis, and Self-control"* (Semple, 2011).

In their study aimed at determining personal and performance competencies necessary to successfully deliver IT projects, Erasmus, Joseph and Marnewick, (2016) found that the following competencies are key (in no particular order): Communication, Leading (project team support and encouragement), Professionalism, and Effectiveness.

2.5 Project Success

2.5.1 Evolution of Project Success Definition

Project success is one of the most discussed topics amongst project management practitioners and academics, yet its definition is rarely agreed upon (Koelmans, 2004; Crawford, 2005; Bannerman, 2008; Shokri-Ghasabeh and Kavousi-Chabok, 2009; Lamprou and Vagiona, 2018; Blom, Steyn and Bond-Barnard, 2023; Sima, 2024). In the past, the iron triangle was used to measure project success as completion of a project within the constraints of schedule, budget, and quality/performance was considered sufficient to label a project as a success (Westerveld, 2003; Kerzner, 2009). However, this metric of success has become troublesome in recent years as there are more competing criteria than the iron triangle and there is a wide array of stakeholders to make the judgement across varying time periods. (Westerveld, 2003). This is further supported by the findings made by Shokri-Ghasabeh and Kavousi-Chabok, (2009), whose study concluded that labeling a project successful because it simply meets cost, quality, and time constraints is now outdated. Thus, a new way of defining project success is required.

2.5.2 Broadened Definition of Project Success

Although literature shows no general agreement amongst project management practitioners and academics on the definition of project success despite the numerous discussions around the topic, there is common agreement amongst project management practitioners and

academics that project success is subjective, multi-dimensional, contextual, time, and stakeholder construct (Cuypers, 2022).

The PMI argues that there must be a drive amongst project management professionals to broaden the definition of project success to move the focus away from project management success (where project management success is defined as meeting project management goals such as schedule, quality, and cost (Müller and Turner, 2010)) to overall project success (defined as project meeting envisaged business goals using project outcomes (Müller and Turner, 2010)) as this will not only help the project management profession gain the deserved recognition, but also help Project Manager advance their careers (PMI, 2024). According to the PMI, broadening the definition of project success must give a level of priority to the perception of success by stakeholders. The PMI thus currently define project success as the consensual view across stakeholders, beneficiaries, and the rest of the project participants that a project was deemed to have delivered value for such that the project was worth the money and effort.

Westerveld, (2003) postulates that developing a universal checklist for project success is impossible as success criteria will be different for each project. As an alternative, he proposed a flexible Project Excellence Model (PEM) that covers six results areas as follows: (1) Iron Triangle (Budget, Schedule, and Quality), (2) Appreciation by the Client, (3) Appreciation by project personnel, (4) Appreciation by users, (5) Appreciation by contracting partners, and (6) Appreciation by stakeholders. This model is mostly aligned with the PMI's definition of project success as values the perception of project beneficiaries (users), stakeholders, and project participants (i.e., project personnel and contracting partners).

2.6 Existing Knowledge/Research Gap

2.6.1 Contextualizing Behavioural Competencies to the South African Public Sector

From the literature review, there appears to be very limited research conducted to explore behavioural competencies in the South African context, let alone the South African Public

Sector. Seeing as there is a direct correlation between the Project Manager's competence and project success, and there is a need to improve the probability of success (Mugumbate and Kruger, 2022) in order for the public sector to realize return on investments and operationalize the government strategies through projects, it is imperative to close this gap by identifying the essential behavioural competencies required to successfully deliver.

Most of the studies that are readily available on project management behavioural/ personal/ soft competencies have been mainly concentrated in developed Western countries. As literature has shown, the culture of the performing organization has an impact on behavioural competencies and South Africa being the unique cultural country it is, one cannot simply take the findings from Western countries and apply them in the South African Public Sector. Therefore, there is a need to contextualize behavioural competencies in the South African Public Sector.

2.6.2 Contextualizing Behavioural Competencies to the Performing Organizations' Project Management Structure and Industry

Several studies have shown that there is a direct link between project success and a Project Manager's competence (Dziekoński, 2017; Gruden and Stare, 2018; Javed and Liu, 2017; Khattak and Mustafa, 2019). Additionally, it seems that project management practitioners and academics agree that diverse environments call for different project management competencies, thus rendering project management competencies not universal, hence the need for contextualization (Crawford, 2005; Skulmoski and Hartman, 2009; Dogbegah, Omoteso and Owusu-Manu, 2013; Vlahov, Klindžić and Radujković, 2019). Additionally, Skulmoski and Hartman, (2009) posit that, where there is a multicultural workforce, different behavioural competencies are required. Although studies have been conducted to explore competencies that Project Managers require to be successful, as shown through various studies referenced herein, none takes into account the structural dimension which determines to a degree the level of authority that the Project Manager has on the project team. From literature, it has been demonstrated that a Project Manager's authority is key when delivering projects. Also, Lechler and Dvir, (2010) have demonstrated that there is no linear relationship

between the Project Manager's authority and the formal structure implemented by the performing organization as several structural attributes such as a Project Manager's project authority, Project Manager's personnel authority, Project Manager's project responsibility, Project Manager's functional responsibility, and involvement of top management can be put in place to compensate for the limited authority that the structure provides. Thus, over and above the traditional project management structures, these attributes must be factored in when assessing the project management structure implemented in undertaking projects. It stands to reason that there is a need to align behavioural competencies required to successfully deliver projects when implementing projects in structures taking into consideration such structural attributes as developed by (Lechler and Dvir, 2010).

As detailed in 2.3.3, literature has demonstrated that the project management behavioural competencies required to successfully deliver projects are also dependent on the industry within which a project is undertaken. The South African Public Sector comprises a multitude of organizations that undertake projects in a wide array of industries such as Engineering, Construction, Entertainment, Government & Public Administration, Information Technology, Logistics, Research & Development, etc. (National Government of South Africa, 2024). Thus, it is imperative to take into account the impact of industry on the required behavioural competencies.

2.6.3 Defining Project Success in the South African Public Sector Context

Seeing as using the iron triangle alone to measure project success is now outdated and there is general agreement amongst project management practitioners and academics that project success is subjective, multi-dimensional, context, time, and stakeholder construct. It is thus a prerequisite to develop a common understanding of project success as perceived by South African Public Sector project management practitioners in order to understand the behavioural competencies necessary to successfully deliver projects.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This section of the report details the research methodology employed to either support or refute the research hypothesis. The chapter starts by first describing the research paradigm chosen to achieve the objectives of the study. Thereafter, the chosen research methodology will be discussed followed by the research design accompanied by its justification. The unit of analysis will then be described, followed by the data collection method employed and the data analysis instrument used will be elaborated.

3.2 Research Paradigms

According to Saunders, Lewis and Thornhill, (2009), a research paradigm refers to an overarching term that describes the nature of knowledge and how the knowledge is developed (i.e., epistemology). Numerous research paradigms are available, providing researchers with an array of approaches to choose from depending on their individual study. The four that are common amongst academics are; (1) Positivist – it primarily makes use of quantitative data to derive absolute truths and normally makes use of a quantitative method, (2) Realism – it is strongly linked to the natural science philosophy, asserting that one's sensory experiences provide an accurate representation of the world, (3) Interpretivism – it introduces the social aspect of human behaviour, emphasizing that the interaction between the researcher and participant can influence the research outcome, and normally adopts a qualitative method, and (4) Pragmatism – is a fusion of philosophies that embraces the idea of working with possibly conflicting assumptions about the nature of reality (ontology) and opposing approaches to how knowledge can be effectively reproduced (epistemology), and normally employs a mixed method (Saunders, Lewis and Thornhill, 2009). The Authors further opine that the research philosophy one adopts for their research institutes critical assumptions about the way the researcher views the world (i.e., ontology). The authors further state that it is these assumptions that then determine the research strategy and the methodology that a researcher employs.

From the four research philosophies described above, the research philosophy that most closely aligns with the objectives of this study is that of Positivism primarily due to its objective nature and its ability to draw research outcomes based on observable data and facts, rather than the sensations of role players (i.e., research participants and researchers).

3.3 Classification of Research Purpose

According to Saunders, Lewis and Thornhill, (2009), research purpose can often be classified as explanatory, descriptive, exploratory, or a combination. They describe an exploratory study as one whose objective is to examine a topic which has not previously received sufficient attention with the aim of finding new insights through the use of literature surveys, interviews, or focus groups. Additionally, they describe explanatory studies as research aimed at demonstrating the causal connections between various factors. Ghanad, (2023) states that descriptive research focuses on accurately describing a situation, population, or phenomenon.

This study can be classified as a combination of descriptive and exploratory. Particularly, Phases 1 and 2 as described in section 3.5 are descriptive whilst Phase 3 is exploratory in nature.

3.4 Research Approach

Saunders, Lewis and Thornhill, (2009) state that two research approaches from which a researcher can choose are as follows: (1) Deductive approach where the researcher(s) first develop a theory and/or a hypothesis, and research is then designed to refute or support the theory, and (2) Inductive approach where the researcher(s) collect data from which a theory is then developed.

This study is inductive in nature as it seeks to explore and develop an understanding of the essential behavioural competencies in the South African Public Sector through the use of data collected using a survey and interviews.

3.5 Research Design

According to Creswell, (2014), a researcher has three "Strategies of Enquiry" to choose from, namely: quantitative, qualitative, and mixed (a combination of quantitative and qualitative) methods. In practice and academia, the word qualitative and quantitative are often used to differentiate data collection techniques as well as data analysis procedures employed in a study (Saunders, Lewis and Thornhill, 2009).

This research design followed an established approach previously used for a similar study by Birkhead, Sutherland and Maxwell, (2000). The research comprises three (3) phases as described in the ensuing sections.

3.5.1 Phase 1: Literature Survey

This phase of the study entailed conducting a literature review of extant literature with the aim of obtaining Project Managers' behavioural competencies that are widely accepted amongst project management practitioners and academics. These behavioural competencies were then analyzed and a list of twenty-two (22) behavioural competencies was developed.

3.5.2 Phase 2: Research Survey

This phase of the study involved conducting an online, self-administered survey to collect primarily quantitative data from project management practitioners in the South African Public Sector. The details of the survey are as detailed in section 3.8.3. The primary objective of this phase was to allow participants to indicate which of the identified behavioural competencies (from the list of twenty-two (22) behavioural competencies) they deem essential to successfully deliver projects in the South African Public Sector, thus contextualizing the established behavioural competencies to the South African Public Sector context.

Additionally, participants were requested to indicate additional competencies that were not included in the list that might be unique to the South African Public Sector.

3.5.3 Phase 3: Personal Interviews

After the data collected in phase 2 was quantitatively and
ally analyzed, a new list of behavioural competencies was compiled. This list comprised essential behavioural competencies as established from Phase 2 that participants viewed as essential and additional competencies identified by participants during Phase 2 (see Table 10 on page 63).

Phase 3 comprised nine interviews where a selected group of Project management practitioners in the public sector were interviewed. The objectives of this phase were three folds; (1) to validate the compiled list of behavioural competencies by ensuring that the list is exhaustive, (2) to identify the essential behavioural competencies from the list developed during Phase 2, and (3) to develop an in-depth understanding of behavioural competencies that are deemed essential for South African Public Sector.

3.6 Research Method

According to Saunders, Lewis and Thornhill, (2009), when selecting a research method for a study, one can either choose a single data collection technique along with its associated data analysis procedure or employ multiple data collection techniques with their corresponding data analysis procedures in order to address the research question under consideration. Figure 1 below shows possible options from which a researcher can choose(Saunders, Lewis and Thornhill, 2009).

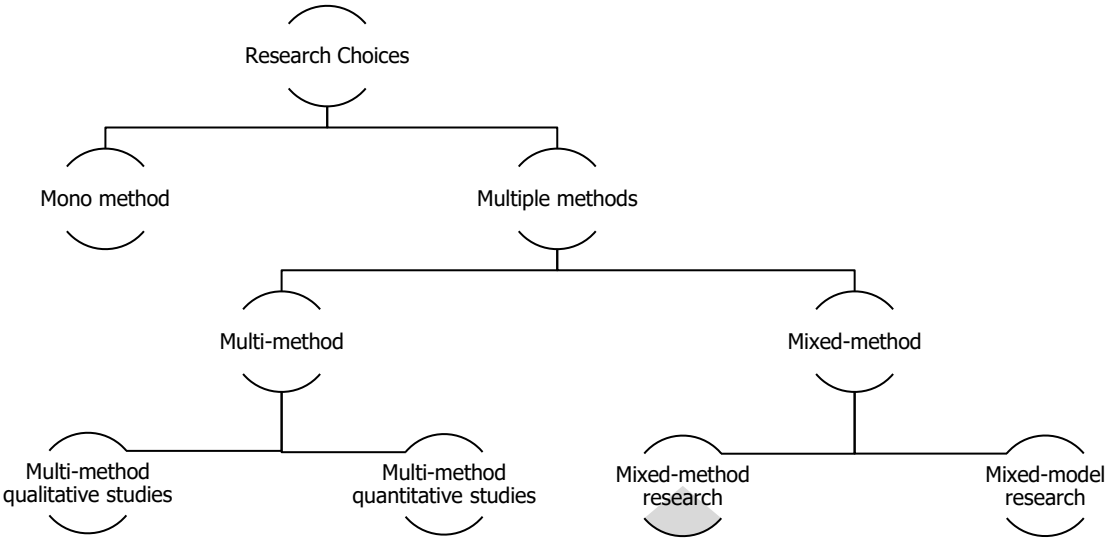

Figure 1: Research Method Options (reconstructed from Saunders, Lewis and Thornhill, (2009))

Saunders, Lewis and Thornhill, (2009), posit that mixed-method research is one where the researcher(s) use both qualitative and quantitative data collection methods and their corresponding data analysis procedures either in parallel or in a sequential manner. According to Creswell, (2014), a mixed-method combines the strengths of the two methods whilst eliminating their respective weaknesses. The author further argues that the mixed approach provided a stronger understanding of the problem at hand and thus better position a researcher to answer research questions.

Mixed-method research was selected for this study as it not only provides an opportunity to answer the research question with adequate depth and breadth but also supports the generalization of the findings and implications to the wider population (Dawadi, Shrestha and Giri, 2021). This can be achieved by using a quantitative approach to collect data from a large number of respondents (i.e., breadth), which gives good grounds for generalization whilst a qualitative approach can be used to provide a deeper (i.e., depth) understanding of the findings.

3.6.1 Quantitative Research Approach

According to Rana, Gutierrez and Oldroyd, (2021), a quantitative research method entails gathering and analyzing numerical data in order to answer a scientific research question. The authors further opine that quantitative methods can be used to make predictions and discover patterns. Apuke, (2017) describes a quantitative method as the process of gathering numerical data and analyzing it using statistics in order to explain a phenomenon or an issue.

To achieve the research objectives of phase 2, the study adopted a quantitative approach primarily due to its impartial nature (Kumar Nayak Priyanka Singh, 2015), and its compatibility with a positivist paradigm (Creswell, 2014). Additionally, a quantitative approach was employed as it allows the author to economically collect large data that can not only answer the research question but allow for the generalization of the findings across the South African Public Sector. Furthermore, using a quantitative approach makes it easier to compare the findings, in the South African context, with those in Western countries upon which the hypothesis is based.

3.6.2 Qualitative Research Approach

Where the quantitative approach relies on numerical data to objectively answer research questions, the qualitative approach is subjective in nature as it values peoples' subjective experiences to develop an understanding of the problem at hand (Leavy Patricia, 2017). The author further states that the approach is methodically grounded in inductive design as it focuses on generating meaningful, detailed, and descriptive data. According to Creswell, (2014), the qualitative method is an emerging method that mainly employs open-ended questions to collect data which can be obtained through observations, interviews, audiovisuals, or documents. He further posits that data collected such as texts and images can be statistically analyzed with the aim of interpreting patterns and themes.

Personal online semi-structured in-depth interviews were employed as a means of collecting qualitative data with the main aim of gaining a deeper understanding of the research participants' responses to interview questions.

3.7 Unit of Analysis

The unit of analysis can be defined as an entity (i.e., groups of people, objects, geographic entities, individuals, social artefacts) from which a researcher collects data (Kumar, 2018). For this study, project management practitioners currently practising in the South African Public Sector were the unit of analysis.

3.8 Data Collection Method

There are several modes of data collection which researchers can use to collect research data, such as telephone interviews, personal, mail, and internet surveys (Fowler, 2014). The honour is on the researcher to choose the appropriate method or a combination of methods that best suit their individual study, considering factors such as length of data collection, cost, available facilities, type of population, etc.

3.8.1 Quantitative Data Collection

According to Creswell, (2014), a survey can be used to provide numeric or quantitative data that gives descriptions of a sample population's opinions, attitudes, or trends. This is supported by Saunders, Lewis and Thornhill, (2009), as they state that through a survey, one can gather quantitative data, which can then be analyzed using inferential and descriptive statistics. Creswell, (2014) further states that the results from a survey can be used by researchers to generalize or draw conclusions. According to Fowler, (2014), one of the best ways to conduct a survey is to email potential participants with a link to the survey for them to complete.

3.8.2 Qualitative Data Collection

Whilst quantitative data collection typically involves a random selection of participants or a selection of a large number of respondents, qualitative data collection requires one to purposefully select individuals or sites to participate in a study (Creswell, 2014). The author further states that there are four types of data collection procedures that one can employ to collect qualitative data; (1) observations where a researcher can observe and collect field notes, (2) interviews where the researcher conducts interviews with participants, (3) documents where a researcher peruses through documents such as newspapers, report, and

minutes of meetings to gather data, and (4) audiovisual materials where a researcher can sift through photos, videos, art object, web pages, emails, social media texts, various forms of audio, etc. For this study, personal interviews were employed as a means of collecting qualitative data.

For this study, both quantitative (through a survey) and qualitative (through personal interviews) were collected. The study was cross-sectional in nature as the primary data was collected at a particular point in time due to the time constraints of the study (Saunders, Lewis and Thornhill, 2009).

3.8.3 Research Tools Justification

3.8.3.1 Online Survey

For this study, a self-administered, computer-aided survey was employed as a method of collecting quantitative data. This method presents several advantages, such as the ease with which questions can be presented, anonymity which makes responses more valid, low cost, potential rapid responses, and thoughtful responses as respondents have ample time (Fowler, 2014). Additionally, a survey is a common method of collecting data for deductive approaches (Saunders, Lewis and Thornhill, 2009).

Due to the timeline within which the study is to be completed, streamlined data collection and time-saving potential primarily, a close-ended questionnaire was employed. The survey consisted of nine sections as detailed below:

Table 5: Phase 2: Questionnaire Survey Structure

Section	Title	Description
1.	**Introduction and Consent**	This section of the study introduced the research and the reason for conducting the study. Also included in this section was the procedure to complete the survey, potential risks and discomforts to participants, and potential benefits to participants. This section also informed the potential participants on how confidentiality will be maintained should they

		choose to participate in the survey. The potential participants were also informed about the option to withdraw from the study at any point should they wish to do so. This section was concluded by giving the potential participants to either give consent and participate in the study, or not give consent and not continue with the survey.
2.	**Demographics of Respondents**	This section collected demographic data of the respondents. Seeing as there exists research that different demographics view different competencies differently; the aim of this section was also to attempt to assess if different demographics perceive behavioural competencies differently. This section included the confirmation of the location of the performing organization to ensure that respondents are indeed practitioners in South Africa.
3.	**Project Identification**	This section was in preparation for the ensuing sections. It afforded the participant an opportunity to select a specific project which they deem successful upon which answers to ensuing sections will be based.
4.	**Industry of Performing Organization**	Seeing as the literature shows that different project management competencies are necessary for different industries (Stevenson and Starkweather, 2010), this section aims to explore if this is the case in the South African Public Sector context.
5.	**Role of Respondent in Project and Structure of Performing Organization**	This section also determined the structure of the performing organization as this determines the level of authority that the Project Manager has in the project as the level of authority affects the behavioural competencies required. For example, a Project Manager in a Weak Matrix structure might require negotiation skills as they do not have authority on the project team. Whereas the Project

		Manager in a Project-oriented organization might not need negotiation skills as they have authority over the team.
6.	**Defining Project Success**	The purpose of this section was to develop a common understanding of what project success is, as there exist different understandings in the industry (Koelmans, 2004; Crawford, 2005; Bannerman, 2008; Shokri-Ghasabeh and Kavousi-Chabok, 2009; Lamprou and Vagiona, 2018; Blom, Steyn and Bond-Barnard, 2023; Sima, 2024). This section also served to ensure that project success is not self-defined but rather defined in terms of commonly accepted criteria in the industry. Additionally, this section sheds light on the understanding of project success in the context of the South African Public Sector, and the jury is still out among practitioners and academics regarding the definition of project success.
7.	**Role of the Project Manager in Delivering the Selected Project**	The literature shows that structures might be put in place to compensate for organizational structural weaknesses (low Project Manager authority) in order to improve the probability of project success (Lechler and Dvir, 2010). This section was aimed at assessing whether or not this was the case for the selected project.
8.	**Ranking Project Manager's Behavioural Competencies Demonstrated in Delivering the Selected Project**	This section used a seven-point Likert scale (where seven is "extremely essential" and one is "not essential") to rank the competencies which they deem were essential for the Project Manager in delivering the identified project under consideration. To ensure that the respondents understood the meaning of the listed competencies, the survey was accompanied by a document that provided definitions for each listed competency.
9.	**Additional Behavioural**	This section afforded the respondent an opportunity to indicate if there were additional behavioural

Competencies Demonstrated in Delivering the Selected Project that are not included in Section 8	competencies that the Project Manager demonstrated during the project that were not included in the list provided in section 8.

A survey was designed using Microsoft Forms to be used as a primary data collection tool. The survey contained a combination of structured and semi-structured questions. See APPENDIX A: QUESTIONNAIRE SURVEY for details.

3.8.3.2 Personal Interviews

For this study, online personal interviews were selected as a means of collecting qualitative data for the following reasons; (1) cost and time efficiency – online interviews are cost-effective as the author and participants do not have to travel to meet for the interview, (2) broader reach – seeing as the participants are scattered all over South Africa, using online interviews allows for individuals that are geographically located in remote areas to participate in the study, (3) convenience – online interviews allows for flexibility in scheduling for both the researcher. The interviews were structured as shown in the table below:

Table 6: Phase 3: Interview Structure

Section	Title	Description
1.	**Introduction and Consent**	This section of the study introduced the research and the reason for conducting the interview. The participants were also informed about the option to withdraw from the study at any point should they wish to do so. This section was concluded by giving the participant an opportunity to either give consent and participate in the study, or not give consent and not continue with the interview.
2.	**Selections and Ranking of Behavioural Competencies**	In this section, participants were presented with a list of behavioural competencies as listed in Table 10. They were then requested to select the behavioural competencies they deem essential to successfully deliver projects in the South African Public Sector. Thereafter, they were asked to rank the competencies in order of importance based on their experience.
3.	**Reasons for the Ranking**	In this section, participants were asked to provide reasons for selecting the specific behavioural competencies and well as why they ranked them as they did.
4.	**Assessing Completeness of Listed Behavioural Competencies**	Participants were presented with the full list of behavioural competencies again and asked if they had observed in their experience additional behavioural competencies that are not listed. This served to confirm or refute the exhaustiveness of the list of behavioural competencies in the South African Public Sector content.
5.	**Conclusion**	The purpose of this section was to thank the participants and highlight the next step in the research.

3.9 Data Sources

Ajayi, (2023) describes data as the collection of values that correspond to qualitative or quantitative variables. Data can be primary, where the data is collected for the first time by the researcher with the aim of answering a research question, and it is factual and original,

or secondary data, where data is collected by others (Ajayi, 2023). Primary data can be sourced through personal interviews, surveys, observations, experiments, and questionnaires among others. Secondary data can be sourced from webpages, books, government publications, journal articles, records, and other similar sources.

For this study, both primary and secondary data were utilized. Secondary data was obtained through a literature review to develop a hypothesis which was then tested through the analysis and interpretation of primary data collected via a web-based computer-aided survey and personal interviews.

3.10 Sample Selection

Fowler, (2014) defines sampling as the selection of a small population that is representative of the whole population under consideration. He further states that to obtain credible and reliable results, one must have a good sample by finding a way to allow almost all the population to participate in the survey. To achieve this, the author used a virtual network sampling method as proposed by Kaliszewski et al., (2021), as this allowed for obtaining a representative sample of South African Public Sector project management practitioners dispersed across the country. The method is similar to the "*snowball method*" as it uses a network of connections that exists between potential respondents. The selection method makes use of information that is publicly available about the respondents, thus increasing the credibility of the sample (Kaliszewski *et al.*, 2021). The authors further posit that for this method to be implemented successfully, the main researcher must be practising in the same industry as the potential participant. Seeing as the author is currently a project management practitioner in the South African Public Sector, this method of sampling was employed. The method procedure comprises three basic steps: (1) Compiling a list of potential participants that belong to the research population, (2) Acquiring respondents from the compiled list as the researcher's direct contacts, (3) Distributing invites to participate in the survey (Kaliszewski *et al.*, 2021).

In this study, a virtual network sampling method was done using LinkedIn as it is the biggest platform for both employers and employees and has a network structure similar to other internet platforms as user groups which are in turn connected to other groups, thus creating a vast network (Kaliszewski *et al.*, 2021).

3.11 Data Analysis

3.11.1 Quantitative Data Analysis

Seeing as collected raw quantitative data is not useful, it must be analyzed to convert it into useful information using quantitative analysis techniques and methodologies (Saunders, Lewis and Thornhill, 2009). The authors further state that through the use of statistical analysis of raw quantitative data, one can describe, present, and explore trends/relationships within the collected data.

Primary data collected was analyzed and interpreted using a combination of Microsoft Excel and IBM's SPSS (IBM SPSS Statistics) computer software. Results were then interpreted followed by discussions, conclusions and recommendations.

3.11.2 Qualitative Data Analysis

In order to make the collected qualitative data useful, one must analyze it using qualitative analysis procedures (Saunders, Lewis and Thornhill, 2009). The authors further state that although this analysis can be conducted manually, a Computer-Aided Qualitative Data Analysis Software (CAQDAS) such as NVivo can be used. According to Creswell, (2014), qualitative data analysis generally starts by first organizing and preparing the raw data for analysis. This can involve interview transcription, typing field notes, and sorting data based on sources. The second step is to read through the data reviewing the collected data with the aim of getting a general sense of what the participants are conveying in their responses. The third step is to start breaking down the data into categories that capture ideas and themes. The fourth step is to use coding as well as identify emerging themes that represent research findings. The fifth step is where the researcher decides how to represent the themes

and description as part of the qualitative narrative. The final step is where the researcher interprets the qualitative research findings (Creswell, 2014).

For this study, the qualitative data was analyzed using NVivo computer software to conduct directed content analysis where the codes and themes were established before data analysis based on literature research findings (Hsieh and Shannon, 2005). Furthermore, description-focused coding was employed to code the data into NVivo. Additionally, Microsoft Excel was also employed to analyze the data.

3.12 Reliability and Validity

3.12.1 Quantitative

According to Aliu *et al.*, (2022), assessing a research instrument's validity and reliability is essential to guarantee the accuracy of the findings.. The authors further state that the validity of the questionnaire examines the degree to which the phenomenon being observed is accurately measured.

Saunders, Lewis and Thornhill, (2009) assert that the reliability and validity of the data collected largely depend on the design and the structure of the questionnaire, as well as the pilot testing rigorousness. With this in mind, prior to distributing the questionnaire to wider participants, the questionnaire was distributed via email to a smaller pilot sample of five participants and the supervisor. This also ensured that the questions were comprehensible. Feedback from these participants and the Supervisor were affected prior to distribution to a larger audience. In this manner, the face validity of the questionnaire used to collect the data was assured.

A thin description for each participant was included as it is inherent with a quantitative study to offer the necessary background of the data gathered while guarding the respondent's identity.

3.12.2 Qualitative

Creswell, (2014) remarks that validity for qualitative research does not mean the same as it does for quantitative research. He further opines that in qualitative research, validity is not directly linked to reliability. Instead, validity in qualitative research refers to the authenticity, credibility, and accurate representation of the research participants' experience. Saunders, Lewis and Thornhill, (2009), posit that reliability focuses on the robustness of the researcher's question, particularly assessing whether or not it will yield consistent results when asked under different conditions. They further recommend the following steps as shown in Figure 2 below.

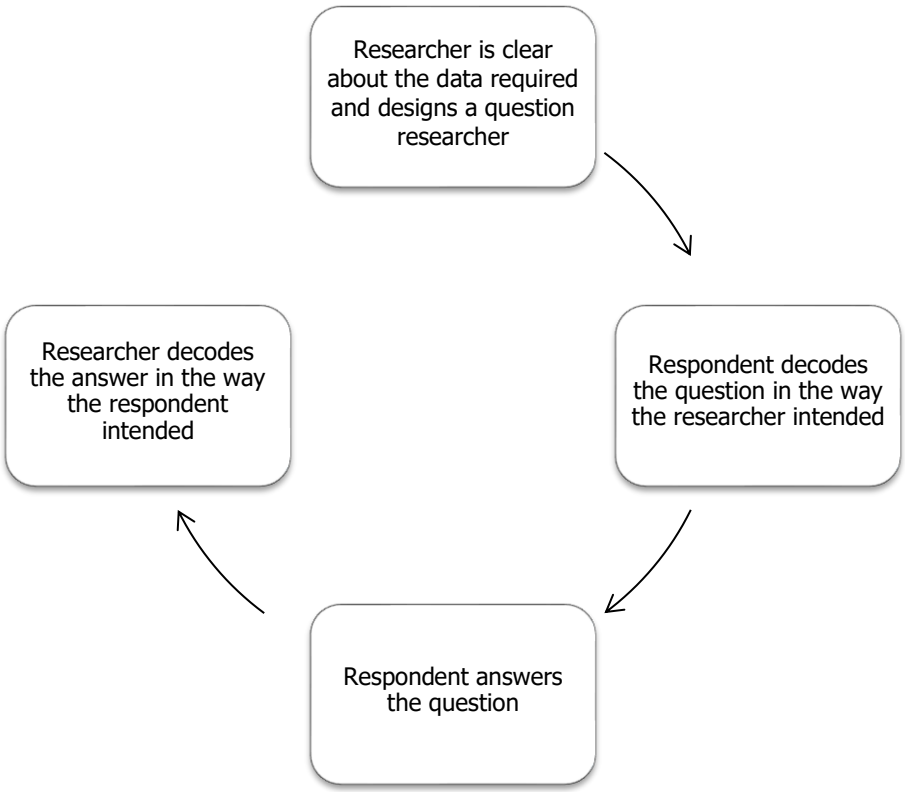

Figure 2: Necessary Stages to Ensure Question Reliability and Validity. Regenerated from Saunders, Lewis and Thornhill, (2009).

Furthermore, Creswell, (2014) highlighted eight strategies that can be followed to ensure reliability as follows: (1) triangulation, (2) member checking, (3) clarifying the biases, (4)

spending prolonged time in the field, (5) presenting discrepant or negative information, (6) using external auditors, (7) peer debriefing, and (8) using a thick description.

For Phase 3 of this study, the stages highlighted in Figure 2 above were followed to ensure that the questions were valid and reliable. Furthermore, as recommended by Creswell, (2014) member checking where the specific descriptions and themes were presented back to the participants to seek confirmation whether or not the information captured accurately represented their experience. Additionally, online personal interviews were recorded to keep an audit trail. Also, the questionnaire was shared with the supervisor before conducting interviews to ensure that the questionnaire formulated would answer the research questions in line with the study objectives.

3.13 Ethical Considerations

Prior to the commencement of the study, ethical clearance was sought from the Engineering & Built Environment Research Ethics Committee to ensure that all ethical aspects associated with the study were taken into consideration. The approval to conduct the study was received and can be viewed in the letter contained in 0APPENDIX C: ETHICS CLEARANCE.

Following the creation of the survey and interview questions, research participants were contacted and offered the opportunity to voluntarily engage in the study. Additionally, potential participants were informed that they may withdraw from the study whenever they desired. They were also given instructions to ensure that they understood the goal of the study and the intended use of the data gathered. No pressure was used to get formal informed consent. The participants received dignified and respectful treatment, and the information they submitted will be treated with confidentiality.

3.14 Assumptions

It was assumed that a representative sample of project management practitioners in the South African Public Sector would be obtained and that they would be objective and impartial in their response to the study.

It was also assumed that some of the behavioural competencies as listed and described in the PMI's, APM's, and IPMA's respective competence frameworks will be applicable in the South African Public Sector context. Additionally, it was assumed that the Project Managers in the South African Public Sector are the main drivers of projects and that there is a direct link between a Project Manager's behavioural competence and project success as observed by project management practitioners and academics in Western countries.

CHAPTER 4: RESEARCH RESULTS AND ANALYSIS

4.1 Introduction

This chapter captures the research participants' responses to the research survey questionnaire and personal interviews. Also presented in this chapter is the analysis of research findings with the aim of making sense of the collected data. The chapter fundamentally presents the research findings as derived from the collected and analyzed data and interprets them in relation to the research question and research objectives.

The primary objective was to establish which behavioural competencies are essential to successfully deliver projects in the South African Public Sector. The ancillary objective was to establish key factors that influence the behavioural competencies required to successfully deliver a project in the South African Public Sector. The final derivative objective of the study was to explore project management practitioners' perspective of project success in the South African Public Sector context.

4.2 Results and Analysis

4.2.1 Survey (Phase 2)

The respondents to the survey comprised project management practitioners in the South African Public Sector. An invitation to participate in the survey was sent using a virtual network sampling method as proposed by Kaliszewski et al., (2021) as detailed in section 3.10 through LinkedIn. A total of 79 responses were received, of which 7 were considered invalid for further analysis as they were for projects not executed in the South African Public Sector. Thus, yielding a total of 91.1% valid responses.

The data collected was exported from Microsoft Forms into Microsoft Excel. The data was pre-processed before importing it into the International Business Machines Statistical Package for the Social Sciences (IBM SPSS) Statistics version 29. SPSS was then used to conduct descriptive statistics such as calculating means, standard deviation, frequencies, etc. The results are presented in the ensuing sections.

4.2.1.1 Demographics

The demographic profile of the survey participants is shown in Table 7. As can be seen, the ratio of male to female ratio was 13:7 in favour of male participants. Also, 75% of the participants were above 35 years old followed by the age group between 30 and 35 at 22%, and only 3% of participants aged between 25 and 30. The majority (39%) of the survey respondents had experience between 10 and 15 years followed in order by 15 to 20 years of experience (25%), 5 to 10 years (18%), more than 20 years of experience (10%), and 1 to 5 years of experience (8%).

Table 7: Demographic Profile of Survey Participants.

	Frequency	**Percentage**
Gender		
Female	25	35%
Male	47	65%
Age		
25 to 30	2	3%
30 to 35	16	22%
More than 35	54	75%
Years of Experience		
1 to 5 years	6	8%
10 to 15 years	28	39%
15 to 20 years	18	25%
5 to 10 years	13	18%
More than 20 years	7	10%

4.2.1.2 Data Reliability

According to Saunders, Lewis and Thornhill, (2009), there are several methods of calculating the reliability of a research instrument. These methods entail measuring the consistency of responses either a group of questions or all questions within the questionnaire. They further state that Cronbach's alpha method is one of the most commonly used methods to calculate reliability. Pieterse *et al.*, (2024) opine that Cronbach's alpha is particularly important for the Likert scale questionnaire which was adopted for this study.

To examine the reliability of the research instrument used for this study, a Cronbach's α test was conducted in SPSS. The instrument yielded a Cronbach's alpha of 0.936 (22 items) which indicates a high level of reliability as it is above the required 0.7 minimum (Ikediashi, Ogunlana and Alotaibi, 2014; Marnewick and Einhorn, 2019; Pieterse *et al.*, 2024). Thus, the collected data can be considered reliable.

4.2.1.3 Data Normality

According to Ghasemi and Zahediasl, (2012), a multitude of statistical procedures are based on the assumption that the data that is collected from a sample is normally distributed. They further posit that the check for normality must be seriously considered as conclusions drawn from the data may not be accurate should the assumption of normal distribution not be correct. They further state that for samples above 40, the violation of normality should not be a problem and parametric analysis may be carried out as the distribution tends to be normal irrespective of the data shape.

The commonly used tests to examine the normality of the data are the Kolmogorov-Smirnov and Shapiro-Wilk tests (Ghasemi and Zahediasl, 2012). For this study, the Kolmogorov-Smirnov and Shapiro-Wilk tests were conducted in SPSS. The results showed that the data is not normally distributed as the significance values for all variables were less than 0.05 which is required to qualify for normality (Aliu *et al.*, 2022).

Table 8: Normality Test.

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Leadership	0.261	72	<0.001	0.770	72	<0.001
Communication	0.334	72	<0.001	0.652	72	<0.001
Managing	0.290	72	<0.001	0.816	72	<0.001
Cognitive ability	0.271	72	<0.001	0.861	72	<0.001
Effectiveness	0.302	72	<0.001	0.746	72	<0.001
Professionalism	0.247	72	<0.001	0.801	72	<0.001
Engagement & motivation	0.319	72	<0.001	0.780	72	<0.001
Self-control	0.338	72	<0.001	0.796	72	<0.001
Assertiveness	0.274	72	<0.001	0.838	72	<0.001
Openness	0.302	72	<0.001	0.831	72	<0.001
Relaxation	0.159	72	<0.001	0.926	72	<0.001
Creativity	0.185	72	<0.001	0.909	72	<0.001
Negotiation	0.242	72	<0.001	0.808	72	<0.001
Conflict & crisis management	0.282	72	<0.001	0.783	72	<0.001
Reliability	0.250	72	<0.001	0.761	72	<0.001
Values appreciation	0.294	72	<0.001	0.839	72	<0.001
Efficiency	0.335	72	<0.001	0.773	72	<0.001
Consultation	0.304	72	<0.001	0.809	72	<0.001
Results-orientation	0.267	72	<0.001	0.773	72	<0.001
Teamwork	0.317	72	<0.001	0.718	72	<0.001
Human resource management	0.218	72	<0.001	0.879	72	<0.001
Learning & development	0.234	72	<0.001	0.870	72	<0.001

Seeing as the data violates the normality, parametric analysis can either be conducted with caution or non-parametric analysis can be conducted instead. According to (Okoroiwu and Akwiwu, (2019), the correct choice of statistical analysis when normality is "*clearly violated*" is non-parametric analysis. Ostertagová, Ostertag and Kováč, (2016) suggest using the Kruskal-Wallis test which is a popular non-parametric alternative to the One-way Analysis of Variance (ANOVA) test as it does not assume normality. Thus, non-parametric analysis was employed to analyze the collected data as the data violated normality.

4.2.2 Personal Interviews (Phase 3)

Personal interviews were conducted with nine experienced project management practitioners in the South African Public Sector who previously participated in the survey (Phase 1) with the aims of; (1) identifying the essential behavioural competencies from the list developed in Phase 2 (survey), and (2) to develop a deeper understanding of behavioural competencies and why they deem specific behavioural competencies essential for Project Managers to successfully deliver projects in the South African Public Sector, and (3) ensuring that the list of behavioural competencies developed in Phase 2 is comprehensive. The data collected can be seen in APPENDIX B: INTERVIEW RESPONSES and the results are discussed in the ensuing section.

4.3 Behavioural Competencies that are Essential to Successfully Deliver Projects in the South African Public Sector.

Essential behavioural competencies were established by adopting an approach similar to the one used by Hashim Khawla Alamen, (2018). The approach entails developing a criterion for essential behavioural competencies by calculating the average mean value for all measured competencies. Thereafter, the means for each behavioural competence were compared to this average value and those with means higher than the average were classified as essential. The mean of the behavioural competencies was calculated to be 5.919.

Table 9 shows that fourteen (14) behavioural competencies are classified as essential in the context of the South African Public Sector with the remaining eight (8) being classified as relatively non-essential.

Table 9: Behavioural Competence Ranking by Means.

Rank	Behavioural Competence	N	Mean	
1.	Communication	72	6.500	Above Average (Essential Behavioural Competencies)
2.	Teamwork	72	6.431	
3.	Results-orientation	72	6.264	
4.	Conflict & crisis management	72	6.236	
5.	Leadership	72	6.222	
6.	Professionalism	72	6.208	
7.	Reliability	72	6.194	
8.	Effectiveness	72	6.069	
9.	Engagement & motivation	72	6.056	
10.	Negotiation	72	6.056	
11.	Efficiency	72	6.028	
12.	Managing	72	5.972	
13.	Consultation	72	5.972	
14.	Openness	72	5.931	
15.	Self-control	72	5.875	Below Average (Non-essential Behavioural Competencies)
16.	Assertiveness	72	5.833	
17.	Values appreciation	72	5.806	
18.	Cognitive ability	72	5.722	
19.	Learning & development	72	5.514	
20.	Human resource management	72	5.431	
21.	Creativity	72	5.278	
22.	Relaxation	72	4.611	

In addition to ranking the provided behavioural competencies, participants were requested to indicate any additional behavioural competencies that they have observed in Project Managers of the identified successful project that they deem was critical in them successfully delivering the project. The aim was to, (1) explore if the provided list of behavioural competencies was exhaustive, (2) identify (if any) unique behavioural competencies that

might the prevalent in the South African Public Sector that might not be included in the lists of IPMA, PMI, and APM competency frameworks.

Several responses were received, and the responses were subjected to analysis and from the analysis, it was established that most of the identified competencies were already included in the list of behavioural competencies provided with the questionnaire or the description of behavioural competencies that accompanied the survey. These included competencies such as Leadership, Motivation, Communication, Conflict resolution, etc. Thereafter, the remaining competencies were cross-referenced against technical/ knowledge competencies and those that were found to be considered technical/ knowledge competencies by the PMI, APM, and IPMA were then eliminated. These included competencies such as Risk management, Time management, Stakeholder management, Project planning, Contract management, Technical knowledge, and Health and safety management.

The remaining competencies identified were (1) Emotional intelligence, (2) Empathy, (3) Positivity, (4) Problem-solving, (5) Adaptability, (6) Agility, (7) Flexibility, (8) Punctuality, (9) Organized, and (10) Inter-personal Skills.

These ten (10) behavioural competencies were then combined with the fourteen (14) essential competencies as detailed in Table 9 to develop a new list of behavioural competencies. These competencies then formed part of the questions for Phase 3 (personal interviews) of the study.

Table 10: List of Consolidated Behavioural Competencies

	Behavioural Competency	
1.	Communication	**Behavioural Competencies Deemed Essential from Phase 2**
2.	Teamwork	
3.	Results-orientation	
4.	Conflict & crisis management	
5.	Leadership	
6.	Professionalism	
7.	Reliability	
8.	Effectiveness	
9.	Engagement & motivation	
10.	Negotiation	
11.	Efficiency	
12.	Managing	
13.	Consultation	
14.	Openness	
15.	Emotional intelligence	**Additional Behavioural Competencies Identified During Phase 2**
16.	Empathy	
17.	Positivity	
18.	Adaptability	
19.	Agility	
20.	Flexibility	
21.	Punctuality	
22.	Organized	
23.	Inter-personal skills	

The results from the nine interviews were analyzed in Nvivo following the established procedures for directed content analysis as described by Hsieh and Shannon, (2005). This analysis entails defining codes and themes before data analysis based on behavioural competencies as detailed in Table 10.

The transcripts of the interviews were then subjected to a content analysis similar to the process followed by Birkhead, Sutherland and Maxwell, (2000) to identify the most frequently mentioned behavioural Competencies by participants. The treemap diagram shown in Figure 3 below represents the behavioural competencies that participants deemed essential to delivering projects in the South African Public Sector ranked by frequency.

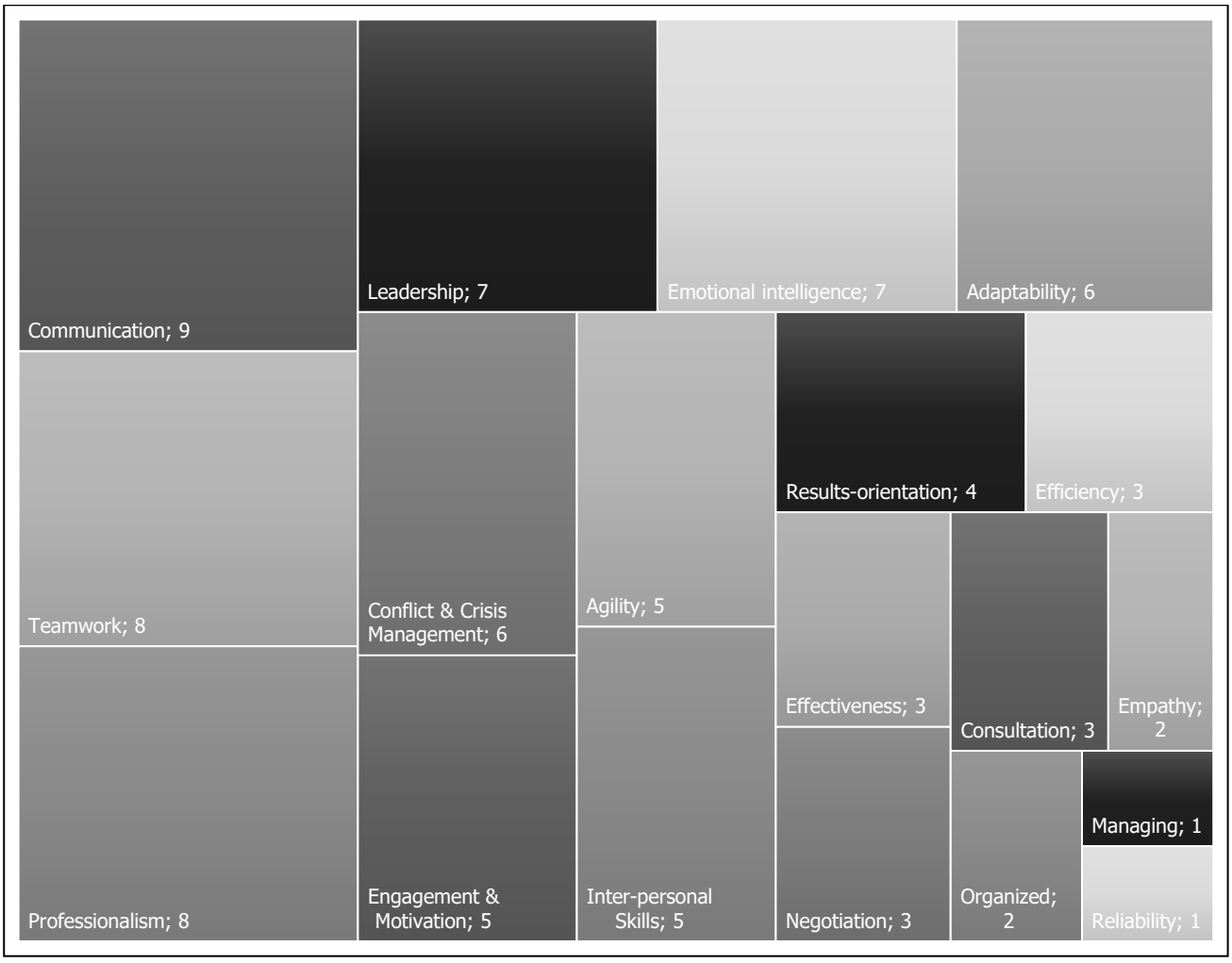

Figure 3: Essential Behavioural Competency Hierarchy Chart

As can be seen from the treemap diagram, all nine participants mentioned Communication as an essential behavioural competency which indicates that the participants collectively view it as an essential behavioural competency. It was closely followed by Professionalism and Teamwork with eight of the nine participants, which places emphasis on the need for

collaboration in executing projects and the importance of the Project Manager to maintain high standards of professionalism in discharging their duties. Emotional intelligence and Leadership then followed with seven mentions each which emphasizes the need for the PM to be able to lead the project whilst showing an understanding of different interpersonal dynamics at play in and around the project. Conflict & crisis management and Adaptability followed each with a total of six mentions which underpins the need to adapt to a dynamic environment within which projects are being executed and the need to be able to effectively manage conflicts and crises as they arise.

Interpersonal skills, Engagement & motivation, and Agility each received five mentions by participants followed by Results-orientation with four mentions. Effectiveness, Negotiation, and Consultation received lower mentions with three mentions each whilst Empathy and Organized only received two mentions. Managing and Reliability both received only one mention Whilst Flexibility, Openness, Positivity, and Punctuality received no mention.

Table 11 below shows all behavioural competencies classified based on the frequency of mention. Foundational Behavioural Competencies represent competencies frequently mentioned (above 67% mentions) indicating that they are fundamental for a Project Manager to successfully deliver projects in the South African Public Sector. Core Behavioural Competencies represent behavioural competencies that are considered important, although they are not as critical as Foundational Behavioural Competencies. These competencies received mention above 33%, but below 67%. Finally, Supporting Behavioural Competencies received between 0% and 33%. These competencies are considered supporting competencies as they are mentioned less frequently although they still have a role in the context of the South African Public Sector.

Table 11: Essential Project Manager's Behavioural Competencies in the South African Public Sector.

	Behavioural Competency	Frequency	% Mentions
Foundational Behavioural Competencies	1. Communication	9	100%
	2. Teamwork	8	89%
	3. Professionalism	8	89%
	4. Leadership	7	78%
	5. Emotional intelligence	7	78%
Core Behavioural Competencies	6. Adaptability	6	67%
	7. Conflict & crisis management	6	67%
	8. Engagement & motivation	5	56%
	9. Agility	5	56%
	10 Inter-personal skills	5	56%
	11 Results-orientation	4	44%
Supporting Behavioural Competencies	12 Efficiency	3	33%
	13 Effectiveness	3	33%
	14 Negotiation	3	33%
	15 Consultation	3	33%
	16 Empathy	2	22%
	17 Organized	2	22%
	18 Managing	1	11%
	19 Reliability	1	11%

The reasons provided by participants for viewing these eighteen behavioural competencies as essential are discussed in the ensuing sections.

4.3.1 Communications

All Nine interviewees indicated that in their experience, Communication is an essential behavioural competency in the South African Public Sector with 44% of them ranking it as the top behavioural competency. All participants unanimously highlighted that effective

communication is an absolute necessity for a Project Manager to successfully deliver projects. Several themes emerged from the interviews as follows.

4.3.1.1 Direct Link to Project Success

Several participants linked the ability to communicate effectively to project success as one is not only clearly communicating the vision of the project to the project, but also communicating with stakeholders that are impacted and those that impact a project. Participant–007 stated that in the public sector, "*there is a multitude of stakeholders and to meet their expectations a Project Manager must be able to communicate effectively*". Seeing as project success can be defined as appreciation by stakeholders' as shown in Figure 7, it is thus important for the PM to have good Communication skills to understand the needs of stakeholders if a project is to be a success. As stated by Participant–009, a Project Manager must be able to "*receive instructions" which* can be a brief from stakeholders that once clearly understood can be translated into "*clear project goals"* as stated by Participant-001.

Participant–005 also stated that in their years of practice in the South African Public Sector, they have seen "*Projects often fail due to lack/ poor communication"* further underscoring the direct link between communication and project success.

4.3.1.2 A Core Function of a Project Manager

Most of the participants noted that the core function is communication as a Project Manager spends *"90% of their time"* communicating with the project team and other stakeholders to ensure that the flow of information between relevant parties occurs seamlessly. They also highlighted that the Project Manager must use communication to ensure the project team understand project goals and to also ensure alignment amongst team members.

4.3.1.3 Project Team Management

Participants also indicated that the Project Manager must have good communication skills in order to manage the team to deliver the project. Participant-003 stated that through good communication, a Project Manager can get to know people and engage them in a casual manner which can motivate them to contribute towards project goals. This sentiment was supported by Participant-006 who stated that a Project Manager can use good communication

skills to not only get the status of project activities but also understand the challenges that the project team might be facing that can prevent them from meeting project deliverables.

In summary, Communication emerged as an essential behavioural competence for Project Managers in the South African Public Sector with four participants ranking it as the top competence as it is directly linked to project success, and it is the core function of a Project Manager. Furthermore, poor communication was cited as a common cause of project failure, further emphasizing its criticality to project success.

4.3.2 Teamwork

Teamwork emerged as an essential behavioural competency with eight of the nine participants citing it as an essential competency to successfully deliver projects in the South African Public Sector. Several themes were observed from the interviews and are as follows.

4.3.2.1 Project Integration

Several participants indicated that the primary job of a Project Manager is to integrate various areas of a project which entails bringing together a team with all necessary skill sets and getting them to work together as a team. This was underscored by Participant-004 who stated that to successfully deliver a project, a Project Manager must have a cohesive team that will "*share information and gel*". Thus, highlighting the criticality of teamwork to project success. Participant-006 further highlighted the importance of the need for a Project Manager to integrate various specialist knowledge areas by stating that Project Managers must ensure that specialists from different fields are able to work together effectively to achieve project objectives. Participant-008 noted that a Project Manager "*can't function as a single entity*" and needs to have and foster the spirit of teamwork across various functions as the cross-functional collaboration ensures that all parts of a project integrate seamlessly.

4.3.2.2 Enabling Collaboration

Participant-003 further stated that through Teamwork, a project team is able to "*keep things moving*" as members can fill in when a team member is not available, further emphasizing the importance of Teamwork in keeping the project on track project even when challenges

arise. Furthermore, Participant-002 highlighted that the Project Manager must be able to collaborate with individuals at different authority levels and different skill sets and must be able to "*play well with others*" to get those individuals to collaborate and keep them engaged for the duration of the project. Additionally, Participant-009 further emphasised that Teamwork fosters collaboration and innovation, which is essential for developing creative solutions in response to dynamic challenges that often emerge during project execution.

In summary, Teamwork emerged as an essential behavioural competency for Project Managers in the South African Public Sector as it enables the Project Manager to integrate projects and foster collaboration which is critical to project success.

4.3.3 Professionalism

Professionalism was widely lauded as an essential behavioural competency by eight out of nine participants. Participants consistently highlighted the importance of Professionalism which they viewed as a cornerstone to project delivery as it underpins the conduct of a Project Manager and the whole project team. The following themes emerged.

4.3.3.1 Professional Conduct

Participants across the board emphasized the need for a Project Manager to conduct themselves in a professional manner when conducting their day-to-day duties as it "*sets the tone for the project*" and how it will be executed. Participant-001 stated that a Project Manager must carry themselves professionally in discharging their duties. Participants further stated that conducting oneself professionally entails respecting people's time by being punctual and showing respect to others.

4.3.3.2 Ethics and Integrity,

Some participants explained that professionalism extends to one being ethical in discharging their duties and having integrity. Participant-007 discussed how conflicts in and around projects can push people toward unprofessional behaviour, stressing that PMs need to rise above personal issues and maintain ethical conduct. They noted that "*ethics and integrity are part of professionalism*" highlighting that a PM's ability to lead ethically fosters an environment of respect and trust. This sentiment was supported by Participant-009 who stated that

Professionalism requires a PM to "*be trustworthy and honest at all times, especially with corruption being rampant in the South African Public Sector*" over the past several years.

4.3.3.3 Building Trust and Confidence with Stakeholders

Participant-008 noted the importance of professionalism in building trust and confidence not only among project team members but also among stakeholders outside the project including project-approving bodies. According to this participant, when PMs conduct themselves professionally, they are able to avoid unnecessary challenges such as dealing with sceptics or "*doubting Thomases*". This contributes to smoother project execution and helps PMs garner support from top management which makes approval processes more straightforward and fosters long-term collaboration which would otherwise be lengthy if the Project Manager does not have a reputation of conducting themselves in a professional manner and with integrity.

In conclusion, Professionalism emerged as a cornerstone behavioural competency for delivering projects as it sets the tone for projects and can make obtaining and maintaining necessary support from various stakeholders easy. Professionalism entails adhering to ethical standards and respecting others' time, maintaining integrity, and punctuality, and communicating professionally.

4.3.4 Leadership

From the interviews conducted, several themes emerged and shed some light on the criticality of leadership when executing projects in the South African Public Sector. The themes are discussed in the following sections.

4.3.4.1 Guiding the Project Team

A recurring theme from the interviews was that of the need for the Project Manager to act as a guiding force for projects. This was underscored by Participant-001's comments who stated that the Project Manager must provide "*regular leadership so the team can achieve its goals*". The participant further stated that in addition to setting "*clear goals*", a Project Manager must

also lead the team to achieve those goals. Participant-002 also noted that Leadership is a "*non-negotiable*" and every Project Manager must be able to provide leadership as leadership *"takes centre stage as the PM is the single point responsible for the success of a project"*. Participant-005 further emphasized the need for a Project Manager to provide leadership as he stated that a Project Manager "*must not wait for instructions...they must take charge, bring people together, take initiative, and be willing to take risk instead of passing them on to others".*

4.3.4.2 Servant Leadership

In addition to leading the team from the front, Participants also brought to light the importance of Servant leadership where the leader is expected to put the needs of others (i.e., project team members and stakeholders) first and focus on developing others whilst meeting targets (Eva *et al.*, 2019). This is underscored by Participant-001's comment that a Project Manager must be capable of "*supporting team members*" to achieve the project goals and supported by the comments from Participant-003 who stated that "*Servant Leadership is essential"* when leading project teams. Participant-007 also noted that leadership is not always about "*leading from the front*", but also requires a Project Manager to have the ability to delegate leadership to others based on team strengths and weaknesses.

4.3.4.3 Influence Project Direction

The ability to influence and shape the project's direction also emerged as an essential component of leadership according to participants. Participant-009 opined that leadership involves being "*able to influence the direction and the pace required to achieve the end goal".*

In summary, the interviews revealed that Leadership is multifaceted and extends beyond merely directing a team. It involves being able to set clear goals for the project team, serving the team, and influencing the direction of the project.

4.3.5 Emotional Intelligence

The findings from the interviews revealed that Emotional intelligence is a pivotal behavioural competency that is required to navigate the complexities associated with the South African Public Sector environments. Various interconnected themes as follows emerged.

4.3.5.1 Project Manager Self-Regulation

A theme that was prominent in the interview was the need for a Project Manager to self-regulate. This according to the participant involves the Project Manager having the ability to manage their emotions irrespective of the situation in which they find themselves. This was underscored by the comment by Participant-003 who stated that "*a Project Manager must be able to self-regulate*" and must have "*the ability to manage one's emotions and still be able to do the job*". This was also supported by Participant-004's sentiment as they stated that a "*Project Manager must be able to regulate their emotions*".

Participant-009 further stated that in addition to regulating one's emotions, a Project Manager must be able to "*read the room"* and regulate their verbal and non-verbal tones. This Participant further highlighted the need to be able to pick up "*what to say and what not to say*" is critical in managing the multitude of stakeholders in the South African Public Sector.

4.3.5.2 Team Building and Nurturing

Participants also identified having empathy as a key element of Emotional intelligence that the Project Manager must possess. Participant-004 highlighted that the Project Manager must "*have empathy towards the team*" as they have observed that showing empathy towards others can be a good tool to build relationships and defuse tension between team members.

In summary, the analysis of the interview shows that Emotional intelligence is an essential behavioural competence that a Project Manager must have at their disposal as the ability to self-regulate and show empathy to the project team is crucial not only in effectively delivering projects but also helps build relationships and minimize potential conflicts.

4.3.6 Adaptability

Adaptability emerged as an important behavioural competency from the interviews, with seven participants identifying it as crucial for Project Managers in the South African Public Sector. Although it was not ranked as the top competency by any participant, the need for Adaptability and the ability to accommodate changes were prevalent across all participants. Numerous themes emerged from the interviews regarding Adaptability and are discussed in the following sections.

4.3.6.1 Managing Change

A number of participants highlighted the importance of Adaptability in managing changes that can frequently occur in the South African Public Sector. As noted by Participant-002, a "*Project Manager must be adaptable as things change and things slip… [a Project Manager] must be able to adapt to some sort of change as so many things can go wrong*". This sentiment was supported by Participant-003, who emphasized the need for a Project Manager not to be rigid and to "*accept changes*" especially when processes and procedures are revised. The ability to adapt allows a Project Manager to swiftly accommodate changes and continue moving forward without causing major disruptions to a project. Participant-007 further added that Adaptability involves the ability to comprehend "*the environment and the demands of what you are doing*" and being able to "*adapt as situations change*". This means that Project Managers must not only be responsive to internal project changes, but also to external changes common in the public sector such as changing policies, regulations, or stakeholder requirements.

4.3.6.2 Keeping an Open Mind

A recurrent theme in the interviews was the importance of maintaining an open mind in the face of change which inevitably occurs in projects. This was highlighted by Participant-007 as they stated that Adaptability means not closing oneself off, but rather "*keeping an open mind*" and seeking an understanding of the various functions, stakeholders, or departments that might impact the project. This approach enables Project Managers to be better positioned to

assess changes and make informed decisions based on a comprehensive understanding of the environment in which they operate. This was further hammered home by the remarks of Participant-008, who posited that Adaptability is imperative in a dynamic environment where decisions must be based on data rather than emotions. This suggests that Project Managers must be able to pivot and adjust their strategies when new information becomes available, thus helping to avoid the possible pitfall of rigid or outdated processes, policies, regulations, etc.

Although Adaptability was not ranked as the top behavioural competency, it emerged as an important behavioural competency for Project Managers in the South African Public Sector as it was widely acknowledged that for a Project Manager to successfully deliver projects, they must be able to adapt to internal and external changes. Furthermore, the ability to adapt not only ensures project continuity but also enables data-driven decision-making.

4.3.7 Conflict and Crisis Management

From the interviews conducted, Conflict and crisis management surfaced as an important behavioural competency. Six out of nine participants emphasized its importance and indirectly linked a Project Manager's ability to handle conflict and crises to project success. Several themes emerged from the interviews regarding the important role that Conflict and crisis management play in executing projects.

The main theme that emerged was that of timeously management of conflicts and crises as they arise. This was highlighted by participants to be key as timeously managing crises can ensure that project momentum is not lost in the face of conflicts and crises. Participant-003 remarked that "*knowing how to manage a crisis so you don't lose momentum*" is critical for ensuring that projects continue smoothly. Participant-003 further remarked that a Project Manager who handles crises well "*makes life easier for management*" and "*saves the project time*." These responses highlight that the ability to manage conflicts and crises not only maintains project momentum but also improves the overall project environment. Participant-004 warned that failure to manage conflict "*will lead to project failure*", noting that a Project

Manager must "*timeously defuse conflicts before it affect employees*." This sentiment was echoed by Participant-007, who acknowledged that "*conflict will always come up*" in project settings, and it is the Project Manager's responsibility to "*ensure that conflicts don't escalate*".

In summary, Conflict and crisis management emerged as an important behavioural competency for Project Managers as the participants emphasized the need to intervene quickly so project momentum is not lost, and conflicts do not escalate.

4.3.8 Triangulation

4.3.9 Engagement and Motivation

From the interviews conducted, Engagement and motivation emerged as an essential Behavioural competency for Project Managers as five out of nine participants emphasized the importance of a Project Manager's ability to engage with and motivate their team to ensure project success. Several themes regarding the role of Engagement and motivation surfaced during the interviews.

4.3.9.1 Motivating the Team

Several participants emphasized the criticality of the Project Manager's ability to motivate the team during challenging times of the project. This was pointed out by Participant-003 who mentioned that a Project Manager must continuously *"remind people why we do what we are doing",* as this can keep the team motivated throughout the lifecycle of a project. This was supported by Participant-004 who stated that the Project Manager needs to "*keep on motivating the team*". Participant-009 emphasized that the project manager must be able to "*understand what inspires the team and how to best meet their expectations".* Further underlining the need for a Project Manager to be able to motivate the team.

4.3.9.2 Approachability and Engagement

Another significant theme that emerged from the interviews was the need for a Project Manager to be approachable and actively engage with their team. Participant-004 remarked that a "*PM needs to be approachable/engageable to all involved so the team can freely and timeously share info*". This approachability fosters open communication and ensures that

information flows smoothly between team members and the Project Manager, enabling the project to progress effectively.

4.3.9.3 Project Manager Motivation

Participant-006 stated that team members (including Project Managers) often go through emotional ups and downs during a project, and it is essential for a Project Manager to *"get motivation from others and motivate others"* to keep the project moving. This was further backed by Participant-007 who stated that as a Project Manager, one must "*have a mentor to motivate you when not motivated".*

In summary, Engagement and motivation emerged as an essential Behavioural competency for Project Managers as participants stressed the importance of motivating project teams, being approachable and engageable, and staying motivated as a Project Manager, thus highlighting the criticality of Engagement and motivation to the successful delivery of projects in South African Public Sector.

4.3.10 Agility

Agility was identified by several participants as an important Behavioural competency with five out of nine interviewees emphasizing the necessity for Project Managers to be agile. Emerging themes are discussed in the ensuing sections.

4.3.10.1 Responding to Changing Internal and External Conditions.

A dominant theme that surfaced from the interviews was the need for Project Managers to be agile in responding to changing conditions. Participant-001 emphasized the importance of continuous improvement, noting that a Project Manager must "be agile to implement changes" as they arise. The participant also highlighted the importance of ensuring that "when changes occur, they are implemented" effectively, reinforcing the idea that Project Managers must not just recognize shifts but take proactive steps to adjust. This sentiment was echoed by Participant-004, who pointed out that a Project Manager must be able to

"*accommodate changes to meet the needs of stakeholders".* This highlights how Agility does not only pertain to responding to internal changes but also external changes.

4.3.10.2 Complex Projects

Agility was also seen as particularly important when executing projects that are complex in nature as they often introduce unique challenges. Participant-005 noted that Project Managers "must be willing to be agile", particularly when things do not go as planned. Being agile enough to be able to pivot when "things don't work" was identified as a crucial behavioural competency to ensure that projects can still move forward despite challenges. Participant-006 added that the constantly changing working conditions, including "*hybrid working arrangements*", require Agility from Project Managers.

In summary, Agility emerged as an important behavioural competency for Project Managers in the South African Public Sector, particularly in an environment characterized by constant change, evolving stakeholder needs, and complex project execution.

4.3.11 Inter-Personal Skills

Inter-personal skills were commonly recognized by participants as an important behavioural competency with five of the nine participants mentioning it as an essential competence. The emerging themes are detailed in the following sections.

4.3.11.1 Fostering Teamwork and Stakeholder Management

A recurring theme across interviews was the role of Inter-personal skills in fostering teamwork within and around a project. Participant-003 emphasized that Inter-personal skills "*assist with getting people to deliver results*". They further stated that Inter-personal skills are critical in "*building the spirit of togetherness*". Participant-005 highlighted the importance of being able to "*deal with affected parties*" and "*deal with people*" noting that project failure can sometimes result from a Project Manager's lack of or poor Inter-personal skills. This highlights the direct impact that Inter-personal skills have on stakeholder management and teamwork can have on both team performance and project outcomes.

4.3.11.2 Building a Cohesive Project Team

Some participants also emphasized that Inter-personal skills are required to understand and leverage the strengths and weaknesses of individual team members. Participant-008 remarked that in any project, "*you are dealing with people, and each person has their own character*". They further pointed out the importance of a Project Manager being able to "*understand each person's strengths*" in order to manage them effectively and get the best out of the team. This reinforced the idea that Inter-personal skills are necessary for optimizing the contribution of each team member by leveraging team members' strengths to cover where weaknesses might exist and could otherwise negatively impact a project.

4.3.11.3 Creating a Conducive Environment

Another theme that appeared from the interviews is the Project Manager's role in creating a safe and conducive environment for team discussions and problem-solving. Participant-009 pointed out that a Project Manager must be able to "*create a safe zone/ space to be engaged meaningfully on issues*" as this enables open and honest communication within the team, which assists in addressing challenges effectively. Participant-009 further emphasized that creating a space for "*people to converse freely in a harmonized environment*" allows the team to collaborate and find creative solutions to challenges that may arise.

In summary, Inter-personal skills surfaced as a key behavioural competency for Project Managers as it was deemed essential for fostering teamwork, managing stakeholders, building a cohesive team, and creating a conducive environment for all involved in the project. Furthermore, Participants underscored that without strong Inter-personal skills, Project Managers may struggle to manage people effectively, which could negatively overall project success as remarked by Participant-005 who stated that they "*have seen projects fail because PM lacked this skill*".

4.3.12 Result-Orientation

Results-orientation also came out as a key behavioural competency as expressed by four of the nine participants. The ability to not lose sight and remain focused on achieving project goals and deliverables was seen as imperative in ensuring project success. The main theme highlighted across interviews was the importance of being goal-driven and having a clear understanding of the end results that the project aims to deliver.

Participants emphasized the need to maintain focus on the ultimate project goals throughout the project. This was pointed out by Participant-003 who mentioned that it is "*crucial to keep the eye on the ball to meet the project goals*", indicating that a Results-oriented mindset is essential to guide a project to successful completion. This view was further supported by Participant-006 who pointed out that Project Managers "*must focus on results to meet deliverables over and above everything else*". Participant-009 opined that it is "*always important to understand the end game"* and to have a clear grasp of *"the by-product of one's involvement as well as how project goals will be achieved.*" Participant-005 also pointed out the lack of clarity of the project goals can be detrimental to a project as they have observed in the past "*projects that are 90% in and people don't understand why the project is being done*" which can lead to project failure if stakeholders are not aligned on the goal of the project.

Results orientation is a key behavioural as the ability to focus on project goals and deliverables was cited by participants as factors that can contribute towards project success.

4.3.13 Efficiency

Efficiency surfaced as a key behavioural competency as expressed by three of the nine participants. Participants indicated that when executing projects in the South African Public Sector, it is important to manage both time and resources effectively. This was highlighted by Participant-002 as they posited that there is a need for "*efficient management of both human and physical resources*" to avoid waste and work within set constraints. Participant-008 supported this notion by noting that "*time is money*", emphasizing that quicker project

completion leads to cost savings. Efficiency, therefore, ensures that projects meet their goals while optimizing available resources.

In summary, Efficiency was deemed to be a key supporting behavioural competence for Project Managers as it allows for the effective use of time and resources, leading to cost savings and ultimately successful project delivery.

4.3.14 Effectiveness

Effectiveness emerged as a key behavioural competency, with three participants identifying its importance in achieving project goals within the constraints of time, cost, and quality. Participant-005 emphasized the need to effectively work with existing constraints to deliver a project by stating that "*Given resources, time and finances, one must be efficient in utilising those to achieve project goals*". Participant-009 highlighted that being able to work effectively within set constraints of cost, quality, and time is crucial for delivering successful projects. Participant-008 further supported this notion by stating that Effectiveness allows a Project Manager to "*accurately measure their goals*" and ensure proper execution throughout the project's lifecycle.

In summary, Effectiveness is seen as a critical competency for project managers as it ensures that they can deliver results while managing project constraints.

4.3.15 Negotiations

Negotiation also emerged as a key behavioural competency for Project Managers in the South African Public Sector as highlighted by three of the nine participants. The ability to negotiate effectively was described as essential, not only for securing resources, but also for managing a diverse array of stakeholders and ensuring alignment within the project team. This skill was seen as pivotal in balancing competing interests and ensuring successful project outcomes.

The importance of negotiation was emphasized by Participant-001 who stated that Project Managers regularly need to negotiate "*for resources to have the team in the first place".* This underscored the role of negotiation in establishing the fundamental building blocks of a

project in the South African Public Sector environment where resources are usually constrained (Maleka, 2023).

Participant-004 highlighted the importance of negotiation when handling conflicts that may arise in the project by stating that "*when there is a conflict, PM must be able to negotiate between parties*" and "*strike a balance between conflicting requirements of the respective stakeholders*". This view indicates that Negotiation skills are not only useful when putting together a project team, but also in managing stakeholders, and project scope throughout the lifecycle of a project. Furthermore, Participant-005 opined that in projects with "*many moving parts*", Negotiation becomes critical for achieving alignment among stakeholders. They also emphasized the importance of having Negotiation skills by stating that "*it is very difficult to manage a project if this skill is not in place*".

In summary, Negotiation was highlighted as a key competency for managing project human resources, stakeholders, and managing conflicts. Participants underlined that for a Project Manager to be successful, they must have the ability to negotiate in order to navigate the project through challenges.

4.3.16 Consultation

Consultation emerged as an important behavioural competency from the interviews, with three participants identifying it as essential. Several themes regarding Consultation surfaced and are discussed in the following sections.

4.3.16.1 Learning from Experience

A prominent theme across the interviews was the importance of learning from past experiences by consulting others. Both Participant-001 and Participant-006 underlined that Project Managers must be able to draw lessons learned from past projects to avoid making mistakes already made in the past. Participant-001 also noted that "*one must be able to*

consult others so you don't repeat mistakes already made by others", thus underscoring the importance of consulting to gather insights from past projects.

4.3.16.2 Conflict Resolution and Decision-Making

Another theme that emerged was the role of Consultation in resolving conflicts and facilitating decision-making when there are disagreements. Participant-006 mentioned the importance of Consultation in situations "*where there is no agreement amongst members*", stressing that Project Managers must consult and engage with team members when addressing issues. This highlights how Consultation can be a tool for conflict resolution and ensuring alignment among stakeholders and team members. Participant-007 highlighted that Consultation involves *"asking the relevant questions"* to gather insights necessary to make the right decision. They noted that "*different stakeholders have different influence,"* and consulting them effectively can be critical in driving project success. This theme emphasizes the need for Project Managers to actively seek input from a variety of stakeholders to make informed decisions.

Although Consultation was not ranked as the top competency, it emerged as an essential behavioural competency participants emphasized that effective Consultation helps to resolve conflicts, prevent repeating mistakes, and assists with effective decision-making.

4.3.17 Empathy

Empathy emerged as a key behavioural competency as it was mentioned by two of the nine participants as they highlighted that the ability to understand and relate to the perspectives of team members and stakeholders was seen as essential for fostering positive relationships and promoting collaboration. Participant-006 emphasized that project managers must "*show understanding of people's circumstances…and must show understanding of different cultures"*, particularly when dealing with diverse teams. Participant-009 added that Project Managers must have the ability to "*place themselves in someone else's shoes*" in order to be able to find the best possible outcome for all.

In summary, some participants accentuated that a Project Manager who is able to show Empathy has a better understanding of the needs of their project team and Stakeholders. Thus, they are better positioned to foster a conducive environment for the team to thrive.

4.3.18 Organized

A Project Manager's ability to be Organized was highlighted as an essential behavioural competency by two of the nine participants. The ability to stay Organized was seen as essential for managing the project complexities and ensuring smooth coordination among various stakeholders. Participant-001 underlined that it is important for Project Managers to be Organized. Participant-002 supported this by stating that a Project Manager "*must be the most organized team member*" as they interact with all team members and stakeholders. Participant-002 further opined that having "*things in order*" allows the Project Manager to be a reliable point of reference for others.

In summary, being Organized was viewed as an essential behavioural competency for managing responsibilities effectively and ensuring successful project outcomes.

4.3.19 Managing

Managing was selected as a key behavioural competency by one of the participants citing the ability to effectively manage various aspects of a project such as time, communications, and expectations as key for ensuring project success. Participant-007 highlighted the need for project managers to manage "*time, communications, expectations, and processes*". They also noted the importance of selecting the right skills and Managing expectations, especially when some may go against the project's objectives. The Participant further stated that a Project Manager must "t*ake people through the project to manage expectations and get them to understand*".

In summary, effective management was seen as key for handling the diverse elements of a project and aligning stakeholders' expectations with the project's goals.

4.3.20 Reliability

Reliability was identified as a key behavioural competency by one of the nine participants as they viewed it critical for fostering trust and maintaining strong relationships among project stakeholders. Participant-008 noted that Reliability "*creates trust across all stakeholders*". Thus, emphasizing that when Project Managers are dependable, it builds confidence. In summary, reliability was viewed as key for establishing trust and facilitating effective project execution.

4.4 Key Factors that Determine the Project Management Behavioural Competencies Required to Successfully Deliver a Project in the South African Public Sector.

4.4.1 Industry

Seeing as literature shows that behavioural competencies required to successfully deliver projects differ based on the industry within which projects are being executed (Stevenson and Starkweather, 2010; Chipulu *et al.*, 2013), data was collected to capture the industry of the respective participants. Figure 4 shows the survey results of the industries that participated in the study.

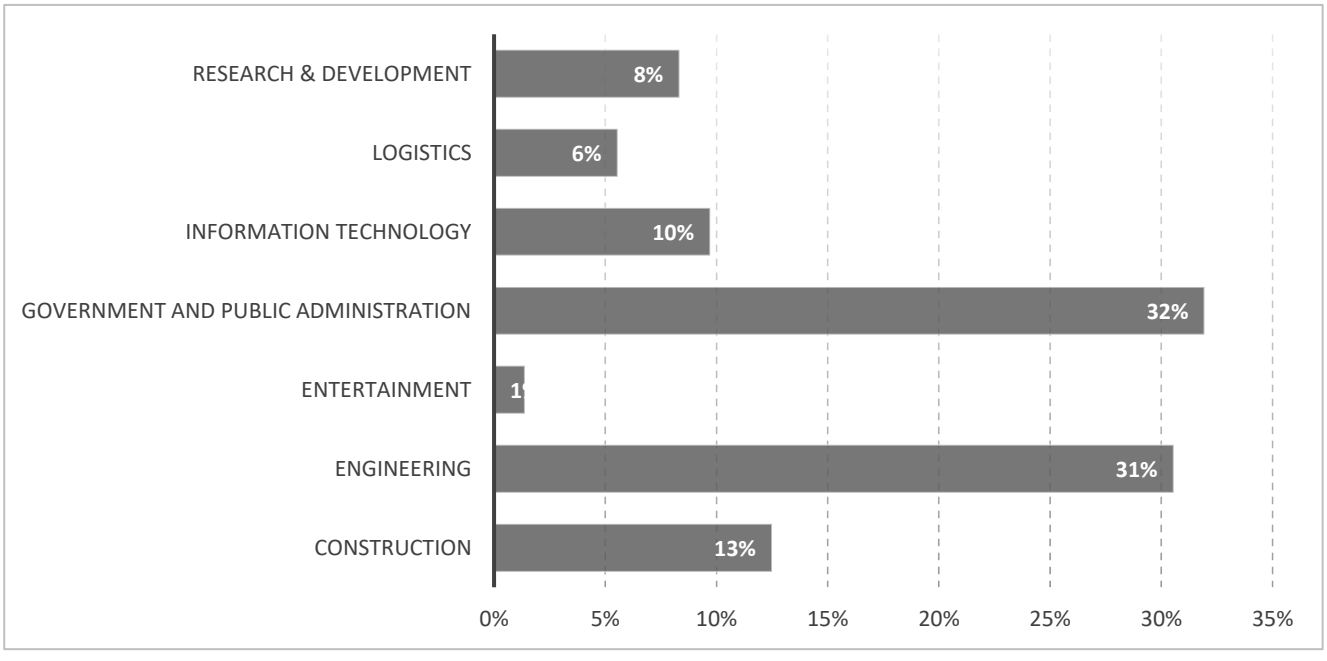

Figure 4: Survey Participants Industry.

Responses from a total of seven industries were received, with Government & Public Administration and Engineering being the highest at thirty-two percent (32%) and thirty-one percent (31%) respectively. This was followed by Construction at thirteen percent (13%). The remaining responses were from Information Technology, Research & Development Logistics, and Entertainment with ten percent (10%), eight percent (8%), six percent (6%), and one percent (1%), respectively.

According to Aliu et al., (2022), the Kruskal-Wallis test can and is commonly used to assess any significant differences in responses from research participants. The requirement for running the test is that there must be at least three categories of participants (Mujeeb and Hameed, 2024). This condition was met for this study as the participants were categorized into seven industries as follows: (1) Construction, (2) Engineering, (3) Entertainment, (4) Government and Public Administration, (5) Information Technology, (6) Logistics, (7) Research & Development. The results were then analyzed using descriptive statistics in SPSS and Table 12 below shows the obtained results.

Table 12: Kruskal-Wallis Test (Grouped by Industry).

	Kruskal-Wallis[a,b]		
	Kruskal-Wallis H	df	Sig.
Leadership	6.787	6	0.341
Communication	2.364	6	0.883
Managing	6.227	6	0.398
Cognitive ability	4.615	6	0.594
Effectiveness	6.693	6	0.350
Professionalism	5.082	6	0.533
Engagement & motivation	5.743	6	0.453
Self-control	9.582	6	0.143
Assertiveness	5.351	6	0.500
Openness	3.912	6	0.689
Relaxation	7.021	6	0.319
Creativity	3.175	6	0.787
Negotiation	5.346	6	0.500
Conflict & crisis management	3.105	6	0.796
Reliability	4.436	6	0.618
Values appreciation	5.248	6	0.512
Efficiency	5.425	6	0.491
Consultation	7.716	6	0.260
Results-orientation	5.229	6	0.515
Teamwork	3.146	6	0.790
Human resource management	3.957	6	0.682
Learning & development	2.875	6	0.824

a. Kruskal Wallis Test

b. Grouping Variable: Industry

The results showed that there is no significant difference in behavioural competencies that were assessed when viewed through the lens of the performing industry as all sig values are

above the threshold of 0.05 (Ostertagová, Ostertag and Kováč, 2016). Thus, it can be concluded that there is no difference in preference of behavioural competency by industry in the South African Public Sector.

4.4.2 The Performing Organization's General Project Management Structure

Seeing as the project management structure employed when executing projects affects the behavioural competencies required as detailed in section 2.3.2, Participants were asked to indicate the structure employed in their performing organization. The Figure 5 below shows the results of the survey.

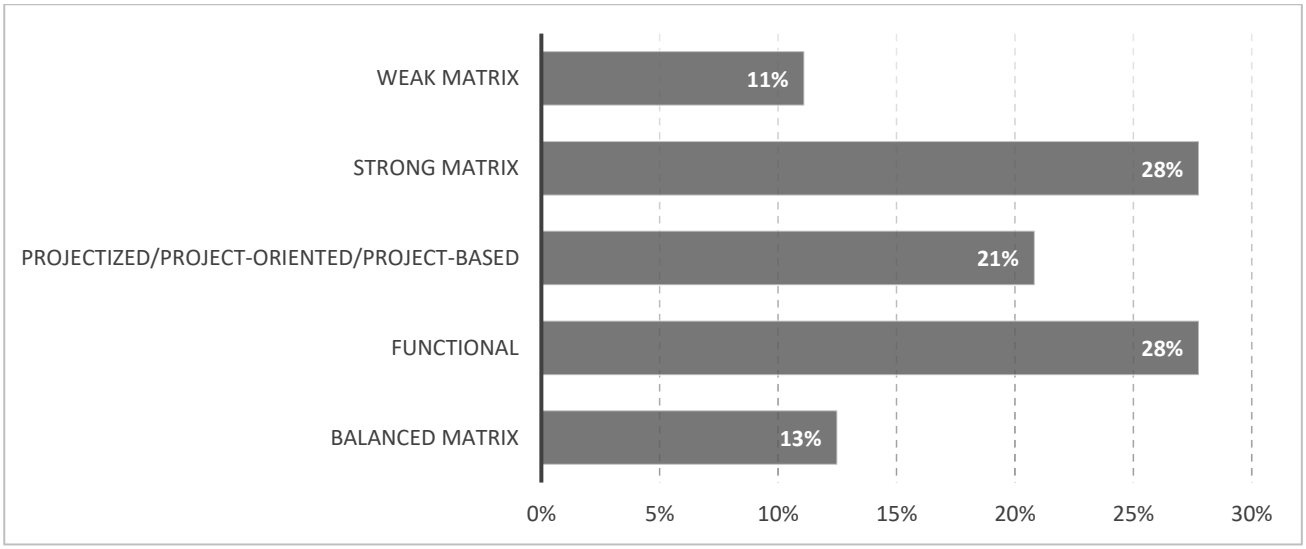

Figure 5: Performing Organization's General Project Management Structure.

As can be seen from the figure above, Strong matrix and Functional structures had the highest success rates at 28% of the responses, followed by Projectized/ project-oriented/ project-based. Weak matrix structure had the lowest responses at 11%.

Literature shows that the project management structure implemented by the performing organization does not linearly represent the authority of the Project Manager as some structures might be put in place to compensate for organizational structural weaknesses such as low Project Manager authority in order to improve the probability of project success (Lechler and Dvir, 2010). Participants were requested to indicate the actual structure that

was put in place for the project under consideration based on the following categories as developed by Lechler and Dvir, (2010).

The results confirmed the non-linear relationship between project management structure and PM's authority level as some Project Managers practising in Projectized/ Project-oriented/ Project-based structures executed their project as Project Coordinators, meaning that they had little to no authority over project personnel where theory suggests that they should have a high level of authority. Also, some Project Managers practising in organizations using Weak matrix structures where theory suggests that they should have low to no authority, delivered their projects as Autonomous PMs, suggesting that they had full authority over project personnel.

Figure 6 below shows the actual roles that PMs played in delivering the identified project.

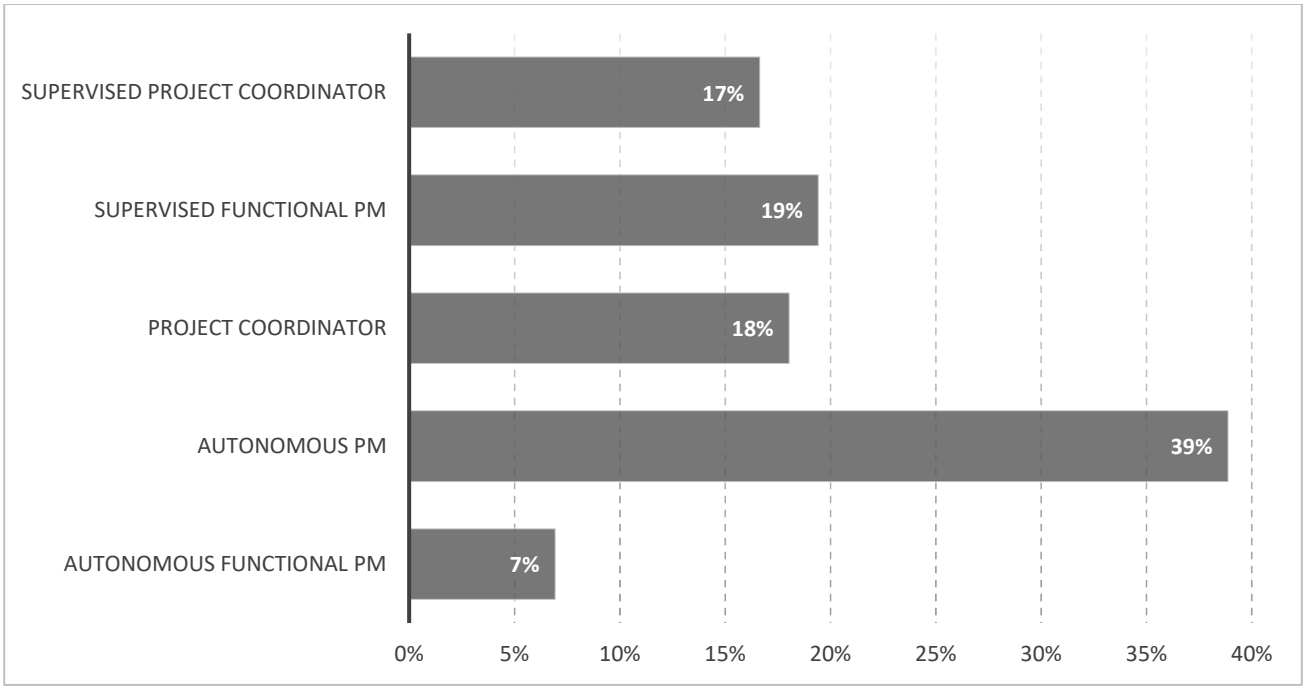

Figure 6: Project Manager's Actual Role in Delivering Identified Project.

As can be seen, a majority (39%) of the participants operated as Autonomous Project Managers which is usually associated with Strong matrix and

Projectized/ project-oriented/ project-based project management structures. This was followed by supervised Functional PMs (19%), Project Coordinators (18%), and Supervised Project Coordinators (17%) which shows the use of steering committees to supplement structural weaknesses. Autonomous Functional Managers were last at 7% of the responses.

To evaluate if there was a notable difference in responses depending on the role category of the Project Manager, Kruskal-Wallis analysis was performed with data grouped by PM's role as shown in Table 13.

Table 13: Kruskal-Wallis Test (Grouping by Project Manager (PM) Role Category)

	Kruskal-Wallis[a,b]		
	Kruskal-Wallis H	df	Sig.
Leadership	3.165	4	0.531
Communication	2.549	4	0.636
Managing	2.789	4	0.594
Cognitive ability	0.015	4	1.000
Effectiveness	4.621	4	0.328
Professionalism	3.852	4	0.426
Engagement & motivation	2.452	4	0.653
Self-control	3.936	4	0.415
Assertiveness	3.349	4	0.501
Openness	3.320	4	0.506
Relaxation	4.659	4	0.324
Creativity	1.976	4	0.740
Negotiation	2.328	4	0.676
Conflict & crisis management	4.319	4	0.365
Reliability	2.081	4	0.721
Values appreciation	9.282	4	0.054
Efficiency	5.043	4	0.283
Consultation	1.513	4	0.824
Results-orientation	5.532	4	0.237
Teamwork	4.701	4	0.319
Human resource management	1.502	4	0.826
Learning & development	2.388	4	0.665

a. Kruskal Wallis Test
b. Grouping Variable: Project Manager (PM) Role Category

The analysis showed that there is no significant difference in behavioural competencies that were assessed when viewed through the lens of the role category of the Project Manager as all sig values exceeded the threshold of 0.05. Thus, it can be concluded that there is no difference in preference of behavioural competency by industry in the South African Public Sector.

4.5 Project Management Practitioner's Perspective of Project Success in the South African Public Sector.

It is widely accepted that project success remains a prominent subject of discussion amongst project management practitioners and academics (Koelmans, 2004; Crawford, 2005; Bannerman, 2008; Shokri-Ghasabeh and Kavousi-Chabok, 2009; Lamprou and Vagiona, 2018; Blom, Steyn and Bond-Barnard, 2023; Sima, 2024). Also, seeing as the study aimed to establish behavioural competencies required to deliver projects successfully in the South African Public Sector, it stands to reason that one must first develop an understanding of the definition of project success in the context of the South African Public Sector. To meet this objective, survey participants were requested to select criteria which they used as a metric to consider a project successful. Six options were provided as follows; (1) Appreciated by the stakeholders, (2) Appreciated by the Client, (3) Appreciated by project personnel, (4) Appreciated by contracting partners, (5) Met the triple constraints (time, budget, and quality), (6) Appreciation by users (Westerveld, 2003). The results are shown in Figure 7.

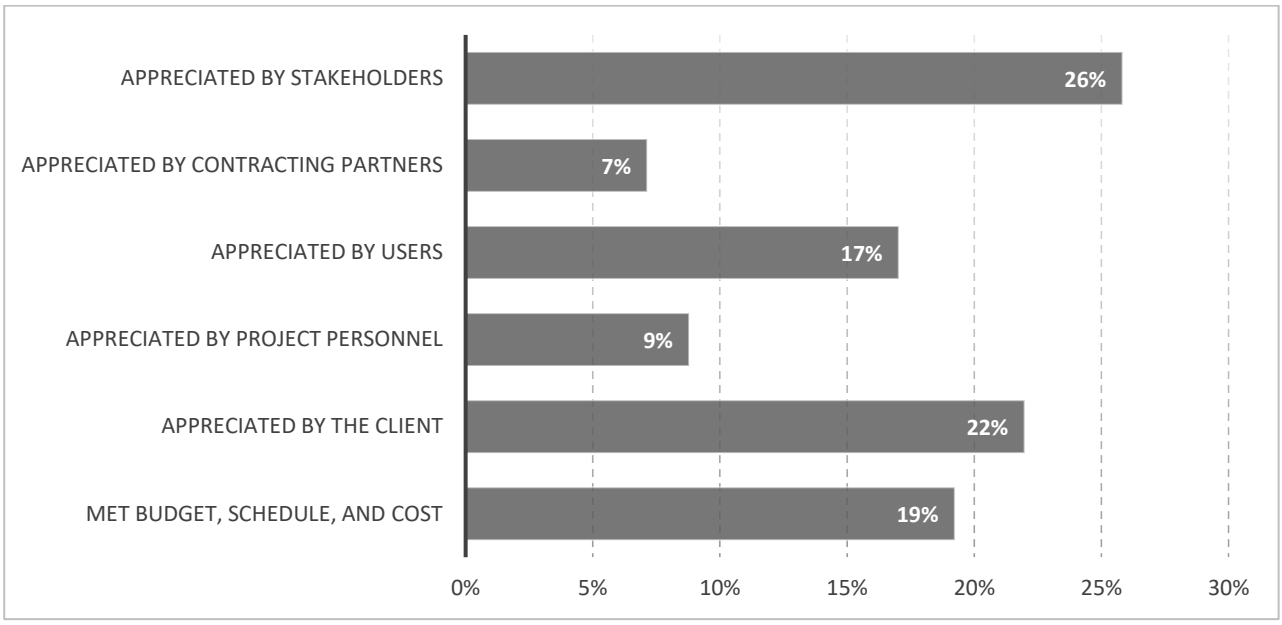

Figure 7: Perspective of Project Success

The results showed that most participants (i.e., twenty-six (26%)) considered the project to be successful as it was appreciated by the stakeholders. Twenty-two percent (22%) of the participants indicated that they considered the project successful as it was appreciated by the Client whilst nineteen percent (19%) of the participants considered the project to be successful because it met the budget, was completed on time, and was within the allocated budget. Seventeen percent (17%) indicated that they consider the project to be successful as it was appreciated by End users. The remaining participants considered the project to be successful because it was appreciated by project personnel and contracting partners respectively at nine percent (9%) and seven percent (7%).

These results show that the South African Public Sector project management practitioners are aligned with their counterparts in Western countries in their perspective of project success as they no longer view project success from a single lens of meeting budget, cost, and schedule (Westerveld, 2003; Kerzner, 2009; PMI, 2024). Rather, they place more emphasis on the assessment by Stakeholders, Clients, and End users to determine whether or not a project is a success. With that said, the importance of meeting the triple constraints of budget, time, and quality is also underscored as data highlights it as the third most important criterion. This is particularly important in the South African Public Sector where projects are executed

with constrained resources (Maleka, 2023). Thus, the data shows that Project Managers in the South African Public Sector must endeavour to satisfy the needs of End users, Clients, and Stakeholders whilst keeping to the allocated budget, schedule, and agreed scope.

4.6 Summary

This chapter has presented the findings of the research undertaken, in the ensuing chapter, these findings will be discussed and similarities and or differences to the literature discussed in chapter 2 will be highlighted.

CHAPTER 5: RESULTS DISCUSSION

5.1 Introduction

This chapter presents an in-depth discussion of research findings as presented in Chapter 4. The primary focus of the chapter is on the interpretation of the results and seeking alignment between the findings and research objectives with the ultimate aim of answering the research question.

5.2 Behavioural Competencies that are Essential to Successfully Deliver Projects in the South African Public Sector

The primary objective of the study was to establish the behavioural competencies that are required to successfully deliver projects in the South African Public Sector. A literature survey was conducted, and commonly accepted behavioural competencies were identified. These behavioural competencies were then assessed for applicability in the South African Public Sector via a survey. The survey filtered identified competencies that are applicable according to seventy-two (72) participants. Furthermore, the survey identified additional behavioural competencies that were not included in the initial list. A combination of the behavioural competencies deemed essential from the list and the additional ones that were not part of the original list were then consolidated for further examination and assessment of applicability in the South African Public Sector context. This was achieved by conducting in-depth personal interviews with experienced practitioners in the South African Public Sector.

Figure 8 below presents the seventeen behavioural competencies that filtered through and are deemed essential for a Project Manager to successfully deliver projects in the South African Public Sector.

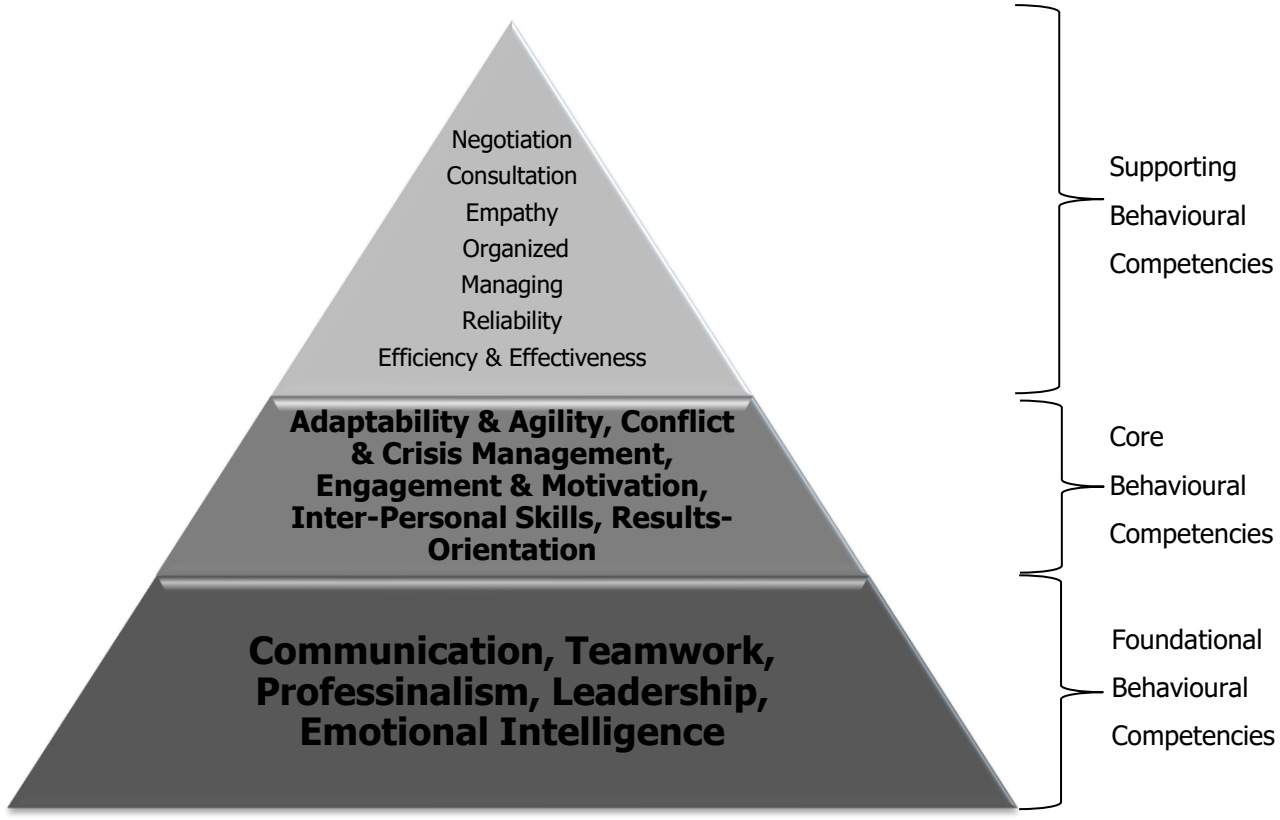

Figure 8: Essential Behavioural competencies for a Project Manager to Successfully Deliver Projects in the South African Public Sector.

As shown in Figure 8, the behavioural competencies are classified into three categories as described in the ensuing sections.

5.2.1 Foundational Behavioural Competencies (FBC)

In the context of this study, foundation behavioural competencies are described as those competencies that are a must-have for a Project Manager as they are directly linked to project success. Without these competencies, a Project Manager is highly unlikely to successfully deliver projects in the South African Public Sector. The five identified foundation behavioural competencies are discussed in detail in the following sections.

5.2.1.1 Communication

Communication was recognized as a foundational behavioural competency by all nine interviewees. Also, from the quantitative survey, it was ranked the number one most essential

behavioural competency, further highlighting its importance in the South African Public Sector according to participants. This aligns with the findings by (Pieterse *et al.*, 2024)

The study revealed that effective communication is directly related to project success as a Project Manager is expected to first understand the requirements from project owners, and then be able to translate the project owner's vision into deliverables to deliver envisaged project outcomes.

Effective communication was also cited as crucial for managing stakeholders and their expectations. This is particularly so in the public sector where projects usually involve a sizeable number of stakeholders, each with their own interests. This was highlighted by one of the participants who stated that in the South African Public Sector, "*there is a multitude of stakeholders and to meet their expectations, a Project Manager must be able to communicate effectively".* Effective communication allows a Project Manager to communicate challenges to stakeholders and to align evolving stakeholders' expectations with project objectives throughout the lifecycle of the project.

Additionally, good communication skills are critical for project team management as a Project Manager can employ this skill to understand the challenges that the project team experiences during the lifecycle of the project. Thus, enabling the Project Manager to be able to engage and motivate the team to deliver the project.

Additionally, a Project Manager is expected to be able to facilitate the flow of project information between stakeholders and project team members through communications in order to keep all necessary stakeholders abreast of the latest information so they can make data-driven decisions. This also allows for a Project Manager to be able to effectively integrate a project and foster teamwork.

Thus, Communication is a foundational behavioural competency in the South African Public Sector and lack of or poor communication can lead to project failure.

5.2.1.2 Teamwork

Teamwork was ranked as the second most important competency during the survey and during personal interviews, underpinning its importance in the South African Public Sector. Seeing as the primary job of a Project Manager is to integrate various specialist streams to deliver a project (Project Management Institute, 2017a), the ability of the Project Manager to foster teamwork emerged as a foundational behavioural competency in the South African Public Sector. The ability to get resources working as a team becomes even more important when a project team is faced with challenges such as the unavailability of team members, as through teamwork, the project team can support one another by filling in to close weaknesses that might exist. Also, through good teamwork, the project team can creatively address challenges as they arise through collaboration with one another as opposed to working in silos.

Given that a project often requires various specialist fields that are probably working together for the first team due to the temporary nature of projects, a Project Manager must create a conducive environment where teamwork can thrive. This in turn makes integrating a project easier. It is thus imperative for a Project Manager to be able to get various specialists working together to deliver a project as failure to do so can directly lead to project failure if various specialists do not work as a team. Thus, rendering the ability to get the team working together as a team a foundational behavioural competence.

5.2.1.3 Professionalism

The findings revealed that the ability of a Project Manager to conduct themselves professionally as they discharge their duty is critical. The results showed that the conduct of a Project Manager sets the tone for the rest of the project and how it will be executed. In the context of the South African Public Sector professionalism entails amongst others, being punctual, showing respect to others, being ethical (Erasmus, Joseph and Marnewick, 2016), and having integrity. Furthermore, the ability of a Project Manager to conduct themselves in a professional manner was highlighted to be much more important when conflict arises as the Project Manager is expected to remain professional and objective.

The ethical component of professionalism is also very crucial in the public sector, especially in light of the corruption allegations over the past couple of years in South Africa. It is expected of a Project Manager to act ethically and with integrity, as they discharge their duties, as this builds trust with stakeholders, team members, and top management to the benefit of a project as a project will experience less skepticism when going through approval processes due to the trust in the Project Manager.

Thus, Professionalism is a foundational behavioural competency that a Project Manager must possess if they are to deliver projects in the South African Public Sector.

5.2.1.4 Leadership

Leadership also emerged as a foundational behavioural competency as a Project Manager is expected to be able to guide and lead the project team to deliver the project's vision. This involves proactively making sound data-driven decisions instead of waiting for top management or steering committees to make them as this can cost a project valuable time.

Additionally, a Project Manager is expected to play the role of a Servant leader in a project by providing the necessary support to team members to enable them to deliver project goals (Eva *et al.*, 2019). Also, part of Leadership is assessing the strengths and weaknesses of the project team and delegating leadership where necessary to optimize team strengths.

Finally, as part of Leadership, a Project Manager is expected to go beyond the project team and affect the direction of the projects. This might involve lobbying stakeholders and top management to align their interests with those of the project team. Thus, for a Project Manager to successfully deliver a project in the South African Public Sector, they must possess Leadership skills as without it, the team will not have a clear vision, the necessary support, and guidance required to deliver a project. This was underscored by one of the participants who stated that Leadership is a "*non-negotiable".*

5.2.1.5 Emotional Intelligence

The last foundational behavioural competency was found to be Emotional intelligence. Specifically, the ability to self-regulate and control one's emotions irrespective of the situation. Also, a Project Manager must be able to "*read the room*" and know what is acceptable to say and not to say at any given time.

Additionally, a Project Manager is expected to use their Emotional intelligence to build and nurture the project team by showing sympathy towards project team members. This is also handy in defusing tensions which can cause team disharmony if left unresolved.

5.2.2 Core Behavioural Competencies (CBC)

In the context of this study, core behavioural competencies are described as the competencies that one must have to develop project resilience in order to navigate a project through challenges as they arise. Although these competencies do not directly contribute towards project success/failure, they are crucial to have as they can help a project team navigate through complexities such as changing processes and procedures, diverse stakeholders, changing top management, etc. that usually arise during project execution in the South African Public Sector. The identified core behavioural competencies are discussed in the ensuing sections.

5.2.2.1 Adaptability and Agility

Adaptability and Agility emerged as a core behavioural competency as it is deemed important for a PM to be agile enough to adapt to changes that may arise throughout the lifecycle of a project. This is particularly important in complex projects as internal and external procedures, policies, regulations, stakeholders, etc. often change due to the dynamic nature of the South African Public Sector and these changes must be affected timeously by the project team (Maleka, 2023). Thus, the PM must keep an open mind and be agile to champion the adoption of new ways of doing things not only to remain compliant but also to improve project execution. Failure to adapt to changes can lead to project failure as the project team can deliver a project that is not aligned with the updated regulations, policies, etc.

Adaptability also becomes vital when there are changes internal to the project such as new project members that can join the team during the project who have a different way of working. The PM as the leader of the project must be able to assess the capabilities of new project team members and capitalize on their strengths. Also, when things do not go as planned, a PM must have the Agility to adopt the plan to keep the project moving.

5.2.2.2 Conflict and Crisis Management

It is inevitable that conflicts and crises will arise during the lifecycle of a project, thus the ability to manage them as timeously as possible becomes critical as this can save a project critical time. Also, a PM must have the ability to identify a crisis and be able to resolve it before it escalates before it negatively affects project momentum. The ability to resolve conflict within the project team not only makes for a conducive project environment, but also makes life easier for top management or steering committee as they do not have to spend too much time resolving project-related crises and conflicts.

5.2.2.3 Engagement and Motivation

Engagement and motivation must be both inwardly and outwardly focused for a PM. The Project Manager must be engageable by the project team and stakeholders as this provides a platform for them to express their views and challenges that can have a bearing on project deliverables. Also, the PM must be able to engage the team and stakeholders to solicit views and challenges experienced which can assist the PM to be able to make decisions that ensure the project remains aligned with the expectations of stakeholders which is crucial to project success.

Additionally, the PM must be able to engage and motivate the project team, particularly during challenging times. Also, the PM must be intrinsically motivated to do their job or have an external source of motivation such as a mentor. This becomes important during challenging times when a PM might not have the required motivation to lead the project team.

5.2.2.4 Inter-Personal Skills

Inter-personal skills were viewed as a core behavioural competency as it is crucial to fostering teamwork and stakeholder management. This can be achieved by engaging members and

stakeholders at an individual level with the aim of understanding what drives each individual and understanding their individual strengths then aligning their individual roles and responsibilities to get the most out of them.

A PM who possesses Inter-personal skills can easily create a good environment where all involved can converse freely, thus promoting collaboration amongst team members and stakeholders. Failure to create such an environment can have a detrimental impact on project delivery, particularly in stakeholder-driven projects which is often the case in the South African Public Sector.

5.2.2.5 Results-Orientation

Seeing as the objective of delivering a project is to deliver specific results, the ability of a PM to remain focused on the results in the face of all challenges that may arise emerged as a core competency. A PM must constantly remind project team members and stakeholders about the results to be delivered by the project and ensure that they all clearly understand what the project's end game is. A PM who is not able to focus on the end results can confuse the project team and ultimately lead to project failure.

5.2.3 Supporting Behavioural Competencies (SBC)

In the context of this study, SBCs are described as the competencies that a PM should have in order to effectively manage a project. Although these competencies are not as critical as FBC and CBC, they are good to have to support the PM to deliver a project effectively. The identified SBCs are described in detail in the following sections.

5.2.3.1 Efficiency & Effectiveness

Efficiency & effectiveness emerged as a SBC as a PM who is efficient in discharging the project management duties is able to deliver a project using optimal time and resources (human or otherwise). In doing so, a PM increases the probability of project success as they are likely to require less funds and human resources than would otherwise be required should they not possess the skill. Thus, they are likely to effectively deliver a project within budget and on schedule.

This is particularly important in the South African Public Sector where PMs often have to deliver projects with constrained human resources and limited budget (Maleka, 2023). Thus, a wasteful PM is likely to struggle to deliver a project in the South African Public Sector within human resources constraints and budget limitations.

5.2.3.2 Negotiations

The ability to negotiate, also surfaced as a key SBC as it is critical in acquiring resources to form part of the project team, and also in managing a diverse range of stakeholders that often exist in the South African Public Sector. Stakeholders often have conflicting interests and a PM who is skilled in negotiation can negotiate to balance these conflicting needs and thus enhance the probability of project success.

Additionally, negotiation skills are key when resolving conflicts that often arise during a project lifecycle. These can be conflicting requirements that the project must meet or conflict amongst project team members. A PM who is equipped with good Negotiation skills can keep the project on track by finding the balance when conflict arises amongst project team members or when there are conflicting requirements that can negatively affect a project's scope if they remain unresolved.

5.2.3.3 Consultation

Consultation is also a key SBC as it enables a PM to be able to learn from past projects and experiences, thus preventing them from repeating mistakes already made. This is particularly key in the South African Public Sector where project failure rate is high. Consultation is also key when making decisions as a PM can use this skill to consult the right experts and gather the information required to make the right decision. Also, during conflicts, a PM who is able to consult all involved to understand the source of conflict is best positioned to effectively resolve conflicts.

5.2.3.4 Empathy

A PM with the ability to show empathy is best positioned to understand the challenges that the project team and stakeholders face, and consequently best positioned to foster a

conducive team environment in the face of challenges. This ultimately allows the team to navigate challenging times with minimal delays. This is aligned with the findings by Aliu *et al.*, (2022).

5.2.3.5 Organized

Being organized was also viewed as an SBC as a PM has many knowledge areas that they have to integrate as an unorganized PM can have critical items fall through the cracks and potentially make life difficult for all involved in the project. Also, seeing as a PM is responsible for the flow of information within and around the project team, they need to be organized to ensure that information flows to the right people, at the right time in a suitable format.

5.2.3.6 Managing

Managing also emerged as a SBC as the ability to manage various project elements such as communication channels, budget, schedule, resources, expectations, and processes are critical in delivering projects.

5.2.3.7 Reliability

Reliability was also viewed as an SBC as it was deemed as a cornerstone to building trust which is critical for stakeholders, top management, and project team members to have on a PM.

5.2.3.8 Summary

In light of the findings and discussion as discussed above, the essential behavioural competencies are summarized and described as shown in the table below in the South African Public Sector context:

Table 14: Description of Behavioural Competencies in South African Public Sector Context

Behavioural Competency	Description
Communication	Communication is directly linked to project success and it is the core function of a Project Manager. Poor communication is a common cause of project failure, further emphasizing its criticality to project success. Communication is also key in managing project teams.
Teamwork	Teamwork enables a Project Manager to integrate projects and foster a collaborative environment for various specialists to collaborate and deliver envisaged project outcomes.
Professionalism	Professionalism entails amongst others, being punctual, showing respect to others, being ethical, and having integrity. Furthermore, it involves presenting oneself and communicating professionally.
Leadership	leadership is multifaceted and extends beyond merely directing a team. It also involves being able to set clear goals for the project teams, supporting and guiding a project team, and influencing the direction of a project.
Emotional intelligence	Emotional intelligence involves the ability of a Project Manager to self-regulate and show empathy to the project team and is crucial not only in effectively delivering projects but also assists in building relationships and minimizing potential conflicts in and around a project.
Adaptability & agility	Adaptability and agility entail the ability of a Project Manager to adapt to internal and external changes as they arise in order to meet project goals. Furthermore, the ability to adapt not only ensures project continuity but also enables data-driven decision-making.

Conflict & crisis management	This entails the need for a Project Manager to intervene timeously as conflicts or crises arise so that project momentum is not lost. Additionally, a Project Manager must address conflicts promptly to ensure that they do not escalate.
Engagement & motivation	Encompasses the ability to motivate project teams, being approachable and engageable by all, and staying motivated and engaged throughout the lifecycle of a project.
Inter-personal skills	The ability to engage all involved in a project at a personal level with the aim of r fostering teamwork, managing stakeholders at a personal level, building a cohesive project team, and creating a conducive environment for all.
Results-orientation	The ability to focus on project goals and deliverables and guide the team to maintain focus on the envisaged project goals.
Efficiency & effectiveness	Project Managers' ability to efficiently and effectively utilize available resources to deliver projects within set project constraints such as the allocated schedule, budget, and scope.
Negotiation	Negotiation involves a Project Manager's ability to acquire project human resources through negotiations with Line/Functional Managers. It also entails managing stakeholders by negotiations to ensure that conflicting needs are addressed in order to deliver a project in line with their expectations.
Consultation	The ability of a Project Manager to consult relevant individuals or repositories to learn from past projects. Consultation is also instrumental in conflict resolution as a Project Manager must be able to consult parties involved in the conflict in order to effectively resolve the conflict.
Empathy	Project Manager's ability to put themselves in others' situations to better understand their needs and challenges and thus better positioning themselves to foster a conducive environment for the project team to thrive.

Organized	The ability of a Project Manager to be able to plan things properly to ensure smooth coordination among various project team members and stakeholders
Managing	This involved the ability to identify, acquire, and manage the required skill (project team and stakeholders) sets to ensure a successful delivery of a project. Critical to this is managing stakeholders' expectations
Reliability	Reliability involves a Project Manager being dependable and trustworthy so the project team, top management, and stakeholders can rely on them to deliver a project.

5.3 Key Factors that Determine the Project Management Behavioural Competencies Required to Successfully Deliver a Project in the South African Public Sector.

From the literature research conducted, two key factors that mainly determine the behavioural competencies that a Project Manager requires in order to successfully deliver projects were found to be the industry within which a project is undertaken, and the project management structure employed to undertake a project. The impact of these two factors was examined in the context of the study and is presented in the ensuing sections.

5.3.1 Behavioural Competencies Required Based on Industry

Seeing as literature showed that different competencies are required for different industries (Stevenson and Starkweather, 2010). The survey aimed to assess whether or not this is the case in the South African Public Sector. This was achieved by conducting the Kruskal-Wallis test in SPSS as recommended by Aliu *et al.*, (2022). This was done using the non-parametric data collected.

A total of seven industries (i.e., Construction, Engineering, Entertainment, Government & Public Administration, Information Technology, Logistics, Research & Development)

participated in the survey and the results showed that there is no difference in preference for behavioural competencies from the participating industries.

This can be attributed to the role that Project Managers in the public sector play where they are not directly involved in the intricacies of projects, but rather focus on managing contracts. As Van der Waldt, (2011), government institutions are increasingly outsourcing projects to the private sector. Although this outsourcing does not absolve public sector project teams from the responsibility to deliver projects, their role is relegated primarily to planning projects, obtaining approvals, appointing Contractors (from the private sector), managing said appointed Contractors, and stakeholders. Thus, the behavioural competencies required to manage projects remain the same irrespective of the industry within which a project is classified.

Additionally, the behavioural competencies might remain the same irrespective of the industry due to standardized processes and procedures that projects must follow such as the Public Fund Management Act (PFMA), Public Procurement Act, etc. These processes are very strict and thus leave very little room for a Project Manager to creatively employ their skills to navigate a project to be successful.

5.3.2 Impact of Performing Organization's Project Management Structure on Behavioural Competencies

Literature showed that the project management structure employed to deliver a project has an influence on project success (Dziekoński, 2017; Javed and Liu, 2017; Gruden and Stare, 2018; Khattak and Mustafa, 2019). Particularly, the authority level of the Project Manager on project personnel (Lechler and Dvir, 2010) which is accurately measured by exploring the actual role of the Project Manager as Lechler and Dvir, (2010) found that there is no linear relationship between project management structure and the authority level of a Project Manager. The study aimed to explore whether or not the authority level of the Project manager has an impact on required behavioural competencies in the South African Public Sector.

Survey participants selected successful projects that were executed using Weak matrix structures, Strong matrix structures, Balanced matrix structures, Projectized/ Project-based/ project-oriented, and Functional structures. From those structures, Project Managers executed the project as either Supervised PMs, Supervised Functional PMs, Project Coordinators, Autonomous PMs, or Autonomous Functional PMs as defined by Lechler and Dvir, (2010). Kruskal-Wallis test was conducted and the results showed that there were no significant differences in preferred behavioural competencies in the South African Public Sector. This can be attributed to the fact that although a Project Manager might have total authority on the project team, they do not always have the authority to affect the bonuses, increase salaries, or dismiss a non-performing employee as is the case in the private sector. Thus, the authority of the Project Manager in the public sector is inherently diminished by organizational structures hence the lack of differences in Project Managers' behavioural competencies preference.

5.4 Project Management Practitioner's Perspective of Project Success in the South African Public Sector

Survey participants were requested to indicate their understanding of project success for two reasons: (1) to ensure that survey participants define project success is not self-defined but rather defined in congruent with the commonly accepted definition of the project management industry, and (2) to understand what the is the current of understanding of project success in the South African Public Sector as the definition is still evolving according to literature (Koelmans, 2004; Crawford, 2005; Bannerman, 2008; Shokri-Ghasabeh and Kavousi-Chabok, 2009; Lamprou and Vagiona, 2018; Blom, Steyn and Bond-Barnard, 2023; Sima, 2024).

5.4.1 Appreciation by Stakeholders

The study findings showed that appreciation by stakeholders is the most used criterion to gauge whether or not a project was a success. This is no surprise as projects in the public sector usually consist of a wide array of stakeholders, all with differing expectations, concerns, priorities and having different backgrounds (van der Waldt, 2020). This was further

underscored by the remark made by Participant-007 who stated that in the public sector, "*there is a multitude of stakeholders and to meet their expectations, a Project Manager must be able to communicate effectively".* Additionally, a sizeable amount of projects (medium to large) in the public sector tend to be either stakeholder-sensitive or stakeholder-led where stakeholder-led projects are characterized by the involvement of stakeholder groups and persons who have significant authority that can dictate a project's direction and stakeholders sensitive projects delivers clear outcomes that changes practices that people value (Worsley, 2020). It thus makes sense for project management practitioners to prioritize the perspective of these stakeholders when assessing whether or not a project was a success. This shows an evolution in the perspective of project management practitioners as traditionally, project success was only assessed through the lens of the iron triangle (meeting budget, time, and quality).

5.4.2 Appreciation by Client

The Findings showed that project appreciation by clients is the second most important criterion for project success in the South African Public Sector. In project management, a client is typically defined as an individual or an organization that provides the funding for a project. In the context of the public sector, tax-payer money is used to undertake projects and as such, many organizations are recognizing citizens as their clients (Draai and Raga, 2011). The authors further state that many organizations are repositioning themselves following the principles of "batho-pele" which translates to "people first" in Sotho.

The results of this study demonstrate that project management practitioners are people-centred in their definition of project success as they give priority to how the citizens view a project.

5.4.3 Meeting Budget, Schedule, and quality

A project being completed on budget, on schedule, and within agreed quality emerged as the third most important criterion. Traditionally, meeting these triple constraints automatically translated into project success and failure to meet these constraints meant a project was a

failure even if stakeholders' needs were met. However, with the projects becoming more complex, the definition of project success has evolved as detailed in section 2.5.1.

The findings of this study are in congruent with this evolution as it shows a shift from using only the iron triangle to define project success to a more holistic view where the perception of stakeholders is given more weight. That being stated, projects in the public sector are undertaken using constrained resources and limited timelines to deliver strategic objectives. It thus becomes imperative to balance meeting the needs of the stakeholders whilst delivering a project with set constraints of budget, time, and quality.

5.4.4 Appreciation by Users

The results also showed that appreciation by End users as the fourth most important criterion for project success in the South African Public Sector. This demonstrates that project management practitioners are concerned with the usefulness of project deliverables and the impact that they have on the end user.

5.4.5 Appreciation Project Team Members

The results showed that appreciation by both project personnel and contracting partners is the least important criterion for project success in the South African Public Sector. This is a demonstration of Servant leadership by the project team members as they appear to prioritize the views of others over their own (Eva *et al.*, 2019).

5.4.6 Summary

In summary, the overall results showed that project management practitioners in the South African Public Sector define project success more wholistically as opposed to the traditional definition which only focuses on project success being a project that is completed on time, on budget and in scope (Shokri-Ghasabeh and Kavousi-Chabok, 2009). The focus is now on appreciation by stakeholders, Clients, and End users in addition to meeting the triple constraints of cost, budget, and schedule. This demonstrates the principle of "batho pele" which has been adopted by a multitude of South African Public Sector organizations such as

the Department of Public Service, KZN Department of Public Works & Administration, Department of Social Development, etc.

Additionally, the definition of project success is outwardly focused as there appears to be less focus on appreciation by both the project personnel and contracting partners who are the drivers of projects. Thus, project team members view themselves as servants for the respective stakeholders in projects.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This final chapter draws conclusions based on the findings and discussions as presented in Chapters 4 and Chapter 5. This is then followed by recommendations based on conclusions drawn. Recommendations also include future studies relating to the topic of project management behavioural competencies in the context of the South African Public Sector. To ensure a comprehensive conclusion to the research, this chapter revisits the research, objectives, question and proposition.

6.2 Research Objective 1: Establish which Behavioural Competencies are Essential for a Project Manager to Successfully Deliver Projects in the South African Public Sector

The primary objective of the study was to establish the behavioural competencies that are essential for a Project Manager to successfully deliver projects in the South African Public Sector. The study found that there is a total of seventeen (17) behavioural competencies that are essential for a Project Manager to successfully deliver a project in the South African Public Sector. These competencies are classified into three categories as follows:

i. **Foundational Behavioural Competencies** are described as those behavioural competencies that are "must-have" for a Project Manager as they are directly linked to project success and without these competencies, a PM is unlikely to successfully deliver projects. These behavioural competencies include: (1) **Communication**, (2) **Teamwork**, (3) **Professionalism**, (4) **Leadership**, (5) **Emotional Intelligence**.
ii. **Core Behavioural Competencies** are described as the behavioural competencies that a Project Manager must have to develop project resilience which is required to navigate a project through challenges. Although these competencies do not directly contribute towards project success, they are crucial to have as they can help a project team navigate through complexities such as changing processes and procedures, diverse stakeholders, changing top management, etc., that are usually associated with

the South African Public Sector. The identified core behavioural competencies include; (1) **Adaptability & agility**, (2) **Conflict & crisis management**, (3) **Engagement & motivation**, (4) **Inter-personal skills**, and (5) **Results orientation.**

iii. **Supporting Behavioural Competencies** are described as the behavioural competencies that a Project Manager must have to effectively manage projects. Although these competencies are not as critical as Foundational Behavioural Competencies and Core Behavioural Competencies, they are good to have to support a Project Manager to deliver projects effectively. The identified Supporting Behavioural Competencies include: (1) **Negotiation**, (2) **Consultation**, (3) **Empathy**, (4) **Organized**, (5) **Managing**, (6) **Reliability**, (7) **Efficiency & effectiveness.**

As can be seen from the results presented herein, this objective was met through the use of a survey, statistical analysis and thematic analysis of personal interviews with experienced project management practitioners in the South African Public Sector.

6.3 Research Objective 2: key Factors that Determine the Project Management Behavioural Competencies Required to Successfully Deliver a Project in the South African Public Sector.

The ancillary objective was to explore key factors that can impact the required behavioural competencies for a Project Manager to successfully deliver projects in the South African Public Sector. From literature research, two key factors that primarily influence the behavioural competencies that a Project Manager requires to successfully deliver projects were found to be the **industry within which a project is undertaken**, and the **project management structure employed** to undertake projects.

This study demonstrated through the use of the non-parametric Kruskal-Wallis test that there are no significant differences in preferred behavioural competencies for a Project Manager to successfully deliver projects in the South African Public Sector regardless of the employed project management structure and industry within which a project is undertaken. Thus, the study found that the industry within which a project is undertaken and the project

management structure employed to undertake a project does not affect the essential Project Management behavioural competencies. Therefore, this objective was met.

6.4 Research Objective 3: Explore Project Management Practitioners' Perception of Project Success in the South African Public Sector Context

The research showed that through the use of descriptive statistics the perception of project success amongst project management practitioners in the South African Public Sector has followed a similar evolution as it has for their Western countries counterparts. The study demonstrated that completing a project within budget, on time and within quality is no longer sufficient to consider a project successful. Project management practitioners in the South African Public Sector value more the appreciation of projects by stakeholders and clients over meeting the triple constraints of budget, time and quality. Due to the resource constraints that exist in the South African Public Sector, they also consider the triple constraints the third most important success criterion followed by the appreciation by users of the project deliverable. Thus, the perspective of project success has evolved to be more holistic in line with the rest of the world. Hence, this objective was met.

6.5 Revisiting Research Question

The research question for this study set out to explore *"What are the essential behavioural competencies that a Project Manager must have in order to successfully deliver projects in the South African Public Sector?".*

The research found it to be important to establish the definition of project success in the South African Public Sector content in order to establish the essential behavioural competencies that a Project Manager must have. Additionally, it was found that several Public Sector organizations undertake projects in a wide array of industries and employ various project management structures to deliver projects. It was thus deemed important to explore the impact of the industry within which projects are undertaken as well as the employed project management structures in order to comprehensively answer the research question.

The study established a total of seventeen (17) behavioural competencies that are essential for a Project Manager to successfully deliver projects in the South African Public Sector. It was also found that these competencies are not impacted by the project management structure employed or the industry within which projects are undertaken. Hence the research question is answered.

6.6 Research Proposition

The research proposition was stated as *"Leadership is the key behavioural competence essential to successfully delivering projects in the South African Public Sector."*

Literature survey conducted showed that the behavioural competencies required to successfully deliver projects differ depending on the country within which studies are conducted. This was demonstrated through studies conducted by Gruden and Stare, (2018) in Slovenia, Vlahov, Klindžić and Radujković, (2019), and Khattak and Mustafa, (2019) in Pakistan. However, in all these studies Leadership emerged as the only behavioural competence consistently appearing across various countries, hence the hypothesis.

The research revealed that there is no single behavioural competency that is key to delivering projects successfully in the South African Public Sector. Rather the study established five (5) Foundational Behavioural Competencies (i.e., Communication, Teamwork, Professionalism, Leadership, Emotional intelligence) that directly contribute towards project success. Additionally, five (5) Core Behavioural Competencies (Adaptability & agility, Conflict & crisis management, Engagement & motivation, Inter-personal skills, and Results orientation) were identified that are critical to building project resilience that is essential to navigating a project through challenges usually associated with the South African Public Sector environment. Finally, seven (7) Supporting Behavioural Competencies (i.e., Negotiation, Consultation, Empathy, Organized, Managing, Reliability, Efficiency & effectiveness) that are good to have to enable effective management of projects were also identified.

Therefore, the hypothesis is partially supported as leadership is part of the Foundational Behavioural Competencies. However, Leadership alone is not enough and must be supported by additional behavioural competencies as detailed herein.

6.7 Conclusions

The primary objective of the study was to establish which behavioural competencies are essential for a Project Manager to successfully deliver projects in the South African Public Sector. Also, an ancillary objective of the study was to explore key factors that affect the project management behavioural competencies required to successfully deliver a project in the South African Public Sector. Finally, a supporting objective was to explore project management practitioners' perceptions of project success in the South African Public Sector context.

The study achieved all objectives as stated above using a survey and personal interviews where project management practitioners in the South African Public Sector participated. Conclusions drawn based on research findings are presented in the ensuing sections.

6.7.1 PM Behavioural Competencies that are Essential to Successfully Deliver Projects in the South African Public Sector

The study revealed a total of seventeen (17) behavioural competencies that are essential for a Project Manager to successfully deliver projects in the South African Public Sector. These competencies are classified into three (3) categories as follows:

1) **Foundational Behavioural Competencies** which include Communication, Teamwork, Professionalism, Leadership, and Emotional intelligence. These competencies are a must-have for a PM as they are directly linked to project success and a PM who does not have them increases the probability of project failure.
2) **Core Behavioural Competencies** are competencies that a PM must have in order to develop project resilience that is required to navigate a project through challenges as they arise. These competencies include Adaptability & agility, Conflict & crisis management, Engagement & motivation, Inter-personal skills, and Results orientation. These competencies indirectly contribute towards project success/ failure and are

necessary to have as they help a project team navigate through complexities in the South African Public Sector.

3) **Supporting Behavioural Competencies** that include Negotiation, Consultation, Empathy, Organized, Managing, Reliability, and Efficiency & effectiveness. These competencies are good for a PM to have in order to effectively manage projects as they enable them to deliver projects effectively.

6.7.2 Key Factors that Affect the Required Behavioural Competencies that are Essential to Successfully Deliver Projects in the South African Public Sector

Literature showed that there are two (2) key factors that affect the required project management behavioural competencies. These two factors were investigated, and the conclusions drawn based on the findings are presented below:

6.7.2.1 The Impact of Industry on the Required PM Behavioural Competencies

The impact of the industry on PM's behavioural competencies required to successfully deliver projects was examined as literature showed that different competencies are required for different industries (Müller and Turner, 2010; Stevenson and Starkweather, 2010). A total of seven (7) industries (i.e., Construction, Engineering, Entertainment, Government & Public Administration, Information Technology, Logistics, Research & Development) participated in the study, and the results showed that there is no difference in preference of behavioural competencies from the participating industries. Thus, the behavioural competencies required to successfully deliver projects remain the same irrespective of the industry within which a project is classified in the South African Public Sector.

6.7.2.2 Impact of Performing Organization's Project Management Structure on Behavioural Competencies

Literature showed that the project management structure employed to deliver a project has an influence on project success (Dziekoński, 2017; Javed and Liu, 2017; Gruden and Stare, 2018; Khattak and Mustafa, 2019). Particularly, the authority level of the Project Manager on project personnel, which is accurately measured by exploring the actual role of the Project Manager as Lechler and Dvir, (2010) found that there is no linear relationship between project

management structure and the authority level of a Project Manager. The study aimed to explore whether or not the authority level of the Project Manager has an impact on required behavioural competencies in the South African Public Sector.

The authority level of the PM was assessed through the role that the PM played in the selected project such as Supervised PM, Supervised Functional PM, Project Coordinators, Autonomous PM, and Autonomous Functional PM, as identified by Lechler and Dvir, (2010). The study found that the required PM behavioural competencies in the South African Public Sector are independent of the PM's authority level, or the project management structure employed to undertake a project.

Additionally, the study also confirmed the non-linear relationship between a project management structure and Project Manager authority level. Thus supporting the findings by Lechler and Dvir, (2010).

6.7.3 Project Management Practitioners' Perspective of Project Success

Findings from the study conducted indicated that like the rest of Western countries, the definition of project success has evolved from a traditional view where a project was considered successful when it met the triple constraint of schedule, budget, and scope (Shokri-Ghasabeh and Kavousi-Chabok, 2009). Project management practitioners in the South African Public Sector view project success based on the appreciation of projects by stakeholders and clients over meeting the triple constraints of budget, time and quality. However, due to the resource constraints that exist in the South African Public Sector, they also consider the triple constraints the third most important success criterion followed by the appreciation by users of the project deliverable.

Thus, the perspective of project success in the South African Public Sector has evolved to be more holistic in line with the rest of the Western countries where the definition of success has broadened beyond the bounds of a project and considers how a project is viewed by stakeholders.

6.8 Recommendations

This research serves as an initial step toward understanding project management behavioural competencies and their impact on project success in the context of the South African Public Sector. The recommendations will be focused on the next logical steps that project management practitioners and academics should take if they are to turn the tide and improve the probability of project success in the South African Public Sector.

Based on the conclusions presented in section 6.7, the following recommendations were made:

- To improve the probability of project success, South African public organizations must train their Project Managers to develop their ***Communication***, ***Teamwork***, ***Professionalism***, ***Leadership***, and ***Emotional intelligence*** competencies as these behavioural competencies are directly linked to project success, and lack of these skills is likely to directly lead to project failure. Additionally, when recruiting new Project Managers, they must recruit Project Managers who possess these competencies as they are "*must-haves*" for Project Managers in the South African Public Sector. This will better position organizations to realize improved return on investment through projects and provide the much-needed boost to the local and international project management profession as project failure remains prevalent despite project management growing as a profession (Young and Jordan, 2008; Project Management Institute, 2017c; Dago, 2018; Mosamane, 2019; Shabir, Naveed and Cheema, 2023).
- Given the complexities that exist in the South African Public Sector such as changing processes and procedures, changing policies, diverse stakeholders, and revolving top management that usually arise during project execution in the South African Public Sector, a project must have resilience and this can be achieved by assigning projects to Project Managers who possess the following core competencies; ***Adaptability & agility***, ***Conflict & crisis management***, ***Engagement & motivation***, ***Inter-personal skills***, and ***Results orientation***. Additionally, Project Managers must be

trained to develop these competencies which will better equip them to navigate complexities as detailed herein and indirectly increase the probability of project success.

- In light of the constraints such as budget limitation, and resource constraints (Maleka, 2023) that exist in practice in the South African Public Sector, Organizations must assign projects to Project Managers with the following behavioural competencies: ***Negotiation***, ***Consultation***, ***Empathy***, ***Organized***, ***Managing***, ***Reliability***, and ***Efficiency & effectiveness***. These competencies allow Project Managers to effectively deliver projects by minimizing wastage of time and resources.
- This study can be seen as a first step toward understanding the project management behavioural competencies in the South African Public Sector. **Further studies** must be conducted where larger databases can be used to reach a broader range of project management practitioners to further refine the list of PM behavioural competencies that are essential in the South African Public Sector.

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APPENDIX A: QUESTIONNAIRE SURVEY

INTRODUCTION & CONSENT

Dear Potential Participant

My name is Vusi Chabalala and I am from the Department of Construction Economics & Management at the University of Cape Town. I would like to invite you to participate in a research project which I am undertaking for my Masters in Project Management supervised by Mark Massyn from the University of Cape Town. The results of the study will be contributed toward a Masters in Project Management dissertation. You were selected as a possible participant in this study because of your experience in participating in projects execution in South African Public Sector.

TITLE OF THE RESEARCH PROJECT: Exploring the Behavioural Competencies Essential for Project Managers to Successfully Deliver Projects in South African Public Sector.

PURPOSE OF THE STUDY: The study is designed to assess project management behavioural competencies that are necessary for Project Managers to successfully deliver projects in South African Public Sector.

PROCEDURES: If you volunteer to participate in this study, we would ask you to go online and complete a once-off questionnaire survey which should take approximately 15 to 25 minutes of your time. The Survey will be conducted using Google Forms (Here) which is a cloud-based platform that allows users to generate and run surveys.

POTENTIAL RISKS AND DISCOMFORTS: There are no foreseen physical or psychological risks to participants (nor their organization), nor discomforts, just the inconvenience of time to complete the survey.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY: There will be no direct benefits (i.e., no payment) for participating in this study. It is anticipated that the study will benefit the project management discipline by adding to the body of knowledge.

CONFIDENTIALITY: Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of referring to participants using s generic label (i.e,Participant-001) instead of names or other identifying information. The gathered data will be digitally captured and securely stored, with access to the electronic files being managed through password protection.

PARTICIPATION AND WITHDRAWAL: You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

IDENTIFICATION OF INVESTIGATORS: If you have any questions or concerns about the research, please feel free to contact the following individuals:

Name: Vusi Chabalala	Name: Mark Massyn
Email: chbshi001@myuct.ac.za	Email: mark.massyn@uct.ac.za
Tel: 0734661108	Tel: 0216509111

RIGHTS OF RESEARCH PARTICIPANTS: You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Vusi Chabalala or Mark Massyn.

Yours sincerely
Vusi Chabalala
Student

1. **Please indicate your choice from the two options below:** *

- ◯ I have read and understand what I am being asked to do. I hereby agree to participate in the survey.
- ◯ I do not wish to continue with this survey

DEMOGRAPHICS

2. **What country is the performing organization that delivered the project based?** *

- ◯ Republic of South Africa
- ◯ Other

3. **What is your gender?** *

- ◯ Male
- ◯ Female
- ◯ Non-binary
- ◯ Transgender
- ◯ Prefer not to say
- ◯ Other

4. **What is your age?** *

- ◯ Less than 25
- ◯ 25 to 30
- ◯ 30 to 35
- ◯ More than 35

5. **How many years of experience do you have as a practitioner?** *

- ◯ Less than 1 year
- ◯ 1 to 5 years
- ◯ 5 to 10 years
- ◯ 10 to 15 years
- ◯ 15 to 20 years
- ◯ More than 20 years

PROJECT IDENTIFICATION

When answering questions in the upcoming sections, think of a single project that you recently (i.e., within the last five years) completed that had a minimum of 5 project team members.

INDUSTRY

6. **In what industry sector is your performing organization within which the project was undertaken?** *

- ◯ Engineering
- ◯ Manufacturing
- ◯ Finance
- ◯ Research & Development
- ◯ Construction
- ◯ Information technology
- ◯ Marketing and Advertising
- ◯ Healthcare
- ◯ Government and Public Administration
- ◯ Non-profit organization
- ◯ Other

7. **What is the name of the organization within which the project under consideration was undertaken?** *

PERFORMING ORGANIZATION GENERAL PROJECT MANAGEMENT STRUCTURE

8. **In what capacity were you involved in the identified project?** *

- ◯ Project Manager
- ◯ Project team member
- ◯ Program/Portfolio Manager
- ◯ Project Sponsor
- ◯ Other

9. **From the list below, select the formal structure that was used in your organization to deliver the project under consideration.** *

- ◯ **Functional** - The Project Manager (PM) was sourced from a functional department and had to balance project management with functional responsibilities Also the PM had limited authority. The Line Manager (LM) was responsible for assigning project team members and the budget
- ◯ **Weak matrix** - The PM was not employed only to manage projects but had other responsibilities. The PM had limited authority and had to negotiate resources and budget with the LM.
- ◯ **Balanced matrix** - The PM was not employed only to manage projects but had other responsibilities. The PM shared equal authority on resources and budget with the LM.
- ◯ **Strong matrix** - The PM was employed only to manage projects, with no other responsibilities. The PM had full authority and had to negotiate resources and budget with the LM.
- ◯ **Projectized/Project-oriented/Project-based** - The organization is exclusively focused on projects. Teams are formed for specific projects and disbanded once they are completed. The PM had full authority and control over resources, and team members reported to them.

DEFINING PROJECT SUCCESS

10. **From the list below, select one or more reason(s) why you perceive the selected project to be successful.** *

- [ ] Met the triple constraints of Budget, Schedule, and Quality (Iron Triangle)
- [ ] The project was appreciated by the Client
- [ ] The project was appreciated by project personnel
- [ ] The project was appreciated by users
- [ ] The project was appreciated by contracting partners
- [ ] The project was appreciated by stakeholders

ACTUAL ROLE OF PROJECT MANAGER IN DELIVERING THE PROJECT UNDER CONSIDERATION

11. **In which category (from the list below) would you place the Project Manager (PM) in their role delivering the selected project?** (See description next to each category) *

- ○ **Project Coordinator** - No single individual was appointed to manage this project. The responsibility of managing the project was distributed amongst participants from functional units. The Project Manager acted as a facilitator responsible for coordinating efforts and communication between functional departments. The Project Manager was sourced from a position with very low functional responsibilities.
- ○ **Supervised Project Coordinator** - Similar to Project Coordinator as detailed above except for the involvement of the steering committee (comprising of senior management) to coordinate and support the project.
- ○ **Autonomous PM** - The Project Manager had a high-level project authority, functional responsibilities, as well as project personnel authority responsibility with no steering committee involvement. This Project Manager executed the project independently from the functional organization.
- ○ **Supervised Functional PM** - The project was executed by a Functional Manager with high functional responsibilities while simultaneously having to balance running the project with functional responsibilities. Additionally, the Project Managers was supported by a steering committee.
- ○ **Autonomous Functional PM** - Similar to Supervised Functional Project Manager as detailed above except they were not directly supported by a steering committee as they are autonomous in project execution

12. **From the list of behavioural competencies provided below, rank the competencies which you deem were essential for the Project Manager to deliver the identified project under consideration.** (See provided description of each competency before ranking) *

	Not essential	*Low essential*	*Slightly essential*	Neutral	*Moderately essential*	*Very essential*	*Extremely essential*
Leadership	○	○	○	○	○	○	○
Communication	○	○	○	○	○	○	○
Managing	○	○	○	○	○	○	○
Cognitive ability	○	○	○	○	○	○	○
Effectiveness	○	○	○	○	○	○	○
Professionalism	○	○	○	○	○	○	○
Engagement & motivation	○	○	○	○	○	○	○
Self-control	○	○	○	○	○	○	○
Assertiveness	○	○	○	○	○	○	○
Openness	○	○	○	○	○	○	○
Relaxation	○	○	○	○	○	○	○
Creativity	○	○	○	○	○	○	○
Negotiation	○	○	○	○	○	○	○
Conflict & crisis management	○	○	○	○	○	○	○
Reliability	○	○	○	○	○	○	○
Values appreciation	○	○	○	○	○	○	○
Efficiency	○	○	○	○	○	○	○
Consultation	○	○	○	○	○	○	○
Results-orientation	○	○	○	○	○	○	○
Teamwork	○	○	○	○	○	○	○
Human resource management	○	○	○	○	○	○	○
Learning & development	○	○	○	○	○	○	○

14. **Describe (if any) additional behavioural competencies that the Project Manager demonstrated during the project that are not included in the list above, that were in your opinion, necessary to make the project a success.** *

Behavioural Competency	Description
Leadership	Leadership involves providing direction and motivating others in their role or tasks to fulfil the project's objectives. Leadership is required throughout the life of a project. It is particularly important when a project encounters problems, when change is required, or where there is uncertainty about a course of action. Leadership is needed to exert all of a project manager's competencies in a way that they can be seen and embraced by the team. Besides displaying leadership with the project team, the project manager needs to be seen as a leader in representing the project to senior management and other interested parties
Communication	• Actively listens, understands, and responds to stakeholders • Maintains lines of communication • Ensures quality of information • Tailors communication to an audience
Managing	• Builds and maintains the project team • Plans and manages for project success in an organized manner • Resolves conflict involving project team or stakeholders
Cognitive ability	• Takes a holistic view of the project • Effectively resolves issues and solves problems • Uses appropriate project management tools and techniques • Seeks opportunities to improve project outcome
Effectiveness	• Resolves project problems • Maintains project stakeholder involvement, motivation, and support • Changes at the required pace to meet project needs • Uses assertiveness when necessary
Professionalism	• Demonstrates commitment to the project • Operates with integrity • Handles personal and team adversity in a suitable manner • Manages a diverse workforce • Resolves individual and organizational issues with objectivity

Engagement and motivation	Engagement is the personal buy-in from the project manager to the project and from the people inside and associated with the project. Engagement makes people believe in the project and want to be part of it. The motivation of the project team depends on how well the individuals bond together and their ability to deal with both the high and low points of the project. Engagement with and motivation of the individuals involved in the project have to be honest and will then result in a good working atmosphere and increased productivity of both individuals and the team as a whole
Self-control	• Emotional regulation which entails the ability to manage emotions and reactions in a professional setting. • Impulse control which entails the ability to resist acting on urges or impulses that could be detrimental to the project. • Self-discipline which entails one's ability to follow through on commitments and maintain focus despite distractions.
Assertiveness	• Provide direction, coaching and mentoring to guide and improve the work of individuals and teams People. • Exert appropriate power and influence over others to achieve the goals.
Openness	• Stimulate and support an open and creative environment • Facilitate and promote open communication
Relaxation	Appropriate balance of work, family, and leisure, awareness, reenergizing
Creativity	Creativity techniques, imagination and intuition, optimism
Negotiation	Negotiation is a search for agreement, seeking acceptance, consensus and alignment of views. In a project, it can take place on an informal basis throughout the project life cycle or on a formal basis such as during procurement, and between signatories to a contract.
Conflict and crisis management	Conflict management is the process of identifying and addressing differences that, if unmanaged would affect project objectives. Effective conflict management prevents differences from becoming destructive elements in a project.
Reliability	Control cycle, systematic and disciplined working method, tolerating mistakes
Values appreciation	Personal interests and goals, social sensitivity, pressure groups
Efficiency	Productivity, resource and energy efficiency, social and environmental costs

Consultation	• Show confidence and respect by encouraging others to share their opinions and concerns • Share own vision and goals in order to gain the engagement and commitment of others
Results-orientation	Constant improvement and entrepreneurship, integration of social, technical, and environmental aspects, management of interested parties' expectations.
Teamwork	The process whereby people work collaboratively towards a common goal, as distinct from other ways that individuals can work within a group.
Human resource management	the understanding and application of the policy and procedures that directly affect the people working within the project team and working group. These policies include recruitment, retention, reward, personal development, training and career development.
Learning and development	Learning and development involve the continual improvement of competencies in the organization. The identification and application of learning within projects to develop the organization's capability to undertake current and future projects.

APPENDIX B: INTERVIEW RESPONSES

Participant-001		
Rank	**Behavioural Competency**	**Reason**
1	Communication	• Flow of information between project team members is critical, • Clear definition of project goal (can be written but must also be communicated).
2	Teamwork	• Ability to work together to achieve project goals,
3	Leadership	• Providing regular leadership so the team can achieve its goals, • Ensure clear goals, • Support team members, • Ability to guide the team, • Encompasses most of the competencies.
4	Negotiations	• Negotiating for resources to have the team in the first place.
5	Agility	• Ensure that when changes occur, they are implemented, • Continuously improve as things change, • Be agile to implement changes.
6	Results-oriented	• Must focus on delivering project goals
7	Efficiency	• Must be efficient in delivering project goals
8	Organized	• Important to be organized as an individual
9	Emotional intelligence	• To provide good leadership, one must have emotional intelligence
10	Professionalism	• PM must carry themselves professionally in discharging their duties.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive

Participant-002		
Rank	**Behavioural Competency**	**Reason**
1	Leadership	• Seeing as the PM is the leader, • Leadership must take centre stage as the PM is the single, • point responsible for the success of a project, • Non-negotiable.
2	Teamwork	• PM must be able to engage stakeholders role players. • Ability to interact with individuals of varying levels, • Must be able to play well with others,
3	Organized	• Critical as the PM is working with different role players • Responsible to interact with different role players to deliver a project, • You must be the most organized team member, • Must have things in order so you can be a point of reference.
4	Communication	• PM must be able to communicate effectively between all participants of a project, • It is a core, • Must communicate in such a way that people receive the information, • The PM is the centre that must give all required feedback to all involved.
5	Inter-personal Skills	• This speaks to the way one communicates with people, • Must be an effective communicator with a good understanding of different stakeholders, • Includes EI to know the audience and tailor the communication accordingly.
6	Efficiency	• Must work efficiently before managing the project in accordance with the project constraints, • Must not be wasteful, • Efficient management of both human and physical resources.

7	Negotiation	• When things don't go according to plan, one must be able to negotiate with all involved, • In cases when you need to negotiate between parties, one must have these skills to handle these issues.
8	Conflict & Crisis management	• When conflict arise, the PM must be able to manage crisis, • Ability to intervene and negotiate with both internal and external.
9	Professionalism	• PM must be a professional as it is not an academic qualification, • Must have the professionalism in executing projects, • It is a professional competency.
10	Adaptability	• The PM must be adaptable as things change and things slip, • Must be able to adapt to some sort of change as so many things can go wrong, • Adapt to accommodate unforeseen changes.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive

Participant-003

Rank	Behavioural Competency	Reason
1.	Communication	• Important to keep people on the same page, • Knowing where the project is going, • Communicate to motivate and enforcing teamwork • Find out where issues are, • Also important in getting to know people, engaging people in a s casual manner as this makes people want to assist.
2.	Leadership	• Servant leadership is essential, • Leading by example, • Being accountable to oneself, • People follow what they see,

		• Being authentic as a leader. • People are attracted to what works.
3.	Professionalism	• Maintaining professionalism including respecting people's time, • It helps other to do what they need to do, • Keeps the team spirit going, • Set the tone for the projects, • Helps with accountability.
4.	Teamwork	• It makes things easier, • Keeps the project going as members can always feel in where necessary.
5.	Results-orientation	• Crucial to keep the eye on the ball to meet the project goals, • It is all that matters. • SMART is crucial.
6.	Conflict & Crisis management	• Knowing how to manage a crisis so you don't lose momentum, • Minimize conflict as it makes it easier for the team, • Being able to handle a crisis makes life easier for management. • This can save project time.
7.	Emotional intelligence	• Key to not personalize things, • Knowing how to self-regulate, • Having the ability to manage one's emotions and still be able to do the job.
8.	Adaptability	• The ability to change with changes in processes and procedures, • Accept the changes, • Not being rigid, • Adapting to a new way of doing things.
9.	Inter-personal Skills	• Assists with getting people to deliver results, • Being able to engage in various levels, • Build the spirit of togetherness.
10.	Engagement & Motivation	• Reminds people why we do what we are doing. • Necessary fuel for the team.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive.

Participant-004		
Rank	**Behavioural Competency**	**Reason**
1.	Emotional intelligence	• When dealing with human beings, one need to have emotional intelligence, • The ability to regulate your emotions and having empathy towards the team, • The ability to defuse tension is productive to the project.
2.	Communication	• Communication is key because that is how info is transferred. As 90% of the time a PM is communicating.
3.	Teamwork	• The PM needs to have a team that will share info and gel together in order to deliver the project, • You need a cohesive team as you have to deal with too many things at once.
4.	Engagement & Motivation	• The PM needs to be approachable/engageable to all involved so the team can freely and timeously share info, • You also need to be able to motivate employees as in some cases, there are info that can't be shared, • You must keep on motivating the team
5.	Conflict & Crisis management	• PM must be able to manage conflict very well as failure to manage conflict will lead to project failure, • PM must be able to timeously defuse conflicts before it affects employees, • Must address conflicts ASAP
6.	Professionalism	• As a PM, one must conduct themselves in an professional and ethical manner and show that you are not just handed the title

7.	Leadership	• Goes hand in hand with professionalism, • One must be able to display leadership skills as the team members look up to the PM for mentorship
8.	Negotiation	• When there is a conflict, PM must be able to negotiate between parties, • Be able to strike a balance between conflicting requirement of the respective stakeholders.
9.	Agility	• PM must be agile as things are constantly changing, • Be able to accommodate changes to accommodate the needs of stakeholders.
10.	Adaptability	• Flexibility to be able to manage the team through changes as they arise.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive

Participant-005		
Rank	**Behavioural Competency**	**Reason**
1.	Conflict & Crisis management	• In public sector there are many conflicting factors, • You will not do well if you don't have this skill.
2.	Communication	• Projects often fail due to lack/poor communication, • Communicating, quality, to stakeholders.
3.	Inter-personal Skills	• No islands, • Must be able to deal with affected parties, • Must be able to deal with people, • Have seen projects fail because PM lacked this skill

4.	Results-orientation	• Have seen projects that are 90% in and people don't understand why project is being done.
5.	Negotiation	• Many moving parts, • Must be able to get alignment, • Know when to let go and push. • Very difficult to manage project if skill is not in place
6.	Agility	• Must be willing to be agile as some projects are novel, • If things don't work you must be willing to change
7.	Effectiveness	• There has to be a marriage between what you want to accomplish and what you want to deliver, • Given resources, time and finances, one must be efficient in utilising those to achieve project goals.
8.	Adaptability	• Processes and procedures change and must be willing to change with them.
9.	Leadership	• One must be willing to take charge, • Must not wait for instruction but take initiative • Must be willing to bring people together. • Must be willing to take risks and not pass on to others.
10.	Consultation	• Very important in many levels, • There are lots of lessons learnt that one can draw from, • One must be able to consult others so you don't repeat mistake already made by others.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive

Participant-006		
Rank	**Behavioural Competency**	**Reason**
1.	Agility	• When dealing with projects , you often have competing constraints,

		• As changes occur, one must be agile, • Given the current working conditions, seeing as things have changed over the years, one must be agile. • With hybrid working arrangements as an example.
2.	Communication	• In order to get a deliverable, PM must engage and talk to understand challenges, • Important in giving updates to stakeholders and engaging the team to establish the status.
3.	Teamwork	• When you have different specialists, PM must integrate respective areas, • To integrate effectively, you need team work. Needed.
4.	Emotional intelligence	• Requires a lead to be aware of themselves first so they understand the team, • This becomes handy when the team is not performing, • When team members come to you with challenges, you need to be able to emotionally available and show understanding and make recommendation.
5.	Conflict & Crisis management	• Two-folds: technical side – technical solutions required, you must be able to find common grounds when conflict arise, • When there is not team charter, you sometimes find that some members are sensitive, one must be mindful, • Must encourage where needed, • Justify why there are certain needs.
6.	Empathy	• A sensitive one, • You must show understanding to people's circumstances, • Show understanding for different cultural needs.
7.	Engagement & Motivation	• People go through a roller coaster from time to time, • Get motivation from others, and motivate others.
8.	Professionalism	• Punctuality, • PM must always be on time, • Carry yourself in a professional manner, • Dress code is sometimes important,

		• Report must be professionally done.
9.	Consultation	• To resolve issues where there is no agreements amongst members, • When sharing items that are significant with the team members.
10.	Results-orientation	• Must focus on results to meet deliverables over and above everything else.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive

Participant-007		
Rank	**Behavioural Competency**	**Reason**
1.	Communication	• There is a multitude of stakeholders and to meet their expectations you must communicate, • First point of failure is lack/poor communication, • People want to be heard and that you are giving attention to their needs, • As a PM you must control the communication. The channel of comms expand with the more people that you have, • Manage who gets what info.
2.	Teamwork	• As a PM you need to have the right people to have the right expertise, • You must manage the team well and choose the team well, • You can't manage how people work, you must manage outputs, • You must let the person with the right expertise to lead sometimes,

		• Manage the team developing stages.
3.	Leadership	• You don't always lead from the front, • Must be able to delegate based on the team's strengths and weakness, • Identified the needed skills and provide necessary training, • Understand how you can best support the team, • Be able to listen to stakeholders/team member, • Must understand team members challenges, • Understand who is likely to cause discontentment, • How you lead determines how successful the project will be.
4.	Conflict & Crisis management	• Conflict will always come up, • Know how to defuse the conflict. • Listen for the sake of listening, • Manage the situation after paying attention, • Get people's perspective as everyone has their own ways, • Ensure that conflicts don't escalate.
5.	Emotional intelligence	• Must have empathy, • Be able to put yourself in someone's shoes, • Provide guidance is you can and counselling • EQ over IQ, • Empathy is a big part, • Being kind, • Don't brush aside, • People work under stress and no one cares about people which is against people's wellbeing, • Give people space to communicate and express how they feel and how they want to be treated.
6.	Professionalism	• Not self-explanatory, • Conflict can push people to acting in unprofessional manner, • Don't deal with personalities, • Recognize the professionalism in others, • It doesn't matter how you feel about the person,

		• Ethics and integrity are part of professionalism, • Take your profession serious.
7.	Adaptability	• The ability to see the environment and the demands of what you are doing, • As the situations change, you must adapt, • Don't close yourself off, • Understand other functions, • Have the basics to assess change, • Adapt in a way you execute, • Keep an open mind.
8.	Engagement & Motivation	• Relates to leadership, • Must be able to see the best out of people and motivate them, • Have a mentor to motivate you when not motivated, • Don't try find all answers by yourself, share knowledge with others, • And be the that for others.
9.	Managing	• Managing time, communications, expectations, processes, • Ability to select the right skills, • Managing expectations as some might go against the project, • Take people through the project to manage expectations and get them to understand
10.	Consultation	• Hand in hand with communication, • Ability to consult and ask the relevant questions, • Find out what you don't know, • Different stakeholder have different influence and consulting them can drive project to success.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive

Participant-008		
Rank	**Behavioural Competency**	**Reason**

1.	Teamwork	• On projects, you can't function as a single entity, • You need to interact with team members across functions, • PM just coordinate the teamwork effort
2.	Adaptability	• Important as the environment is dynamic and one must adapt or get left behind or make the wrong decisions, • If you adapt you are able to make data driven decisions rather than emotional ones.
3.	Agility	• Being agile adds incremental value as decisions are made quicker and thus less time is lost idling and thus allowing the project to move on, • You focus on the right things, • Aim is to 20% to yield 80% of the results.
4.	Inter-personal Skills	• In a project you are dealing with people and each person has their own character and the PM must understand each person's to be able to deal with them and leverage of their respective strengths, • One is able to get support can be sourced informal
5.	Professionalism	• PM must conduct themselves in a professional manner and the value of what the PM is doing becomes easily recognized, • You avoid dealing with "doubting Thomas", • Allow the work to speak for the PM, • When people have confidence in your work it makes life easier (i.e., getting things approved and getting support above your level).
6.	Reliability	• Creates trust across all stakeholders.
7.	Communication	• Very key as the PM spends majority of the time communicating with various stakeholders, • Building an ecosystem and integrating through communications.
8.	Efficiency	• Important as time is money, so the less time spent the more money saved, • Results in PM achieving goals quicker.
9.	Effectiveness	• Enable the PM to accurately measure their goals, • Also monitor and control goals during the execution process,

		• Able to adequately execute all actions required to realize the final product.
10.	Emotional intelligence	• Important as one is able to read the room in terms of people's reactions, thus having the ability to pivot when necessary, • Self – important to use EI to maintain one's professionalism irrespective of the situation.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive

Participant-009		
Rank	**Behavioural Competency**	**Reason**
1.	Communication	• Essential skill to be able to take instructions, • To also use the instruction to validate that the information is well received, • This is critical to clearly ensure that the project goals are clearly understood, • PM must communicate clearly as this makes things clear for the rest of the team.
2.	Professionalism	• This is linked to integrity to be able to work within the norms standards and limitations and scope of work, • As part of professionalism, the PM must show respect to others, • They also must be trustworthy and honest at all times, especially with corruption being rampant in the country, • They also must have a positive attitude towards their job.
3.	Results-orientation	• It is always important to understand the end game, • Understand what is the by-product of one's involvement as well as how project goals will be achieved.
4.	Teamwork	• Collaboration is essential in terms of sharing ideas and others,

		• Key to incorporate different fields to come up with good solutions.
5.	Leadership	• Important to be able to influence the direction and the pace required to achieve the end goal, • Also be able to identify the key players in terms of the skills their offer, • Leveraging of people's strengths.
6.	Engagement & Motivation	• PM must be able to understand what inspires the team and how to best meet their expectations.
7.	Inter-personal Skills	• PM must be able to create a safe zone/spaces to be engaged meaningfully on issues, • Being ale to search for solutions on issues by creating a conducive environment for people to conversant freely in a harmonized environment.
8.	Emotional intelligence	• PM must be aware of what to say and what not say, • Conversational tone, how and when to say things, • This is critical and it is developed with time, • Where one is emotionally invested they tend to trip.
9.	Effectiveness	• Being able to realise goals in line with set criteria (cost, quality, and time), • Being able to work within the constraints effectively is key.
10.	Empathy	• PM must able to place themselves in someone else's shoes and finding the best possible outcome of situations.

Question: Would you consider the list of behavioural competencies presented to be comprehensive? If not, what additional competencies would you add?

Answer: The list is comprehensive

APPENDIX C: ETHICS CLEARANCE

CONSENT TO PARTICIPATE IN RESEARCH

Dear Potential Participant

My name is Vusi Chabalala and I am from department of Construction Economics & Management at the University of Cape Town. I would like to invite you to participate in a research project which I am undertaking for my Masters in Project Management supervised by Mark Massyn from the University of Cape Town. The results of the study will be contributed forwards a Masters in Project Management dissertation. You were selected as a possible participant in this study because of your experience in participating in projects execution in South African State-owned Enterprise (SOE).

1. TITLE OF THE RESEARCH PROJECT:

Exploring the Behavioural Competencies Essential for Project Managers to Successfully Deliver Projects in South African State-owned Enterprises (SOEs).

2. PURPOSE OF THE STUDY

The study is designed to assess project management behavioural competencies that are necessary for Project Managers to successfully deliver projects in South African SOE.

3. PROCEDURES

If you volunteer to participate in this study, we would ask you to go online and complete a once-off questionnaire survey which should take approximately 30 to 45 minutes of your time. The Survey will be conducted using SurveyMonkey which is cloud-based platform that allows users to generate and run surveys.

4. POTENTIAL RISKS AND DISCOMFORTS

There are no foreseen physical or psychological risks to participants (nor their organization), nor discomforts, just the inconvenience of time to complete the survey.

5. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There will be no direct benefits (i.e., no payment) for participating in this study. It is anticipated that the study will benefit the project management discipline by adding to the body of knowledge.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

Confidentiality will be maintained by means of referring to participants using s generic label (i.e., Participant-001) instead of names or other identifying information. The gathered data will be digitally captured and securely stored, with access to the electronic files being managed through password protection.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact the following individuals:

Name : Vusi Chabalala
Email : chbshi001@myuct.ac.za
Tel : 0734661108

Name : Mark Massyn
Email : mark.massyn@uct.ac.za
Tel : 0216509111

9. RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Vusi Chabalala or Mark Massyn.

Yours sincerely

Vusi Chabalala
Student

Signed by candidate

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

2024/05/07

EBE/00751/2024

RE: Research Ethics Committee Project Approval Letter

Dear Shidumo Chabalala,

Your application for ethics review of your project titled

Exploring the Behavioural Competencies Essential for Project Managers to Successfully Deliver Projects in South African State-owned Enterprises

has been reviewed and evaluated by the

Engineering & Built Environment Committee.

You may proceed with your research project titled:

Exploring the Behavioural Competencies Essential for Project Managers to Successfully Deliver Projects in South African State-owned Enterprises

Expiration date of approval: 2024/12/31

Please note that should:

(i) any serious or adverse effects to participants occur and/or,

(ii) aspect(s) of your current project change and/or

(iii) any unforeseen events that might affect continued ethical acceptability of the project occur then you should immediately report this to the approving REC. You may be required to submit an amendment to this application, in order to determine whether the changed aspects increase the ethical risks of your project.

Based on the information supplied your application has been successful and is approved.

Please note the following additional conditions associated with this approval:

(i) Please store data securely as per your data management plan.

Regards,

Engineering & Built Environment Committee.