

**A SYSTEMS ENGINEERING ASSESSMENT FOR A PERFORMANCE MANAGEMENT  
SYSTEM AT AIR FORCE BASE YSTERPLAAT IN CAPE TOWN**

by

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## DECLARATION

I, **Clint Lester Thomas Ah Shene**, declare that the contents of this thesis represent my own unaided work, and that the thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

**Signed**



**Date:** November 2022

## ABSTRACT

Air Force Base (AFB) Ysterplaat, which forms part of the South African Air Force (SAAF) is one of the many organisations which has grappled with the concept of performance measurement and management over the years. Formerly, AFB Ysterplaat used the European Foundation Quality Management model to measure their performance before it was jettisoned in 2016. For this reason, AFB Ysterplaat has no approved business performance management (PM) model to measure the strategic and operational performance.

At present, AFB Ysterplaat only makes use of a Performance Management Development System (PMDS) as a tactical tool to mainly measure employee's personal performance. This thesis presents the findings of a study which explored the need for a Performance Management System at AFB Ysterplaat that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.

AFB Ysterplaat is hierarchically organised and positioned at management Level 4 of the SAAF's hierarchical organisation where the units, air servicing units and squadrons (i.e., 22 Squadron, 35 Squadron, 80 Air Navigation School, 505 Squadron and 2 Servicing Unit Detached) are located. At this level of the SAAF's hierarchical organisation, AFB Ysterplaat is responsible for the execution of strategic objectives and decisions that are filtered down the command chain (SA Defence Review 2015, 2016).

A triangulated mixed method approach was used to analyse data from four operational units at AFB Ysterplaat. During the quantitative phase, questionnaires were used to collect data ( $n=85$ ) from the different nominal subgroups (ranks). Statistical analysis was performed using SPSS v27. Concurrently, semi structured interviews ( $n=2$ ) were used during the qualitative phase of this study to gather data from participants who are considered knowledgeable regarding management approaches and performance management and systems. The data collected from the interviews was used to corroborate the findings of the questionnaires. The triangulated mixed methods enabled the researcher to produce a more comprehensive, credible and cross-validated conclusion. Ethical clearance for this research was granted through Cape Peninsula University of Technology institutional channels. The findings of this study showed that although the management processes, vision, mission of AFB Ysterplaat were clear to the strategic, operational and tactical levels of management, there was limited knowledge of strategic performance management systems and tools. This research contributes to the knowledge gaps in literature at Air Force Bases regarding strategic performance management. The study concludes with implications and limitations of the study and recommendations for future research.

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## DEDICATION

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In humble submission to Almighty God.

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## ABBREVIATIONS

<b>80 ANS</b>	80 Air Navigation School
<b>AFB</b>	Air Force Base
<b>AS9100</b>	Aviation and Space 9100
<b>BSC</b>	Balanced Scorecard
<b>BCC</b>	Base Command Council
<b>CPUT</b>	Cape Peninsula University of Technology
<b>CSFs</b>	Critical Success Factors
<b>DoD</b>	Department of Defence
<b>DISE</b>	Department of Industrial and Systems Engineering
<b>DM&amp;RS</b>	Directorate Management and Renewal Services
<b>EFQM</b>	European Foundation of Quality Management
<b>EFQMA</b>	European Foundation of Quality Management Award
<b>FEBE</b>	Faculty Ethics Board Evaluation
<b>HR</b>	Human Resources
<b>ICT</b>	Information and Communications Technology
<b>IPAC</b>	International Association of Providers of AIDS Care
<b>ISO</b>	International Organization for Standardization
<b>ISO</b>	International Organization for Standardization
<b>JO</b>	Junior Officer
<b>KPIs</b>	Key Performance Indicators
<b>NCO</b>	Non-Commissioned Officer
<b>OC</b>	Officer Commanding
<b>PM</b>	Performance Management
<b>PMDS</b>	Performance Management and Development System
<b>PMS</b>	Performance Management System
<b>QV</b>	Quantitative Variable
<b>RIMS</b>	Readiness Index Management System
<b>RSA</b>	Republic of South Africa
<b>RO</b>	Research Objective
<b>SO</b>	Senior Officer
<b>SA</b>	South Africa
<b>SAAF</b>	South African Air Force
<b>SAAFCC</b>	South African Air Force Command Council
<b>SAEF</b>	South African Excellence Foundation

<b>SANDF</b>	South African National Defence Force
<b>SPSS</b>	Statistical Package for the Social Sciences
<b>SOT</b>	Strategic, Operational and Tactical
<b>WO</b>	Warrant Officer
<b>WOHCAO</b>	Watch Out Here Comes Another One

## GLOSSARY

### Term

<b>Strategy in Business</b>	A strategy is a plan of action to achieve a long term or overall aim and a sustainable competitive advantage. The success of business strategy lies in an organisation's ability and support to initiate and attain resources and capabilities (Lin, Tsai and Wu, 2014).
<b>Military Strategy</b>	Bartholomees (2008) and Özleblebici and Doğan (2015) describe military strategy as a leadership responsibility to deploy swift and applicable reactions to changing situations in war. Generally, defeating the adversary by fighting as few battles as possible.
<b>Strategic Planning</b>	Strategic planning is considering the process of Strengths, Weakness, Opportunities and Threats (SWOT) and asks questions pertaining to "Who we are? Where are we going? How will we get there? and finally What do we envisage to achieve? (Goetsch and Davis, 2012).
<b>Compliance</b>	Compliance refers to the ability to execute an order or command within a set framework of rules and regulations (de Waal, 2007).
<b>Readiness</b>	Davis (2016) describes readiness to be charged and expected to always be the most-ready when a nation is least ready. However even for distinguished military entities, readiness is an amorphous term and often difficult to categorically define.
<b>South African Department of Defence</b>	The Department of Defence (DoD) is a department of National Government with its mission to provide, manage, prepare and employ defence capabilities commensurate to the needs of South Africa, as regulated by the Constitution, national legislation, parliamentary and executive direction (SA Defence Review 2015, 2016).
<b>South African Defence Review 2015</b>	The South African Defence Review 2015 discusses the broader role of the Defence Force within a developmental state (South African Defence Review 2015, 2016).
<b>South African Air Force</b>	To provide deterrence and powerful intervention during joint operations, through air combat, combat support as well as air mobility capabilities (South African Defence Review 2015, 2016).

## CHAPTER ONE - ORIENTATION OF THE STUDY

*Start with the end in mind.*

*- Stephen R. Covey*

### 1.1 Problem in context

Many organisations have grappled with the concept of performance measurement and management over the years. This statement foregrounds the assertion by Atkinson (2012) and Harbour (2013) that performance is an essential component of measurement-based management systems within organisations. Air Force Base (AFB) Ysterplaat, which forms part of the South African Air Force (SAAF) located in Cape Town, is one such organisation. The SAAF provides combat-ready air capabilities for the South African National Defence Force (SANDF) on behalf of the Department of Defence (DoD) (South African Defence Review, 2015, 2016). In relation to the SAAF, AFB Ysterplaat provides deployable maritime and landward air capabilities in service to South Africa's military interest (Air Force Base Ysterplaat Business Plan, 2019/2020, 2019).

Against this background, Cassim (2011), Vigaró (2013) and Swartz (2017) argue that to address shortcomings in the performance of an organisation, such as AFB Ysterplaat, effective Performance Management (PM) is the key. Aligned with this, Armstrong (2014) suggests that the concept of PM is associated with an approach to creating a shared vision of the purpose of the organisation. In this way, PM assists in enhancing the performance of the organisation, teams and the individuals, by understanding and managing performance within an agreed framework of planned goals, standards and competence requirements. Within this understanding of PM, three levels of PM are identified where on the first level, organisation is referred to as the strategic level of PM. On the second level of PM, operational teams are referred to as the operational level of PM and on the third level of PM, individuals performing work in the organisation are referred to as the tactical level of PM. Cassim (2011) and Swartz (2017) opine that if the three levels of PM are effectively linked to each other, it can ensure that an organisation like AFB Ysterplaat's activities are streamlined on every level, directed at achieving the overall strategic goals and objectives for the base.

Elucidating on the three levels of PM, various authors (de Waal, 2007; Brudan, 2010; Saravanja, 2010; Cassim, 2011; Armstrong, 2014; Swartz, 2017) urge organisations to approach PM from an integrated perspective. The authors caution that if PM is approached primarily from the individual level of PM, it might only be considered as a performance appraisal

for employees doing work in the organisation. The difference between PM and performance appraisal will be discussed in detail in Chapter 3 of this thesis. Notably, over the past 20 years, AFB Ysterplaat used iterations of a performance-based system to measure performance in the organisation with less than successful results. In addition, there is no evidence to suggest that the strategic and operational level of PM was measured during this time. Various performance-based systems that were previously used at AFB Ysterplaat will be discussed next.

According to Oschman (2009), in 1998 an attempt was made by the top command structure of the SAAF to measure performance by implementing various tools to measure effectiveness and productivity on SAAF bases and units. One of the methods followed during the forementioned attempt, was a formal self-assessment programme based on the European Foundation of Quality Management (EFQM) model. The programme was launched in 1999 by the Inspector General of the SAAF; however, it was replaced by the South African Excellence Foundation (SAEF) model 2001. From 2005 various other methods such as Project SAFER SAAF, ISO 9000:2000 and AS91000 were implemented. Oschman (2009) explained that the management of these systems proved to be labour intensive and time consuming, and as a result it became evident that a new approach to management was needed to measure performance. Currently there is no approved performance management system (PMS) or framework being used to measure the strategic and operational performance of AFB Ysterplaat, and this, in itself may be construed as a risk.

The above-mentioned situation is consistent with findings of studies by Saravanja (2010) and Swartz (2017). They returned that PM is oftentimes limited to the management of performance of individuals in organisations and does not always measure the strategic and operational levels of performance. Furthermore, the authors agree that PM has become an isolated activity, not linked to organisational strategy and processes. Ultimately, in the context of AFB Ysterplaat, the use of only one element of PM will in future affect AFB Ysterplaat's ability to provide deployable and landward air capabilities in service of South Africa which will severely impact the security capability of the country. The following section will discuss the background to the problem at AFB Ysterplaat.

## **1.2 Background to the problem**

At present, AFB Ysterplaat only makes use of a Performance Management Development System (PMDS) as a tactical tool to mainly measure employee's personal performance. The other tactical management tool used at AFB Ysterplaat is the Readiness Index Management System (RIMS) to measure the base's readiness in support of operations for internal and external stakeholders. In addition to these management tools, AFB Ysterplaat utilises a User

Business Plan, which is updated and reviewed annually to broadly outline the Commander's intent for the base. The management tools are currently only used for reporting data that is not translated into management information so that commanders can make strategic and operational decisions pertaining to their unit's performance and the impact that it has on their operations. Although there is not one approved system to measure the strategic, operational and tactical performance at AFB Ysterplaat, the above-mentioned performance-based tools are used in an endeavour to manage the base more effectively. Brudan (2010) and Cassim (2011) suggests that the use of disparate tools is problematic for organisations as it gives a disjointed impression. This is believed to be the case at AFB Ysterplaat. With the above context in mind, this study aims to explore the reasons and rationale why the former performance-based tools and models were jettisoned by the SAAF and AFB Ysterplaat. Furthermore, the study aims to explore the need for a performance management system for AFB Ysterplaat in Cape Town. The motivation for this study is centred around investigating the need for a PMS at AFB Ysterplaat that would allow AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.

### **1.3 Statement of the Research Problem**

Foregrounded by the research background and motivation for conducting this study, the research problem statement for this study is:

AFB Ysterplaat does not have a comprehensive performance management system that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.

### **1.4 Primary Research Question**

The primary research question to be evaluated within the ambit of this research, is as follows:

What would a comprehensive performance management framework that AFB Ysterplaat can employ to focus their strategy look like?

### **1.5 Investigative (sub-) Questions**

The investigative sub-questions to be researched in support of the research question reads as follows:

- What are the elements required by AFB Ysterplaat in regard to strategic performance management?
- What are the organisational requirements to develop a performance management system at AFB Ysterplaat?
- What are the benefits and barriers to implementation of a performance management system at AFB Ysterplaat?

### **1.5.1 Primary Research Objectives**

The research objectives to be considered in this research project are:

- To determine the elements required by AFB Ysterplaat in regard to strategic performance management;
- To determine the organisational requirements to develop a performance management system at AFB Ysterplaat;
- To evaluate the benefits and barriers to implementation of a performance management system at AFB Ysterplaat.

### **1.6 Research Design and Methodology**

This research employs a triangulated mixed method research approach which includes both a phenomenological and a positivistic approach. Significantly however, this research sets out to find objective explanations to social phenomena and realities (Kholeif, 2011). Thus, this study will be both theoretical (phenomenological) and empirical (positivistic) and conducted in the social world as it will examine organisational systems, management tools and various quality approaches in a social context. The study specifically inquires why participants do what they do, particularly within a base like AFB Ysterplaat, and finally within a broader SAAF context.

Guided by the aforementioned, the triangulated mixed method approach was used to analyse data from the five operational units at AFB Ysterplaat. The five operational units that make up AFB Ysterplaat are 22 Squadron; 35 Squadron, 80 Air Navigation School (80 ANS), 505 Squadron and 2 Air Servicing Unit Detached. During the quantitative phase, questionnaires were used to collect data ( $n=85$ ) from the different nominal subgroups (ranks). Statistical analysis was performed using SPSS v27. Concurrently, semi structured interviews ( $n=2$ ) were used during the qualitative phase of this study to gather data from participants who are considered knowledgeable regarding management approaches and performance management and systems.

## **1.7 Significance of the Study**

This study aims to identify shortcomings in the current performance-based tools at AFB Ysterplaat and the need for a PMS at AFB Ysterplaat. In doing so, provide AFB Ysterplaat with the necessary first step in taking corrective action. Significantly, a search of literature found that there is a paucity of literature with regard to PMS's at an air force base that manage at all three levels, that is, the strategic, operational and tactical components of performance. As such, it is hoped that this study contributes to knowledge creation in these areas.

## **1.8 Delineation of the Research**

The research for this study will take place at one of the eight SAAF bases in South Africa. The base is located in Cape Town. The remaining bases in the SAAF will not be taken into consideration for the purpose of this study. The study will be conducted in the public sector as the SAAF and by default, AFB Ysterplaat forms part of the Department of Defence (DoD) which is a governmental department in South Africa (South African Defence Review, 2015, 2016). No part of this research will extend to the private sector. At the time of the study, there was no embargo, that would affect the study and its aims.

Below is a summary of the rationale and reasons for the selection of AFB Ysterplaat for this study:

- Limited studies in literature report on the PMS's at South African Air Forces bases;
- The researcher is currently stationed at AFB Ysterplaat in Cape Town;
- AFB Ysterplaat was named the Prestige Base of the SAAF for two consecutive years, 2018 and 2019.

Additionally, the base was chosen for its willingness to allow the research to occur. The base viewed the research as an opportunity for improvement going forward.

## **1.9 Research Assumptions**

For the purpose of this research, the following assumptions are provided:

- there are plans being formulated at SAAF level and AFB Ysterplaat to attain an appropriate business performance management system,
- there is approximate measurement taking place pertaining to performance at AFB Ysterplaat after the EFQM model has been abolished;

- information received that is of a sensitive nature will be disregarded and not form part of the research;
- it is assumed that all participants will be honest in their responses.

### **1.10 Research Constraints**

- The research constraints are as follows:

#### **Limitations:**

- The limited current knowledge of the participants pertaining to performance management at the time of the interviews and while completing the questionnaires.
- Data collected will be based on the interviews conducted and the completion of the questionnaires from employees of the SAAF, AFB Ysterplaat and the concepts of Performance Measurement and Management as well as the BSC and EFQM.

#### **Other Constraints** foreseeable impacting this research project are:

- The extensive lead time to obtain ethical clearance from the SAAF;
- The process and requirements for university funding that is dependent on various administration;
- The accessibility of information as it will often require approvals;
- The COVID 19 pandemic and the various restrictions imposed during the time of this study,
- The integrity of information pertaining to its storage and retrieval.

### **1.11 Chapter Overview**

The following chapters are included in this research report:

#### **Chapter 1: The Orientation and Background of the Research**

This chapter provides a brief orientation and the background for the research. The chapter also presents the research problem statement, research questions and objectives.

## **Chapter 2: A Holistic Perspective of The Research Environment**

This chapter will provide a background and holistic view of the SAAF, AFB Ysterplaat, PMDS, performance appraisals and reward, EFQM Model, and RIMS within a business, organisational and an Air Force Base context.

## **Chapter 3: A System Engineering Assessment for a Performance Management System at AFB Ysterplaat in Cape Town: A Literature Review**

The literature review will also support the research objectives regarding 1) the elements required by AFB Ysterplaat in regard to strategic performance management, 2) the organisational requirements to develop a PMS at AFB Ysterplaat and 3) the benefits and barriers to implementation of a PMS at AFB Ysterplaat.

## **Chapter 4: Research Design and Methodology**

This chapter will outline the research plan.

## **Chapter 5: Data Analysis and interpretation of Results**

The data and responses as garnered in Chapter 4 will be analysed and results will be interpreted.

## **Chapter 6: Conclusion and Recommendation**

The research draws conclusions and recommendations will be provided.

### **1.12 Chapter Summary**

This chapter provided an orientation to the research problem in terms of a need for PMS at AFB Ysterplaat. The problem in context and a review of the problem was discussed. In addition, the significance of the study and the research design and methodology was introduced. Furthermore, the research assumptions, delineation of the study and the performance-based tools and reward system at AFB Ysterplaat was discussed.

The next chapter will continue the development of this thesis study by presenting a holistic view of AFB Ysterplaat as it relates to the SAAF. In addition, the chapter will analyse the problem and discuss the performance-based tools in use at AFB Ysterplaat.

## CHAPTER TWO - PROBLEM ANALYSIS

*People rarely succeed unless they have fun in what they are doing.*

*- Dale Carnegie*

### 2.1 Introduction

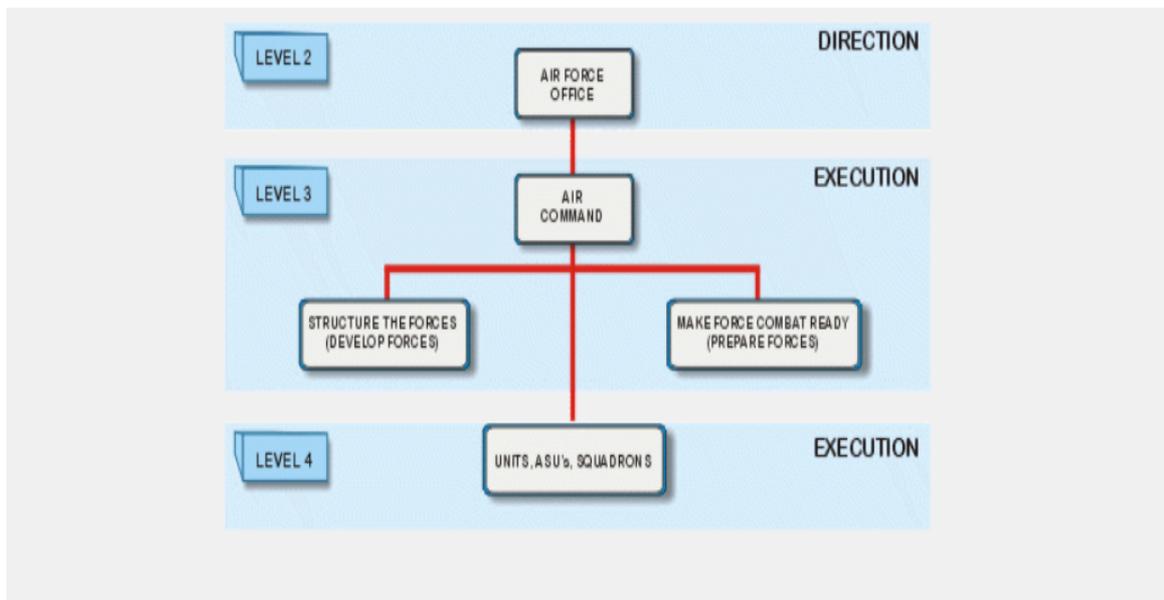
This chapter commences with a brief overview of the management levels of the SAAF, followed by the composition of AFB Ysterplaat and its relation to the SAAF. To successfully meet the research objectives of any study, the context in which this research takes place must be thoroughly understood before research starts, therefore, the chapter commences with a high-level depiction of AFB Ysterplaat and discussion on the five operational units including each one's role and responsibilities at the base.

This is followed by an evaluation of AFB Ysterplaat's strategy. Thereafter, a review is performed on the way performance was previously managed at AFB Ysterplaat, followed by a discussion on the way that performance is currently measured at the base. The chapter concludes with a chapter summary.

### 2.2 Management Levels of the South African Air Force

The word 'levels' referred to in this section pertains to the management levels of the SAAF and is used to refer to the strata in management when describing how the SAAF is hierarchically organised. It is worth noting that in Section 2.4.1, the word 'levels' will be used again, however in a different context, when it is used to refer to 'level of strategy'.

The SAAF's hierarchical organisation consist of three levels of management as depicted in Figure 2.1. Notably, management Level 1 of the hierarchical organisation is located within the SANDF structures, however, this level falls outside the scope of this research study. Within the context of this research, Management Level 2 constitutes the top level of management where the Chief of the Air Force and Chief Directors of the different staff functionaries operate from. In addition, Management Level 2 of the SAAF's hierarchical organisation is the strategic level of management responsible for the direction of the SAAF.



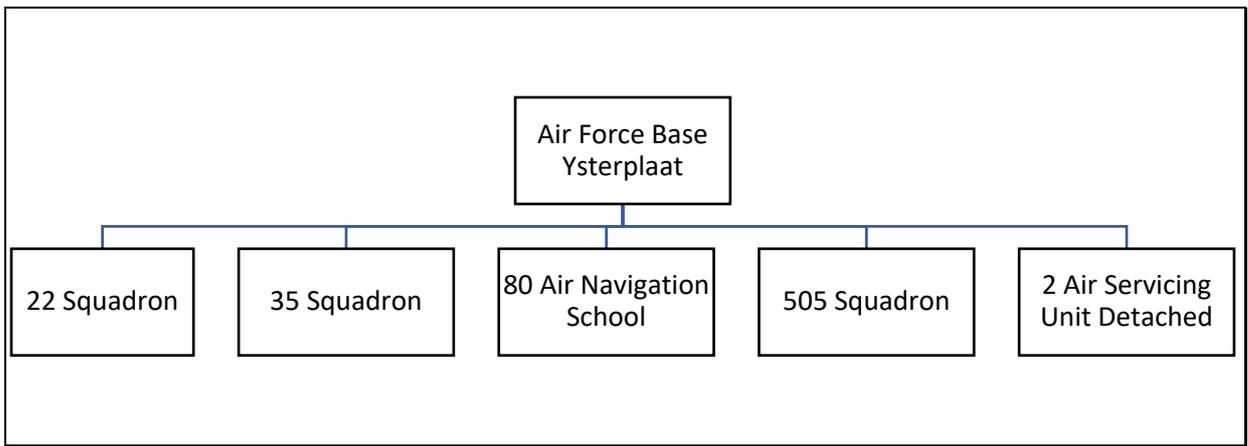
**Figure 2.1:** South African Air Force hierarchical organisation (Source: Defence Web, 2014)

Management Level 3 of the SAAF's hierarchical organisation consists of an air command that is commonly referred to as SAAF Headquarters and various directorates responsible for developing operational plans for units, air servicing units and squadrons. Practically, the various directorates report to the Chief Directors of the different staff functionaries on matters relating to the direction of the SAAF. At this level, administrative command-and-control is exerted on Management Level 4 of the SAAF hierarchical organisation of the SAAF.

Management Level 4 of the SAAF's hierarchical organisation is where the units, air servicing units and squadrons (22 Squadron, 35 Squadron, 80 ANS, 505 Squadron and 2 Servicing Unit Detached) are located. At this level of the SAAF's hierarchical organisation, Air Force Base Ysterplaat is positioned and is responsible for the execution of strategic objectives and decisions that are filtered down the command chain (SA Defence Review, 2015, 2016). An expansion of Management Level 4 of the SAAF's hierarchical organisation to illustrate how AFB Ysterplaat and the five operational units are organised will be discussed in the following section.

### **2.3 Composition of Air Force Base Ysterplaat**

Air Force Base Ysterplaat consists of the five operational units as depicted in Figure 2.2. They are 22 Squadron, 35 Squadron, 80 ANS, 505 Squadron and 2 Air Servicing Unit Detached.



**Figure 2.2:** Air Force Base Ysterplaat and the five operational units (Source: Developed by the Researcher)

22 Squadron and 35 Squadron are permanent flying units responsible for maritime rescue operations, whereas 80 ANS is responsible for air navigation training and survival training. In addition, 505 Squadron provides the security and protection element to the base and its assets, while 2 Air Servicing Unit Detached is responsible for the aircraft maintenance activities of the base. The five operational units play their part by performing their respective role of the strategy of AFB Ysterplaat and therefore contribute collectively to achieving the mission of AFB Ysterplaat which is to provide deployable maritime and landward air capabilities to the SANDF. The next section will discuss how AFB Ysterplaat is organisationally structured in regard to their operations and the support that AFB Ysterplaat has at their disposal.

According to the DoD Management Information Foundation (2020), AFB Ysterplaat is organisationally structured as a general support base, and not as an air force base, as the name AFB Ysterplaat implies. The key difference between a general support base and an air force base is that an air force base has self-accounting status, implying that such bases have an administrative and a procurement delegation. A general support base, however, predominantly only provides support (i.e., HR, logistics, facilities) whereas an air force base conduct operations with a support structure (SA Defence Review, 2015, 2016).

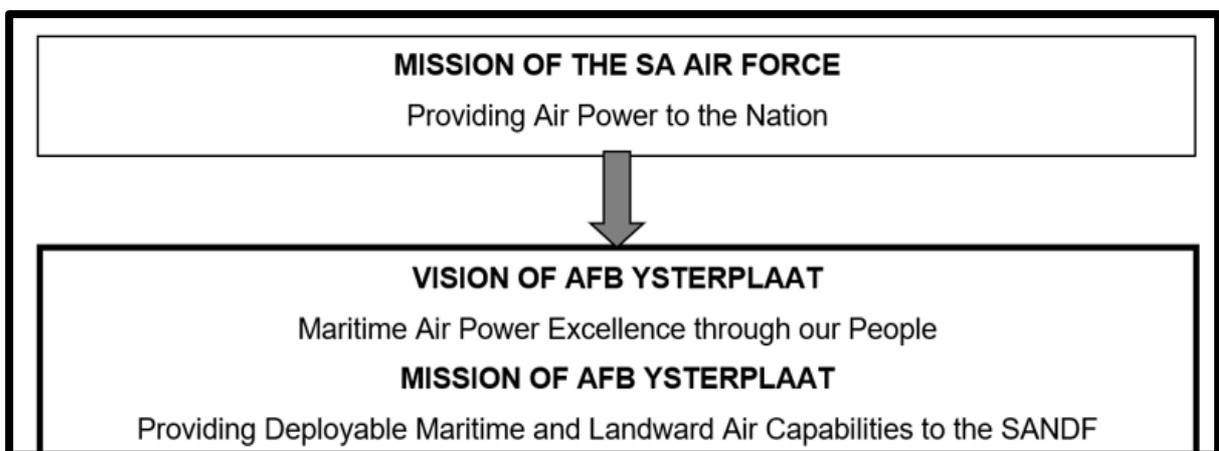
The decision to transform AFB Ysterplaat to a general support base was made in 2001, when an instruction was given to scale down operations, with the intention to close down and only have support status. Subsequently, the base was reclassified as Air Force Station Ysterplaat (Defence Web, 2014). However, in 2004, the top command structure of the SAAF made an about turn on their decision to reclassify Air Force Station Ysterplaat, and consequently the name reverted to Air Force Base Ysterplaat. In practical terms, only the name air force station was changed to air force base. The implication of the continuous back and forth in changing

the classification of AFB Ysterplaat from the top command structure of the SAAF left AFB Ysterplaat with general support base stature and infrastructure with an increase in operations as would be relevant to an air force base. Thus, the initial transition to a general support base followed by an incomplete retransition back to an air force base, has had a major impact on the performance of AFB Ysterplaat and the five operational units, as the base and its operational units are expected to execute the SAAF's strategic objectives with limited support structures.

With the above-mentioned context in mind, the misaligned general support base concept used at an air force base with limited support structures place undue strain on the performance of AFB Ysterplaat when the SAAF's strategic objectives need to be executed. Ultimately, the misaligned organisational structure will threaten to impede the strategic, operational and tactical performance of AFB Ysterplaat.

## 2.4 Analysis of AFB Ysterplaat's Strategy

Stangis and Smith (2017) assert that the term strategy is derived from the Greek word "strategos" which suggests "military leader". The origin of strategy was revealed in the leadership of ancient empires where a strategoi (person), was elected to lead military stadia and oversee territorial outposts of these ancient empires. Jonker (2015) notes that strategy starts with the vision of an organisation. A strategy also includes an overarching, clearly communicated concept as to how the organisation will realise their objectives (Stangis and Smith, 2017). Finkelstein and Borg (2004) and Stangis and Smith (2017) argue that strategy is what an organisation does, or does not do, to satisfy their vision and mission. AFB Ysterplaat's vision and mission are explicitly stated in Figure 2.3 in relation to that of the SAAF.



**Figure 2.3:** AFB Ysterplaat Vision and Mission (Source: AFB Ysterplaat USBP 19/20, 2019)

In this regard, an effective strategy can aid the base perform its function effectively. The primary function of AFB Ysterplaat is to ensure combat readiness for both force preparation and force employment activities to ultimately defend the sovereignty and territorial integrity of the Republic of South Africa. Force preparation is defined by AFB Ysterplaat's User Business Plan 2019 (2019), as the training of air and ground crew, as well as the acquisition of resources to successfully execute force employment in the various roles and missions as prescribed by the SAAF. Force employment is the operational utilisation of assets in various roles and missions as prescribed by the SAAF.

The three levels of strategy for an organisation will be discussed in the section below to illustrate how this takes place at AFB Ysterplaat in an endeavour to meet their organisational goals. The word 'levels' referred to in the next section is relevant to the strategy of AFB Ysterplaat whereas in heading 2.2, the word 'levels' referred to the management levels in the organisation.

#### **2.4.1 Features of the Three Levels of Strategy at Air Force Base Ysterplaat**

Krüger (2013) identified three levels of strategy for an organisation. A discussion on the features of strategy formulation and deployment within these levels, in the context of AFB Ysterplaat is presented.

The first level is known as Level I. Strategy formulation and deployment is conceptualised at this level. At this level, top management, namely AFB Ysterplaat Base Command Council (BCC), assumes primary responsibility for the overall performance of the organisation. Top management includes, the Officer Commanding of AFB Ysterplaat, each operational unit Officer Commanding (i.e., 22 and 35 Squadron, 80 ANS, 505 Squadron and 2 Air Servicing Unit Detached) and support coordinators. The decisions that are taken at this level are value oriented, conceptual, with less concrete detail when compared to other levels in the organisational strategy.

Level II is where middle management assumes responsibility for the translation of the statements of direction and intent, which were generated by top management, into concrete functional objectives and strategies. The results of decisions made by the BCC on Level I are communicated to the different operational units which is situated on Level II. Formulation of plans takes place in Level II before the plans are sent to Level III for execution. The employee ranking categories on Level II are senior officers and warrant officers.

Level III is regarded as the functional level. At this level, lower-level management take responsibility for the implementation or execution of the strategic plans of the organisation. Annual objectives and specific short-term strategies are developed on this level in support of the operational and strategic direction of the base. The ranking category of AFB Ysterplaat employees on Level III are junior officers and non-commissioned officers.

A high-level example of a functionally deployed strategy is when AFB Ysterplaat BCC decides on a futuristic, far reaching and innovative course of action to implement a Performance Management System at AFB Ysterplaat. To implement this strategy, the second and third levels of management are responsible for the detailed formulation and final implementation of the overall strategy.

The objective of this research is to develop a comprehensive performance management system that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission. However, without evaluating the strategy used for the previous performance model at AFB Ysterplaat and understanding the reasons why they were jettisoned, the same could recur in the future. Therefore, the most recent performance model that was used at AFB Ysterplaat is discussed in section 2.5.

## **2.5 The Previous Performance Model used at AFB Ysterplaat**

The European Foundation for Quality Management (EFQM) model was previously used at AFB Ysterplaat to measure their operational performance. According to Gómez, Costa, and Martínez Lorente, (2011), EFQM is a tool that can be used to measure performance and structure the management system of an organisation, by way of self-assessment. The EFQM 2010 version was the last performance management model used by AFB Ysterplaat until 2017. The reason(s) why the EFQM model at AFB Ysterplaat was jettisoned will be discussed below.

The Directorate Management and Renewal Services (DM&RS) is a directorate in the SAAF that is responsible for the evaluation of the SAAF's organisational performance. A recent write-up in the form of a staff paper by DM&RS, tasked the directorate to assess the previously used performance models in the SAAF to determine which one, or combination, can be used to replace the EFQM Excellence Model (Shale, 2019). Since this request, to date, no such model or framework has been forthcoming. According to this author, the decision to discontinue the use of EFQM Model was unanimously accepted at South African Air Force Command Council (SAAFCC), which is the highest management echelon of the SAAF. At the time of the interview, the author cited the reason being the lack of acceptance and willingness to actively support and participate in the self-assessment model by Management Level's 3 and 4 of the SAAF

hierarchical organisation. In addition, the author cited an unsuccessful strategy to implement the model as another possible reason for its discontinuation.

Since the discontinuation of the previous performance model at AFB Ysterplaat, the base makes use of the PMDS and RIMS to measure their performance. The PMDS and RIMS are used autonomously, however, the PMDS and RIMS are not structured within an approved performance management framework. Thus, the PMDS and RIMS are operating in isolation and this does not ensure that AFB Ysterplaat operations are directed towards the success of their organisational mission.

## **2.6 Analysis of AFB Ysterplaat's Performance-Based Tools**

Part of the current strategy at AFB Ysterplaat is to make use of performance-based tools such as the PMDS and RIMS. The PMDS is instituted by the DoD to measure the performance of all their employees. The RIMS is instituted by Management Level's 2 and 3 of the SAAF's hierarchical organisation and executed at Management Level 4 of the SAAF's hierarchical organisation in the form of reporting on the readiness of employees, equipment and infrastructure in support of its operations. The PMDS and RIMS are tactical performance-based tools that are used independently at AFB Ysterplaat and the five operational units and will be discussed next.

### **2.6.1 Performance Management Development System**

Naidoo and Mhlaba (2020) and the Public Service Regulation (2016) describes the PMDS as a system that is based on measuring and evaluating the tasks inherent to an employee's post. A drawback of the PMDS is that it is administratively demanding, time consuming and causes delays in the delivery of service provision. Citing Brudan (2010) and Saravanja (2010), Swartz (2017) confirms that the time required to conduct the performance process is one of the major areas of dissatisfaction for employees and as such, is perceived as a last-minute compliance exercise.

The PMDS outlines the Key Performance Indicators (KPI's) for personal performance of the employees of the DoD and AFB Ysterplaat. However, it is only used as a performance appraisal tool for its employees, which represents only one part of a more important performance management process (DeNisi, 2011). Although the PMDS form part AFB Ysterplaat's strategy, the PMDS is not a comprehensive approach to PM, as it is regarded only as a tool used at the tactical level of management to measure employee performance. Thus, the focus of the PMDS used at AFB Ysterplaat is on the individual. Consequently, the PMDS

will only contribute to one of the organisational requirements to develop a PMS at AFB Ysterplaat. In the final analysis of AFB Ysterplaat strategy, the strategic and operational level of management remain unmeasured which will obstruct operations that are to be directed towards the success of AFB Ysterplaat's organisational mission.

The next performance-based tool used at AFB Ysterplaat as part of their strategy is the RIMS that records the readiness of employees, assets, equipment and infrastructure in support of its operations.

### **2.6.2 Readiness Index Management System**

Readiness is integral to national security (Davis, 2016), and military readiness is having skilled and adequately trained employees to fulfil assigned missions and tasks. In addition, the author argues that the readiness of a military is to deploy to a combat environment and accomplish its mission. The readiness at AFB Ysterplaat and the five operational units is collectively measured by the role they perform to provide deployable maritime and landward air capabilities to the SANDF. AFB Ysterplaat and the five operational units use the Readiness Index Management System (RIMS) to measure their readiness. The RIMS is a dynamic tool used by the tactical level of management at AFB Ysterplaat and the five operational units. The RIMS is updated by AFB Ysterplaat and the five operational units on a monthly basis. The data that is populated into the RIMS pertains to the deployments and transfers of individuals, aircraft availability for maritime search and rescue operations. In addition, the RIMS gathers data on the status of their equipment and infrastructure to support maritime search and rescue operations.

The readiness of AFB Ysterplaat and the five operational units is hampered by critical personnel shortages (i.e., resignations, natural attrition and transfers), inadequate skills transfer program, aging aircraft fleet and an ever-crimping budget (Defence Web, 2021). Although the RIMS records the readiness status of AFB Ysterplaat and its five units, it is uncertain whether the RIMS is effective or even effectively used at AFB Ysterplaat in support of their strategy. In addition, due to the lack of a PMS at AFB Ysterplaat, the RIMS is currently operating in isolation and is not linked to the strategic and operational level of performance at AFB Ysterplaat. Armstrong (2014) highlights that when an organisation is managing different systems in an unstructured way, the outcome of their performance tends to be less effective.

The foregoing discussion presupposes that, should AFB Ysterplaat continue to only primarily measure the tactical level of performance, the strategy and the performance of the base will be adversely affected. Thus, AFB Ysterplaat will be unable to focus their strategy and ensure

that operations are directed towards the success of their organisational mission. For the above reason, AFB Ysterplaat will be rendered ineffective in providing deployable and landward air capabilities in service of South Africa. Moreover, the situation is in contravention with the explanation of readiness provided by Davis (2016) where this author describes military readiness as the charge and expectation upon a military to always be the most prepared when a nation is least ready.

## **2.7 Chapter Summary**

The chapter began by orienting the reader in terms of AFB Ysterplaat relative to the management levels of the SAAF, which was followed by the composition of AFB Ysterplaat. In addition, it provided an analysis of AFB Ysterplaat's strategy that introduced the three levels of strategy for an organisation. The chapter further discussed the performance model that AFB Ysterplaat previously used and the current performance-based tools at AFB Ysterplaat.

The next chapter discusses key concepts from literature related to performance management.

## **CHAPTER THREE - LITERATURE REVIEW**

***Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat***  
**- Sun Tzu in *The Art of War***

### **3.1 Introduction**

This chapter provides a discussion on broad concepts of military hierarchy and introduces the command-and-control approach. The concepts will be clearly defined in relation to, and according to the scope of the study. Thereafter, concepts of strategy formulation, strategy implementation, performance management and implementation are discussed. Finally, performance management tools and the barriers and benefits to implementation of a PMS at AFB Ysterplaat are provided. The chapter concludes with a chapter summary.

### **3.2 Military Hierarchy and Command-and-Control Approach**

This section provides broad insight in terms of the rank structure of the SAAF and AFB Ysterplaat. Kark, Karazi-Presler and Tubi (2016) describe the core task of a military organisation as maintaining security for their country. The authors assert that for thousands of years, military forces were distinguished with a strict military hierarchy in the form of a rank structure. According to the SA Defence Review 2015 (2016), the SAAF's rank structure has three broad categories namely 1) Officers, 2) Warrant Officers and 3) Non-Commissioned Officers. The review explains that the rank structure is used to maintain order under stress in battle and during operations.

In the context of AFB Ysterplaat, the rank structure forms part of the AFB Ysterplaat's strategy to assign levels of responsibility to their employees, similar to the purpose of rank in businesses (AFB Ysterplaat Business Plan 19/20, 2019). In addition, AFB Ysterplaat follows a hierarchical chain of command approach that needs to be always observed and adhered to. Erasmus and Uys (2012) advance that the chain of command is a system in a military or public organisation by which commands and instructions are passed from one person to another. AFB Ysterplaat, utilise the rank structure and chain of command in their management approach to execute strategic decisions as the base is located at Management Level 4 of the SAAF's hierarchical organisation.

Gabrielli, Russo and Ciceri (2019) point out that a consequence of the hierarchical approach is that power is centralised to the employee who holds the highest rank, and this can inadvertently be a significant and potential obstacle to the implementation of a PMS at AFB Ysterplaat. In the context of AFB Ysterplaat, the employee who holds the highest rank is the Officer Commanding, who is the pinnacle of the strategic level of management of AFB Ysterplaat. Furthermore, the Officer Commanding is known as the Controlling Authority of the base. The consequence of centralised power is accentuated by the previous performance model used at AFB Ysterplaat, where it was commanded from the strategic level of management at AFB Ysterplaat to implement the EFQM model without the strategic level of management of AFB Ysterplaat providing clear direction on the implementation plan. The operational and tactical levels of management of AFB Ysterplaat respectfully complied and implemented the EFQM model, as it was a command given by the Controlling Authority. However, that subsequently lead to a paper exercise and window dressing when Inspector General inspections was conducted. The next section will discuss the command-and-control approach. The command-and-control approach is complimentary to the hierarchical approach in a military setting.

### **3.3 Command-and-Control and Performance Management**

The command-and-control approach stems from the military where the commander is in command and controls the subordinate (Webster, 2021). It is founded on, and emphasises a distinction between, commanders on the one hand and subordinates on the other. Seddon (2005) and Rice (2018) argue that a command-and-control approach is authoritative, which fits well in bureaucratic organisations in which privilege and power are vested in strategic level of management. This is typical of a military milieu by which a commander recognises what needs to be done and ensures that appropriate action is taken.

In the context of AFB Ysterplaat, Rintakoski and Autti (2008) argue that the command-and-control approach aids commanders to make the most of what they have in terms of people, material, assets, information and more importantly, time. However, the command-and-control approach also has several drawbacks namely that it 1) limits engagement and commitment, 2) inhibits communication, 3) obstructs course correction and finally 4) it assumes the leader knows best (Webster, 2021). The connection between the command-and-control approach and PM will be discussed next.

Armstrong (2014) argues that PM dating back to the previous century mostly reflected a command-and-control approach. Cassim (2011) reports that the command-and-control approach to PM is mechanistic because it uses financial performance indicators, set

performance deliverables for employees and measures whether these are completed. Citing Brudan (2010), the author adds that organisations were regarded as hierarchies, in which management exercised top-down controls such as administrative controls in the form of procedures and rules.

Underpinned by the foregoing discussion, this study aims to explore whether the previous performance models used by the SAAF and AFB Ysterplaat failed due to the adverse contribution of the command-and-control approach. Gabrielli, Russo and Ciceri, (2019) explain that in the current era, where the nature of work and the profile of the workforce have changed considerably, the predominant focus of current PM practices is largely still on command-and-control measures, and this may undermine optimal performance. The authors continue by adding that tight management controls result in increasing employee resistance and ultimately leading to a decline in performance. Sloan (2009) and Rice (2018) advise organisations to rather devise a strategy that requires the strategic, operational and tactical levels of management to work differently such as an Innovative Management strategy as depicted in Table 3.1. Essentially, this means a move away from attempting to manage employees, that perform work at a tactical level of management in a manner that results in employees working harder or smarter on the same products and services.

**Table 3.1:** Command-and-control Management Approach versus Innovative Management Approach as adapted from (Sloan, 2009)

<b>S/N</b>	<b>Command-and-control Management Approach</b>	<b>Innovative Management Approach</b>
<b>01.</b>	Leads from the front.	Leads from the side.
<b>02.</b>	Commands and directs.	Inspires and empowers.
<b>03.</b>	Checks and controls.	Trusts and delegates.
<b>04.</b>	Improves effectiveness and efficiency.	Finds new approaches.
<b>05.</b>	Thinks he knows best (and often does).	Harnesses the abilities of others.
<b>06.</b>	Has a strong sense of direction and purpose?	Has a clear vision and communicates it?
<b>07.</b>	Prioritises operational over strategic issues.	Prioritises strategic over operational issues.
<b>08.</b>	Gives directions and commands.	Asks questions and solicits suggestions.
<b>09.</b>	Treats staff as subordinates.	Treats staff as colleagues.
<b>10.</b>	Is decisive, often without prior consultation.	Ponders and solicits input before making decisions.

11.	Builds a team who can execute policy and implement plans.	Builds a team who can create and innovate.
12.	Cares about results above all.	Cares about ideas, peoples and the vision.
13.	Promotes himself as the leader and figurehead.	Shares exposure and prestige with the team.
14.	Minimizes risk.	Takes calculated risks.

Guided by Table 3.1, it can be inferred that there are times when a manager needs to direct and instruct and there are also times when a manager needs to inspire and empower employees. However, the implication of an exclusive command-and-control approach to implementing a PMS at AFB Ysterplaat is that it limits creativity and innovation as employees are commanded to unwaveringly execute the mission and not ask questions. This approach rings true to the adage that states ‘comply now and complain later’, an approach which does not afford employees any autonomy or authority to make decisions (Rice, 2018; Gabrielli, Russo and Ciceri, 2019). Consequently, employees are less eager to accept and meaningfully participate in the implementation of a PMS, from the strategic, operational and tactical levels of management of AFB Ysterplaat which will be problematic and may lead to failure. Ultimately, AFB Ysterplaat will be unable to focus their strategy and ensure that operations are directed towards the success of their organisational mission. As part of the strategy of AFB Ysterplaat, the next section will discuss the strategy formulation, strategy implementation and its connection to PM in the context of AFB Ysterplaat.

### 3.4 The Process of Strategy Formulation

Armstrong (2014) and Kryger (2017) argue that a strategy is a declaration of intent of an organisation. In addition, the authors infer that a strategy of an organisation materialise in two stages namely, strategy formulation and strategy implementation. The authors point out that each of the two stages of a strategy is a process. The first stage of the strategy is the strategy formulation process that consists of mission statement, describing the organisation’s purpose; vision, describing the goals; guiding principles and an action plan for how to reach the goals, set strategies and policy guidelines. The guiding principles of AFB Ysterplaat form the basis for the values of the base (Jonker, 2015).

Krüger (2013) argues that the strategy formulation process pertains to analysing the strengths, weaknesses, opportunities and threats to determine the appropriate strategy for the organisation. Several researchers Struwig and Smith (2002), Louw and Esterhuyse (2004), Musandiwa (2019) and Heinzen, Loveridge and Marinho (2020) agree that the process of strategy formulation can be developed as a standalone concept. However, the outcome of

developing the strategy formulation process as a standalone concept will limit an organisation's ability to achieve its goals and objectives as it only constitutes a singular stage of the strategy process. Dayan, Heisig and Matos (2017) opine that the strategy formulation process at organisations is and should be a management responsibility. Against this backdrop, the strategy formulation process at AFB Ysterplaat is developed and crafted by the OC of the base and the BCC, who are considered the strategic level of management of the base. The authors note that often during the process of strategy formulation, the competence, values and skill set of the individuals in the team are not taken into consideration, even though they could add value in the strategy implementation process. It is presupposed, that should AFB Ysterplaat only reach the strategy formulation stage of their strategy, AFB Ysterplaat will not ensure that AFB Ysterplaat's operations are directed towards the success of their organisational mission.

Aligned with the above, Jooste and Fourie (2009) and Borrero, Acosta and Medina (2020) highlight the importance of an organisation having a strategy and go so far as to argue that the process of strategy formulation is an important part of strategy implementation process and that it aids in the organisation's success. The process of strategy implementation will be discussed in section 3.4.1.

### **3.4.1 The Process of Strategy Implementation**

Heinzen, Loveridge and Marinho (2020) regard the implementation of the strategy that was formulated as the action phase which institutes an organisation's strategy. Obeidat, Al-Hadidi, Tarhini and Masa'deh (2017) advance that strategy implementation is the process that activates strategies and plans to accomplish strategic objectives and goals of an organisation. In relation to AFB Ysterplaat, the function of the strategic level of management in relation to the strategy of the base is to select various tools and allocate resources to realise the strategy. Thus, the strategy implementation process is executed at their operational and tactical level of management (Heinzen, Loveridge and Marinho, 2020).

The process of strategy implementation, however, is not without its challenges. de Waal (2007) and Obeidat et al. (2017) highlight common challenges in the process, such as problems surfacing that were not initially anticipated, as well as underestimating the time required for the implementation of the strategy. In addition, the authors cite insufficient training given to the employees functioning at lower levels of the organisation. Musandiwa (2019) advances that other notable challenges to the strategy implementation process are the lack of a shared vision by the organisation and a lack of consensual understanding of how the strategy should be implemented. Overall, the author recognises that the traditionally acknowledged challenges of unsupported organisational structure and lack of upper management commitment are not the

main inhibiting factors to the effective strategy implementation process. Instead, the major challenges to overcome in the strategy implementation process are more cultural and behavioural in nature, including the impact of poor communication and diminished feelings of commitment and ownership among staff and employees which are also present at an organisation like AFB Ysterplaat. The major challenges that were accentuated can hamper AFB Ysterplaat efforts to ensure that operations are directed towards the success of their organisational mission.

### **3.4.2 The Link between the Process of Strategy Formulation and Strategy Implementation**

Formulating an organisation's strategy is a challenging task for any management team. However, implementing the organisation's strategy is even more difficult (Hrebiniak, 2006; Setino, 2020). While both the process of strategy formulation and strategy implementation can be dealt with separately, research by Jooste and Fourie (2009), Heinzen, Loveridge and Marinho (2020) and Setino (2020) advise that these concepts should be aligned and integrated to the organisation strategy. Thus, this implies that an organisation like AFB Ysterplaat's efforts might be in vain if they only reach the strategy formulation stage and not the strategy implementation stage, as strategy implementation is the key to superior organisational performance (Jooste and Fourie, 2009; Heinzen, Loveridge and Marinho, 2020; Setino, 2020). In addition, an effective strategy implementation process can aid AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission. Borrero, Acosta and Medina (2020) add that the process of formulating and implementing a strategy are assumed to enhance an organisation performance, as opposed to not having any strategy whatsoever. The next section will continue with a discussion on strategy and its connection to performance and PM.

### **3.4.3 The Link between Strategy Formulation, Strategy Implementation and Performance Management**

PM can aid in communicating and implementing an organisation's strategy and strategic goals (Cokins, 2009; Armstrong, 2014; Musandiwa, 2019). The authors assert that PM places more emphasis on the process of strategy implementation and that the execution of the strategy becomes the organisation's number one task. Hence, the authors maintain PM plays the most significant role in strategy implementation. Woyessa (2015) cites the lack of connection between the three concepts namely (1) process of strategy formulation, (2) the process of strategy implementation and (3) PM to be one of the main reasons for the failure of a PMS at an organisation. Directed by the views of Prieto, Carvalho, and Fischmann (2009), Cocks

(2010) and Woyessa (2015), it is believed that for an organisation like AFB Ysterplaat's strategy to be successful, aligning strategy formulation and strategy implementation with PM must be a prerequisite to continue to provide deployable maritime and landward air capabilities to the SANDF. AFB Ysterplaat aligning strategy formulation and strategy implementation with PM, can aid the base in ensuring that their operations are directed towards the success of their organisational mission.

### **3.5 Performance Management and its Different Levels**

Armstrong (2014) describes PM as a strategic and integrated approach to delivering sustained success to organisations while simultaneously being focused on the improvement of an organisation's performance and employee development. Pulakos (2015) and Janjua, Attique, Raza and Akbar (2018) argue that PM in the public sector is necessary for improving service delivery to the citizens of a country. The statement is relevant to AFB Ysterplaat as they form part of the public sector where service delivery and efficiency are key outputs in providing deployable and landwards air capabilities in service of South Africa. Woyessa (2015) advances that PM is a tool to achieve the organisation's vision and mission, while Swartz (2017) suggests that PM is used to ensure that performance plans are implemented and that there is effective use of resources.

Musandiwa (2019) notes that a major area of dissatisfaction for managers and employees is the time required for conducting the PM process. The author agrees with Swartz (2017) that PM is often seen as a last-minute compliance exercise and as such, PM has become an isolated activity, not linked to organisational strategy and processes. Bruden (2010), Cassim (2011) and Musandiwa (2019) assert that PM is not always clearly defined at an organisation and therefore employees and managers experience a number of challenging areas in the PM process such as (1) the terms PM and performance measurement which are loosely defined and often used interchangeably, (2) the contest between exclusively using the traditional 'command-and-control' approach versus the use of other management approaches of PM (i.e., collaborative and innovative management approaches), (3) the prime focus on performance measurement and incentives, as opposed to learning and growth within a PMS and (4) the limitation imposed by organisations that PM is primarily used for individual measurement and management.

With the above-mentioned points in mind Armstrong (2014) argues that PM is a continuous process that reflects normal good management practices of setting direction, monitoring and measuring performance and taking action accordingly. PM should not be imposed on

managers as something out of the ordinary that they have to do, instead it should be treated as a natural function that all good managers perform.

Mueller-Hanson and Pulakos (2015) believe that effective PM ensures that the employee and team goals are aligned with the organisational goals so that performance at the organisational level, the level where teams operate and the employee performing work are enhanced. Within this statement, the organisational level refers to the strategic level of PM, the level where teams operate refer to the operational level of PM and employees doing the work refers to the tactical level of PM. To continue the argument on effective PM, Mueller-Hanson and Pulakos (2015) and Swartz (2017) agree that the effective PM process include three broad elements namely, goal setting, performance review and a performance improvement process. Each of the three broad elements of the PM process will be discussed below.

According to the authors, goal setting are drivers of performance. The authors consider goal setting to be at the heart of the PM process because it allows an organisation to focus their performance on their strategy. Goal setting is of importance for AFB Ysterplaat as it can assist the base to ensure that AFB Ysterplaat's operations are directed towards the success of their organisational mission. The goals set by AFB Ysterplaat needs to be regularly reviewed to ascertain whether the goals are on track. Thus, performance review will be discussed next.

Performance review is a formal assessment process where a manager evaluates an employee's work performance. In addition, performance review identifies strengths and weaknesses, provides feedback to the employees and sets goals for future performance for the employee that are aligned with that of the organisation. Performance reviews are also known as performance appraisals. A discussion on performance appraisal will be presented as the chapter proceeds. However, a discussion on the performance improvement process will be presented next.

Armstrong (2014) opines that the performance improvement process is a strategy under the umbrella of PM aimed at maximising the performance of an organisation. The author stresses that the performance improvement process must be implemented on the strategic, operational and tactical level of PM and not only used as a correction tool for underperforming employees in the organisation. Thus, at AFB Ysterplaat, the performance improvement process is a fundamental part of the continuous process of effective PM at all levels of the base.

Based on the above, this research is able to surmise that the existence of effective PM is often the major differentiator between organisations that produce satisfactory results and those that excel. Without a focus on PM at all levels of an organisation, it is difficult to anticipate how an

organisation like AFB Ysterplaat will be able direct their operations towards the success of their organisational mission.

### **3.5.1 Different Levels of Performance Management**

To continue this examination on PM, Armstrong (2014) notes that PM is a systematic process for improving organisational performance by developing the performance of individuals and teams. Brudan (2010), Cassim (2011) and Swartz (2017) present three levels of PM namely Strategic, Operational and Individual. For the purposes of this research, the DoD nomenclature will be used to refer to the different levels of PM, namely the acronym SOT is used. The SOT acronym refers to the Strategic (S of the Acronym), Operational (O of the acronym) and Tactical (T of the acronym) levels of PM. In the context of this study, when the strategic level is discussed, it refers to the organisation (AFB Ysterplaat). When the operational level is discussed, it refers to operational units of AFB Ysterplaat and their support. When the tactical level is discussed, it refers to the employees of AFB Ysterplaat. The three levels of PM will be discussed in the section that follows.

### **3.5.2 Strategic Level of Performance Management**

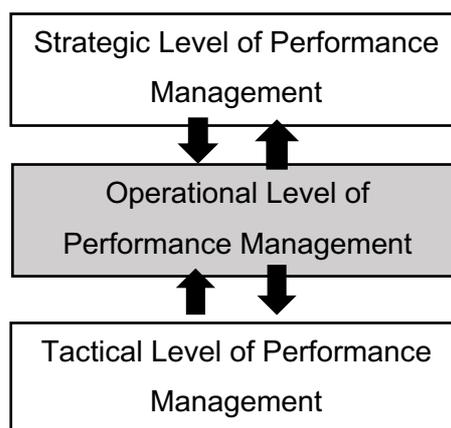
The strategic level of PM is the uppermost level of PM. At this level, PM strategies are developed that are converted into strategies and thereafter these strategies are executed within an organisation (Bruden, 2010). There are various strategic PMS's and tools available, with the most popular being the Balanced Scorecard and the Performance Prism (Neely, Kennerly and Martinez, 2004; de Waal, 2007; Brudan, 2010; Mehedintu, Pirvu and Pirvu, 2012 and Pulakos, 2015). While these tools are popular, a number of other quality tools are also available for instance, the Baldrige Award and the EFQM 2010 model that was formerly used by the SAAF and AFB Ysterplaat. These additional quality tools and models can be used separately or in conjunction with other PMS's and performance tools to guide an organisation to accomplish their organisational mission or goals (Neely, Kennerly and Martinez, 2004; Brudan, 2010; Mehedintu, Pirvu and Pirvu, 2012). Ramataboe (2015) and Swartz (2017), advance that the strategic level of PM is where strategic decisions are made pertaining to the allocation of resources (i.e., employees, equipment, assets and infrastructure) to ensure the success of organisational mission.

For an organisation like AFB Ysterplaat to implement these quality tools and even a PMS, the composition of employees must consist of the higher management echelon of the base that makes decisions in ensuring that an organisation achieves the utmost level of performance. Thus, at AFB Ysterplaat, the strategic level of PM starts with the Officer Commanding (OC)

and the Base Command Council (BCC) where the decisions that are made are to be value oriented, conceptualised, with less concrete detail as opposed to the other levels of PM. Essentially, the strategic level of PM deals with the strategy, policy, design, structure and deployment of resources at AFB Ysterplaat when they are providing deployable maritime and landward air capabilities to the SANDF in service of our country. In addition, the strategic level of PM will provide direction when AFB Ysterplaat's pursue the implementation of a PMS that allows the base to focus their strategy and ensure that operations are directed towards the success of their organisational mission. The operational level of performance management will be discussed next.

### 3.5.3 Operational Level of Performance Management

While the strategic level of PM provides direction for an organisation to achieve their mission and vision, the operational level of PM is in support of the strategic level of PM in deciding what needs to be done to achieve the short to medium term objectives of the organisation (Armstrong, 2014). Swartz (2017) argues that the operational level of PM is associated with the management of operations where the focus is more on the functional level. The functional level operates from the center of the three PM levels and refers to the middle management of an organisation. Significantly, at this level at AFB Ysterplaat, teams are realised, goals and objectives are formulated according to set performance standards. The importance of operating from the center of the three levels of PM at AFB Ysterplaat is that inputs are garnered from the strategic and tactical level of PM (Mehedintu, Pirvu and Pirvu, 2012) as shown in Figure 3.1.



**Figure 3.1:** Operational Level of Performance Management (Source: Developed by the researcher, 2021)

Figure 3.1 illustrates there is an inward and outward flow of inputs to and from the operational level of PM to the strategic and tactical levels of PM respectively. In addition, Brudan (2010),

Cassim (2011) and Ramataboe (2015) opine that the operational level of PM is the cement that holds the three levels of PM together. At this level, the middle management of AFB Ysterplaat refers to the senior officers and warrant officers of the base that are responsible for the coordination and management of related missions and projects. Similarly, the five operational units operate from this level. The operational level of AFB Ysterplaat is where the identified missions and projects are planned, and more detail is formulated in relation to providing deployable maritime and landward air capabilities to the SANDF in service of our country.

Practically, at AFB Ysterplaat from a PM perspective, decisions are made by the OC and BCC on a strategic level as a collective regarding the performance of the base and thereafter promulgated to take place at the five operational units. In addition, the plans that are formulated at this level are performed by the middle management level (i.e., senior officer and warrant officers) of the base prior to the execution of these plans. Even though the plans are formulated at this level, it is uncertain whether AFB Ysterplaat operations are directed towards the success of their organisational mission as their performance output is not quantitatively measured within a performance framework. The next section will discuss the tactical level of performance management.

### **3.5.4 Tactical Level of Performance Management**

The tactical level of PM at an organisation is where the plans that are formulated at the operational level of PM are executed (Cassim, 2011). At this level, annual objectives are monitored and measured to gauge how well the organisation is performing in terms of their strategy (Saravanja, 2010; McGregor and Doshi, 2017). Moreover, the typical performance measures at the tactical level of PM are productivity and effectiveness of the individual or the team (Swartz, 2017). In the context of AFB Ysterplaat, the tactical level of PM is where the execution of the mission occurs at the five operational units and the action plans that are carried out in relation to the employees that perform them. For instance, at 35 Squadron, one of their functions is to supply mission ready maritime air patrol to the DoD, and they are tasked with executing a Search and Rescue mission. The plans that are formulated by the squadron to conduct the search and rescue mission are executed by the air and ground crew respectively.

However, there is no PM framework to gauge how effective 35 Squadron is performing their role towards providing deployable maritime and landward air capabilities to the SANDF in service of our country. Consequently, this situation is also present at 22 Squadron, 80 ANS, 505 Squadron and 2 Air Servicing Unit Detached as their performance is not quantitatively measured at a tactical level of PM. Thus, AFB Ysterplaat will be unable to ensure that

operations are directed towards the success of their organisational mission as their performance is not quantitatively measured at a tactical level of PM. Based on the discussions pertaining to the strategic, operational and tactical level of PM, it is evident that there is a need for a comprehensive PMS that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.

### **3.6 Performance Measurement and Performance Management**

According to Swartz (2017), two inseparable processes stem from performance namely, PM and performance measurement. The author notes with caution that performance measurement and PM are interconnected but not interchangeable, performance measurement acting as a needed proviso for PM. However, Nathan (2009) argues that although the measure of performance is important, it is not always a precondition for PM, while Behn (2003) counters this by suggesting that performance measurement is also not an end in itself.

To further this discussion, Atkinson (2012) argues that performance measurement must center on what is important in managing the organisation effectively and efficiently so that learning and growth as well as continuous improvement can be fostered within the PMS. The SA Defence Review 2015 (2016) argues that the activity of measuring performance should be aimed toward the organisation's mission. In addition, Mehedintu, Pirvu and Pirvu (2012) opine that an organisation will gain no value if their performance is not quantitatively measured which is currently the situation at AFB Ysterplaat.

Harbour (2013) expressed a similar sentiment by stating, "*You can't understand, manage, or improve what you don't measure*". The author advocates that measuring performance affords the stakeholders of the organisation the opportunity to examine and get to know the systems in the organisation in a more meaningful way. In support of this, Atkinson (2012), argues that although performance measurement is important, it is of almost no value if these measures are not translated into a PMS or used for improvement in an organisation. In the context of AFB Ysterplaat, the performance measures should ultimately tell the story of AFB Ysterplaat's strategy and how the base's operations are directed towards the success of their organisational mission.

### **3.7 Performance Appraisal and Performance Management**

Vigaro (2013) and Mueller-Hanson and Pulakos (2015) argues that performance appraisal is a process that entails the evaluation of an employee's performance and progress. However, Woyessa (2015) suggests that performance appraisal serves as a mechanism for providing

feedback from the manager to the employee. In contrast to performance appraisal, Armstrong (2014) states that PM is a continuous and much wider, more comprehensive process of management that clarifies mutual expectations and focuses on the future. The author advances that PM is not a form-filling exercise, as many traditional merit rating or performance appraisal schemes appear to be. Conventional performance appraisal schemes are reactive and usually designed around an annual event, the formal review, which tended to dwell on the past. In the context of AFB Ysterplaat, a PMDS is used as a performance appraisal tool to measure their employee's performance. Table 3.2 highlights the major differences between performance appraisal and PM.

**Table 3.2:** Performance appraisal versus Performance Management as adapted from (Armstrong and Baron, 2005)

<b>S/N</b>	<b>Performance Appraisal</b>	<b>Performance Management</b>
<b>01.</b>	Top-Down Assessment	Joint process through dialogue
<b>02.</b>	Annual appraisal meeting	Continuous review with one or more formal reviews
<b>03.</b>	Use of ratings	Ratings less common
<b>04.</b>	Inflexible system	Flexible system
<b>05.</b>	Focus on quantified objectives	Focus on values, behaviours and objectives
<b>06.</b>	Often linked to pay	Less likely to be linked to direct pay
<b>07.</b>	Bureaucratic – complex paperwork	Documentation kept to a minimum
<b>08.</b>	Owned by the HR department	Owned by line managers

Steered by the views of Armstrong and Baron (2005) and in the context of AFB Ysterplaat, performance appraisal has been discredited for operating as a top-down and largely bureaucratic system owned by the HR department rather than by middle management. The performance appraisal process at AFB Ysterplaat is often reactive, concentrating on what went wrong, rather than looking forward to future development needs. Performance appraisal (PMDS) at AFB Ysterplaat exist in isolation from the strategic and operational level of performance of the base. Ramulumisi, Shultz and Jordaan (2015) and Woyessa (2015) argue that it is unfortunate that managers and supervisors primarily equate PM with performance appraisal. Significantly, the middle management level at AFB Ysterplaat have frequently rejected the performance appraisal system as being time consuming and irrelevant. Furthermore, employees at the base have resented the superficial nature with which appraisals

have been conducted by middle management who lack the skills required, tend to be biased and are simply going through the motions as a last-minute compliance exercise (Swartz, 2017).

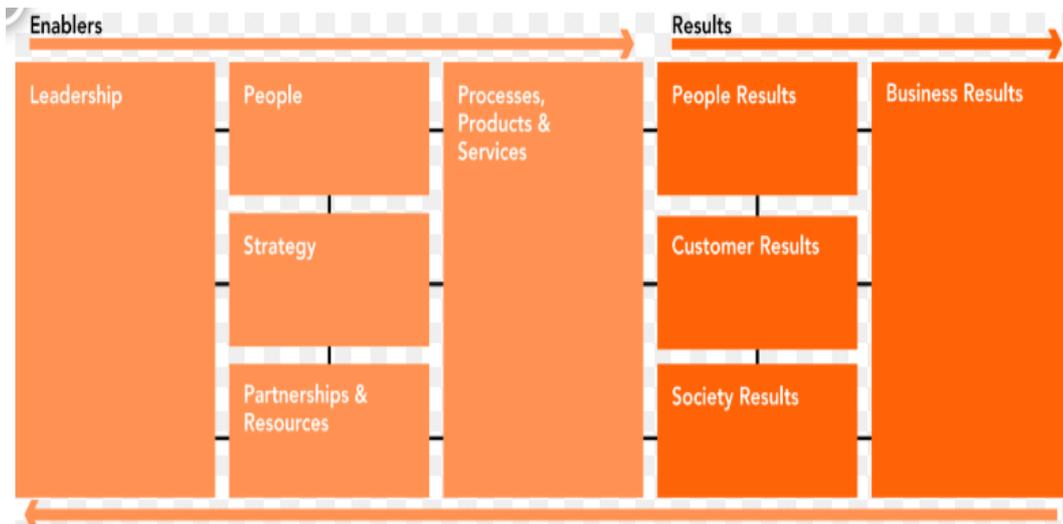
Based on the above, performance appraisals represent only one part of the PM process (Armstrong, 2014; Woyessa, 2015). Thus, AFB Ysterplaat lack the strategic and operational elements that is required to have a comprehensive PMS that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.

### **3.8 Performance Management Tools**

Scholars (Kaplan and Norton, 2005; de Waal, 2007; Brudan, 2010; Saravanja, 2010; Armstrong, 2014) report that there are numerous performance frameworks available that have been tried and tested by different organisations in the private and public sector and their results cannot be disputed. However, the authors point out that if these tried and tested performance frameworks are not effectively implemented at an organisation, it will not yield the intended return on investment as set out by the organisation. Thus, the following section will evaluate literature with regard to two performance management frameworks. The first performance management framework is the EFQM model that was previously used by AFB Ysterplaat and to ascertain why this tried and tested performance management framework did not meet its intended purpose for AFB Ysterplaat and was subsequently disbanded. This is followed by the BSC as a performance management tool to evaluate the knowledge of the strategic, operational and tactical levels of management with regard to quality performance tools available.

#### **3.8.1 European Foundation for Quality Management**

Since its inception in 1991, the main purpose of the European Foundation for Quality Management Award (EFQMA) has been to recognise organisational excellence in European companies. The EFQM model is the framework behind this award, and it has become the most commonly applied model in Europe for Total Quality Management (TQM) (Westlund, 2001). According to Kim, Kumar and Murphy (2010), the EFQM model is widely recognised as a representative theory to improve traditional TQM by expanding the narrow quality-oriented concept into a holistic management concept. Gómez et al. (2011) report that the EFQM model is a non-prescriptive framework based on nine criteria. Criteria one to five are called “Enablers” while the remaining criteria up to nine are called “Results” as shown in Figure 3.4.

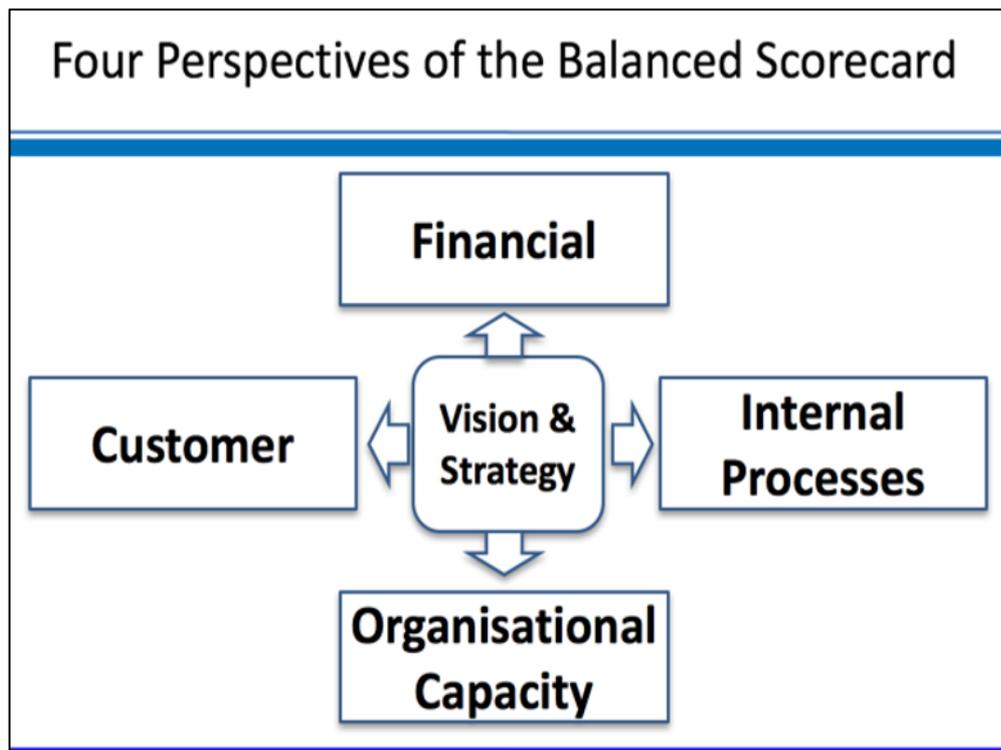


**Figure 3.2:** EFQM Model 2013 (Source: EFQM Website, 2013)

The EFQM model assumes that, in order for an organisation to be successful, whatever its sector, size, structure etc. it requires a good management system. The EFQM model, therefore, is a tool that can be used to structure the performance management system of an organisation, by way of self-assessment (Gómez *et al.*, 2011). The SAAF and AFB Ysterplaat have used the EFQM Model since 2002 and to an extent, attempted to implement it at all their management levels that includes Strategic, Operational and Tactical (SOT), however, not all the directorates bought into the excellence model as was initially envisaged. Despite some detractors in the SAAF, the development of the EFQM model gained some ground as it was the model used to determine various accolades and prestige of bases on an annual basis. The SAAF bases that used the EFQM model in the management of their business areas reaped certain benefits specifically in terms of performance and self-assessment. However, as the years progressed, the EFQM model began to lose its value in the SAAF. When the annual assessment was conducted by the SAAF Inspector General, it was seen as more of a window dressing exercise and the ineffective roll out of the EFQM model within the SAAF became apparent. The perception of the EFQM model from the different management levels at AFB Ysterplaat was synonymous to the WOHCAO acronym reported by Goestch and Davis (2012) which states 'Watch Out Here Comes Another One' or as Armstrong (2014) refers to the 'flavour of the month'. This perception serves to suggest that there have been previous models prior to the EFQM model that did not yield tangible results. Subsequently, the EFQM model followed the same trajectory as the previous performance models used in the SAAF and AFB Ysterplaat. Gómez *et al.* (2011) conclude by expressing that the EFQM model, recognising there are many approaches to achieve sustainable excellence in all aspects of performance, is based on the premise that excellent results with respect to performance, customers, people and society are achieved through partnerships, resources and processes.

### 3.8.2 The Balanced Scorecard and Performance Management

The original balanced scorecard (BSC) model was developed in the 1920's by Dr's Robert Kaplan and David Norton as a performance measurement system and only later transformed into what is known lately as a strategic performance management system (Soderberg, Kalagnanam Sheehan, and Vaidyanathan, 2011; Giannopoulos, Holt, Khansalar and Cleanthous, 2013; Ndevu and Muller, 2018). The BSC provides an approach to performance measurement and management by adding non-financial indicators and four insightful perspectives through which to view an organisation (Kaplan and Norton, 2005; Kaplan and Norton, 2007). The four perspectives are financial, customer, internal business process and learning and growth and is illustrated in Figure 3.5. Kaplan and Norton (2005) suggest that the perspectives serve as a guideline, and an organisation can customise them accordingly but should by no means be considered as exhaustive (Kotze, Vermaak and Kirsten, 2015).



**Figure 3.3:** Third Generation Balanced Scorecard (Source: Ndevu and Muller, 2018)

By 1996, the BSC was labelled as a strategic PMS and had advanced from a measurement tool to a management tool, to a system, and then to a tool within a system, thus completing a 360-degree development (Brudan, 2010; Akhtar, 2018). The author argues that various other authors use the terms performance measurement and PM interchangeably at present. Overall, the BSC, is the most popular system used for strategy execution and is an icon of strategic performance management (Brudan, 2010).

Kaplan and Norton (2005) and Soderberg, Kalagnanam Sheehan, and Vaidyanathan (2011) linked PM to the BSC because it affords strategic managers a quick, yet comprehensive view of their business and to measure organisational performance. The authors reiterated the importance of an organisation having a balanced view using the four perspectives in their performance measures. In addition, the authors expressed that principal to any process of measurement must be the organisation's strategy, hence, the aim of the BSC, to integrate business performance to the organisation's strategy, by measuring results.

Soderberg et al., (2011) and Akhtar (2018) argue that the BSC as a measuring system has evolved considerably to become a strategic performance management and measurement system that assists organisations to plan and execute their strategy. In the context of AFB Ysterplaat, Ndevu and Muller (2018) caution that though a strategy is developed, the BSC will not measure its correctness, but rather monitor and measure progress towards reaching the crafted strategy across all areas of the base. The view that the BSC contributes to the PM cannot be understated. In essence, the BSC tool aids PM by allowing an organisation like AFB Ysterplaat to plan, measure and control its performance (Brudan, 2010).

Based on the above, and the undisputable benefits of the BSC, the BSC can be a particularly useful performance management tool to aid AFB Ysterplaat in developing a comprehensive PMS to focus their strategy and ensure that operations are directed towards the success of their organisational mission. However, if organisations like AFB Ysterplaat are unfamiliar with available quality performance tools, then the potential performance benefits that it can produce for the base will remain untapped.

### **3.9 The Concept of Implementation**

This following section briefly orients the reader to implementation as a concept before examining the barriers and benefits to PMS implementation. Waldersee and Griffiths (2003) and Atkinson (2012) argue that implementation has to do with a change that needs to take place and has been described as complex in nature due to the intricacies involved in its realisation. The authors concede that although there are many interpretations of what implementation is and even how to carry it out, still there is no categorical definition for implementation.

A vast amount of research is available on implementation, such as strategy implementation, PMS implementation or whatsoever implementation an organisation decides upon. However, the one commonality is that implementation does not particularly have a high success rate (de Waal, 2007; Raps, 2005). Implementation has up to 75 percent failure rate (de Waal, 2007;

Brudan, 2010; Musandiwa, 2019). The authors cite that the most common reasons for implementation failures are unclear vision and mission of the organisation, and miscommunications between employer and employee. According to Fixsen, Blasé, Naoom and Wallace (2009) an organisation needs to understand that implementation is a process, not an event and will not initially occur simultaneously or proceed without effort. Goetsch and Davis (2012) express that there is no magic, succeed-every-time formula for implementation due to organisations and cultures that differ. The authors explain that an organisations' implementation plan can have more than "one right way". Essentially, researchers are still searching for the 'one best way' to implement (Waldersee and Griffiths, 2003). In the context of AFB Ysterplaat and based on the above, the implementation of a PMS needs to be approached in a structured way that takes advantage of the strengths, culture, while paying careful attention to the personalities involved (Goetsch and Davis, 2012). The barriers to PMS implementation will be discussed in the following section.

### 3.9.1 Barriers to Performance Management System implementation

Implementation of a PMS yields progressive results for an organisation (de Waal, 2007; Brudan, 2010; Cassim, 2011; Armstrong, 2014). However, the implementation of a PMS is not simple and presents various barriers before actual results are seen by an organisation. Armstrong (2005) cites the following common barriers to a PMS implementation at an organisation as shown in Figure 3.3. Notably, in the context of AFB Ysterplaat these implementation barriers are also applicable.

**Table 3.3:** Implementation barriers as adapted from Armstrong (2005)

<b>S/N</b>	<b>Implementation barriers</b>	<b>Brief explanation</b>
<b>01.</b>	Management puts low priority on the implementation	Time constraints and work pressures in the daily working environment cause management to be too busy solving short-term organisational problems, which slows down the development and implementation of the PMS.
<b>02.</b>	The implementation requires more time and effort than expected.	During the development and implementation of the PMS, the organisation finds that it takes more time and effort than initially expected and budgeted for.

<b>03.</b>	There are insufficient resources and capacity available for the implementation.	Often organisations that want to start the implementation cannot free up enough resources (budget) and capacity (people), resulting in delay or even postponement of the implementation.
<b>04.</b>	The PMS implementation does not have a clear goal.	It is unclear to organisational employees what the goal of the new system is, resulting in resistance to its implementation.
<b>05.</b>	Lack of management commitment.	When management commitment and leadership buy-in for the implementation and use of the PMS is lacking, other organisational employees will put less or no priority on working with the new system.
<b>06.</b>	Period of attention from management for the implementation of the PMS is inadequate.	The implementation of a PMS takes a considerable period of time, after which the organisation has to start supporting management, otherwise the PMS can be seen as “flavour of the month” by organisational employees. enough
<b>07.</b>	Organisational employees lack a positive attitude towards the PMS.	This attitude is obtained if people have an understanding and acceptance of the need for such a system.
<b>08.</b>	The current ICT system does not support the PMS adequately	If the current information – and communication technology cannot support the PMS – by automatically collecting, processing and reporting the data for the KPIs – too much effort is required from organisational employees too manually collect and process the data
<b>09</b>	The organisation does not have a clear and understandable strategy.	If the mission, strategy and objectives of the organisation are not clear and comprehensible to organisational employees, then the CSFS and KPIs that are developed for inclusion in the

		PMS will probably not be relevant to the organisation.
10	There is a lack of knowledge and skills in regard to the PMS.	If organisational employees lack the understanding and the skills required to work with the new PMS, for instance because they have received insufficient training in the workings of the system, then the PMS will either not be used properly or not at all

The implementation barriers are by no means exhaustive; however, it does capture the essence of what AFB Ysterplaat has experienced with former performance models used and will experience if they endeavour to implement a PMS. de Waal (2007) advises that an organisation devise a strategy to mitigate these barriers to increase their chance of a successful implementation and subsequent use of the PMS. The benefits to the implementation of a PMS will be discussed next.

### 3.9.2 Benefits to Implementation of a Performance Management System

According to de Waal, Goedegebuure and Geradts (2011) and Armstrong (2014), an effectively implemented PMS can benefit the organisation at a strategic, operational and tactical level of PM in several ways as shown in Table 3.4.

**Table 3.4:** Implementation benefits of a Performance Management System as adapted from (de Waal, Goedegebuure and Geradts, 2011 and Armstrong, 2014)

S/N	Performance Management Level	Implementation Benefits
01.	Strategic level	Improved organisational performance, employee retention and loyalty, improved productivity, overcoming the barriers to communication, clear accountabilities, and cost advantages.
02.	Operational level.	Saves time and reduces conflicts, ensures efficiency and consistency in performance.
03.	Tactical level.	Clarifies expectations of the employees, self-assessment opportunities, clarifies

		the work accountabilities and contributes to improved performance, clearly defines career paths and promotes job satisfaction.
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The implemented PMS can benefit AFB Ysterplaat by establishing and monitoring clearly defined goals and objectives. Moreover, the PMS can serve as a useful input for AFB Ysterplaat in designing the training and development plans for their employees. Other benefits include improved employee engagement and motivation that allows an organisation to get the most out of their employees (Brudan, 2010 and Armstrong, 2014). Based on the above points, a well-designed PMS at AFB Ysterplaat can benefit the base by streamlining the activities of their operations and that of their employees for realising their organisational mission. In addition, the PMS aligns the strategic, operational and tactical functions so that the focus is directed towards the attainment of the organisational goal. Although there are many barriers to the implementation of a PMS at an organisation, the benefits of a PMS at an organisation are irrefutable (Brudan, 2010; Cassim, 2011; Armstrong, 2014; Swartz, 2017). Based on a study of the available literature, the benefits to the implementation of a PMS at an organisation such as AFB Ysterplaat cannot be overstated to allow AFB Ysterplaat's to focus their strategy and ensuring that operations are directed towards the success of their organisational mission.

### 3.10 Chapter Summary

This chapter examined literature pertaining to the concepts of military hierarchy and introduced the command-and-control approach. This was followed by discussions on the process of strategy formulation, strategy implementation and its connection to PM. Thereafter, PM and its different levels were discussed. In addition, performance measurement and the difference between performance appraisal and PM were presented, following which the performance management tools were discussed. Finally, the concept of implementation was discussed prior to introducing the barriers and benefits to implementation of a PMS. Based on the literature examined and according to de Waal, Goedegebuure and Geradts (2011), the use of a PMS is one of the few management techniques which has been proven to help organisations improve their results.

The next chapter will continue the development of this thesis by introducing and discussing the research design and methodology of this thesis.

## CHAPTER FOUR - RESEARCH DESIGN AND METHODOLOGY

*If we knew what we were doing, it would not be called research, would it*  
– *Albert Einstein*

### 4.1 Introduction and Background to the Research Methodology

This chapter presents the methodological rationale behind the research design of this study and includes a discussion on the research approach, the research instruments used, sampling and data collection processes. This chapter also includes the pilot study which will be reviewed before introducing the main study. The data collection and analysis plan for both the pilot and main study are discussed. Following this, this chapter outlines the research considerations with respect to validity, reliability and ethical guidelines used during this study.

Studies by Saravanja (2010) and Swartz (2017) found that PM is oftentimes limited to the tactical level of PM in organisations and does not always include the strategic and operational levels of PM. As indicated in Chapter two of this thesis and guided by the views of Saravanja (2010) and Swartz (2017), a background study of AFB Ysterplaat suggests that the base only utilises the PMDS on a tactical level to measure employee performance. Thus, without PM at the strategic, operational and tactical levels taking the center stage at AFB Ysterplaat, it is difficult to anticipate how AFB Ysterplaat will be able to direct their operations towards the success of their organisational mission. Ultimately, the ability to provide deployable maritime and landward air capabilities to the SANDF in service of our country will be jeopardised. Foregrounded by this, this chapter outlines the plan to meet the research objectives namely, 1) to determine the elements required by AFB Ysterplaat in regard of strategic performance management, 2) the organisational requirements to develop a PMS at AFB Ysterplaat and finally, 3) the benefits and barriers to implementation of a PMS at AFB Ysterplaat.

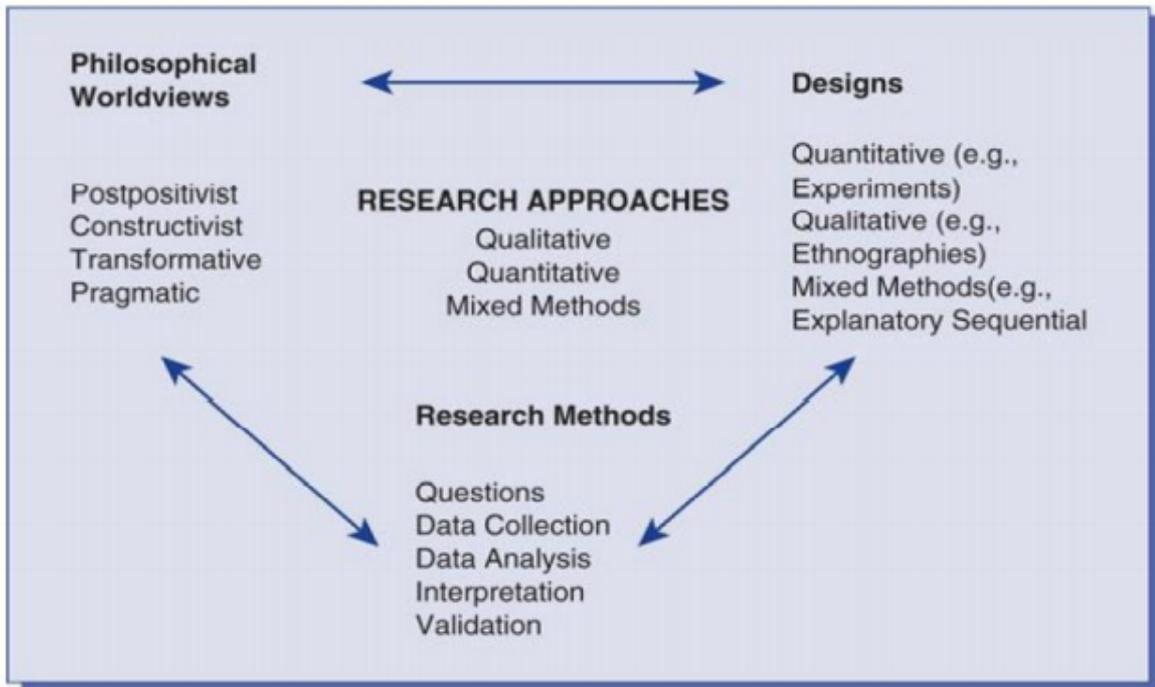
To meet the research objectives of this study, which is to understand and unpack participant's perceptions and experiences in relation to PM, a mixed method research approach is adopted which includes both a phenomenological and a positivistic approach. The detailed discussion of the specific mixed methods used by this study is presented later in the chapter.

With regard to the phenomenological approach, Watkins (2016) contends that it is a research attempt to comprehend people's perceptions, perspectives and understanding of a particular situation or phenomenon. Cresswell (2014) adds that this approach stems from exploring lived experiences of individuals surrounding a phenomenon as explained by the participants. Significantly however, this research may also be described as positivistic, as it sets out to find

objective explanations to social phenomena and realities (Kholeif, 2011). Thus, this study will be both theoretical (phenomenological) and empirical (positivistic) and conducted in the social world as it will examine organisational systems, management tools and various quality approaches in a social context. Specifically, the study analyses why participants do what they do, particularly within a base like AFB Ysterplaat, and finally within a broader SAAF context. The next section discusses research philosophies and worldviews.

## **4.2 Research Philosophies and Worldviews**

Research is described as a systematic and methodical process of inquiry into a problem, with the intention of identifying facts that aid in solving the problem (Mouton, 2011; Collis and Hussey, 2014). Citing these authors, Swartz (2019) emphasises that the purpose of research is to increase the body of knowledge and address gaps in theory. Mouton (2011) argues that a methodological approach in a research study must act as an enabler to effectively close the gap between what is known and what is not known. Several authors have advanced that there are three methodological approaches, however the approach selected for a particular study should be guided by current theory for a specific study (Collis and Hussey, 2009; Maxwell, 2009; Neuman, 2010; Cresswell, 2014; and de Vos, Strydom, Fouché and Delport, 2017). Cresswell (2014) highlights that the three research approaches are qualitative, quantitative and mixed methods and as shown in Figure 4.1. The author argues that quantitative research is the process of collecting and analysing numerical data. Qualitative research considers the collection and analysis of non-numerical data to understand concepts, where researchers often gain in-depth contextual insights into a problem. Finally, the author broadly describes mixed methods research as the type of research in which a researcher combines elements of quantitative and qualitative research approaches.



**Figure 4.1:** A framework for research – The interconnection of worldviews, design and research methods (Cresswell, 2014)

The term ‘*worldview*’ is often referred to as paradigms (Cresswell, 2014) or broadly conceived research methodologies as suggested by (Neuman, 2010). The authors concur that the term is the basic set of beliefs of a researcher that guides the action of the researcher. Cresswell (2014) outlines four different worldviews as being postpositivism, constructivism, advocacy/participatory and pragmatism as depicted in Table 4.1.

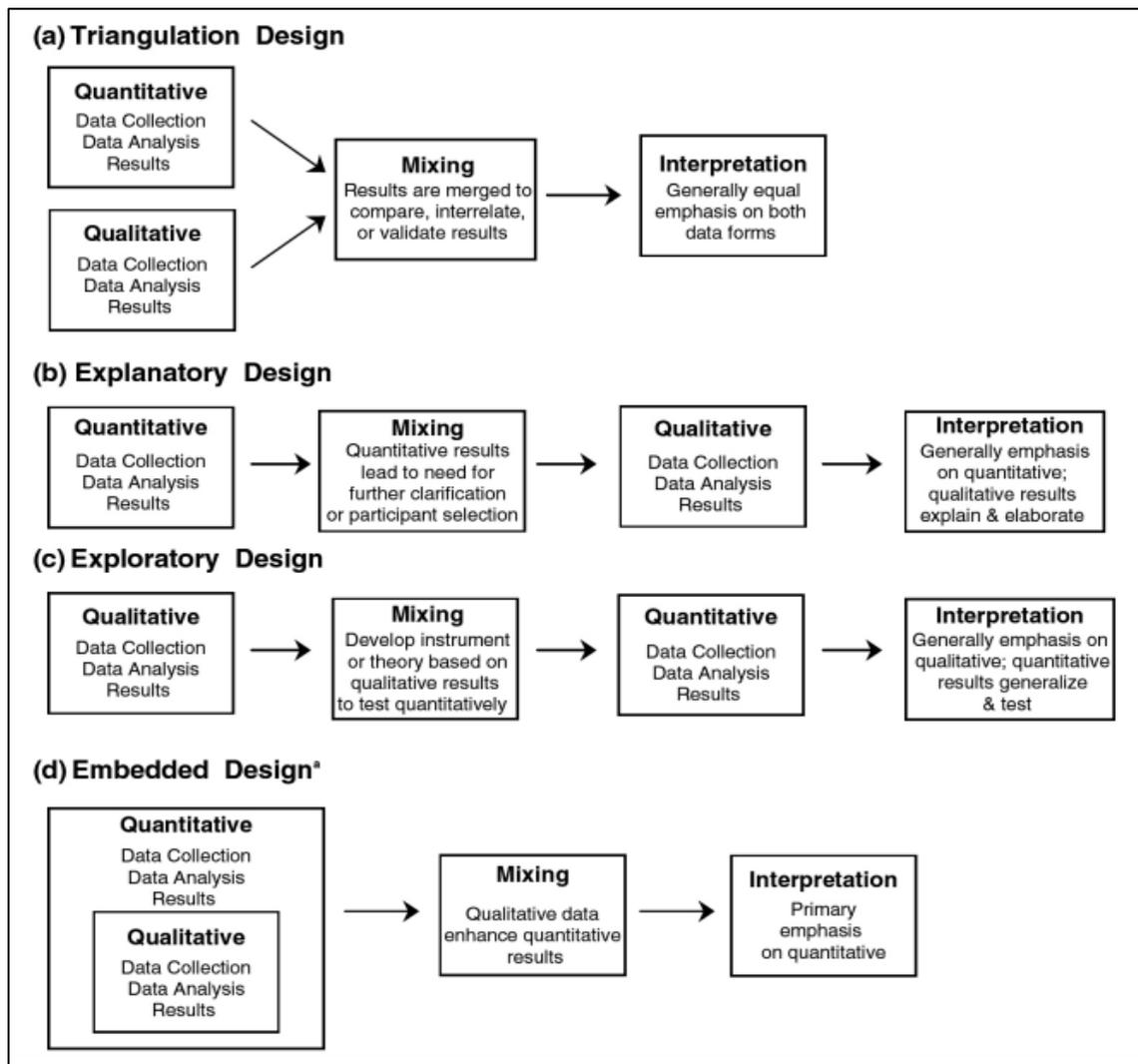
**Table 4.1:** Four Worldviews – Adapted from Cresswell (2014)

<b>Four Worldviews</b>	
<b>Postpositivism</b>	<b>Constructivism</b>
<ul style="list-style-type: none"> <li>• Determination</li> <li>• Reductionism</li> <li>• Empirical observation and measurement</li> <li>• Theory verification</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding</li> <li>• Multiple participant meanings</li> <li>• Social and historical construction</li> <li>• Theory generation</li> </ul>
<b>Advocacy/Participatory</b>	<b>Pragmatism</b>
<ul style="list-style-type: none"> <li>• Political</li> <li>• Empowerment issue-orientated</li> <li>• Collaborative</li> <li>• Change-oriented</li> </ul>	<ul style="list-style-type: none"> <li>• Consequences of actions</li> <li>• Problem-centered</li> <li>• Pluralistic</li> <li>• Real-world practice oriented</li> </ul>

Petersen and Gencel (2013) and Cresswell (2014) argue that the positivists/postpositivists are in search of an objective general reality that occurs 'out there' in the world. Positivism/postpositivism exhibits a deterministic philosophy; that is, based on careful observations and measurements, it attempts to make inferences to a general truth. Both Hesse-Biber (2010) and Cresswell (2014) contend that post-positivist research has the inclination to be reductionistic and deductive. In contrast to postpositivistics, the interpretivist reality exists subjectively and is constructed by how people perceive and interpret the world in their respective context. Interpretivism, also known as constructivism, considers the truth to be non-absolute, but rather subject to an individual's interpretation of reality (Petersen and Gencel, 2013; Cresswell, 2014). Other worldviews include the advocacy/participatory research inquiry that the authors describe as the intertwinement with a political agenda that can or may change the lives of the participants. Finally, the pragmatists, emphasise the research problem and exploit available approaches to comprehend the problem, as opposed to only focusing on the methods.

To systematically evaluate the need for a PMS at AFB Ysterplaat, neither an interpretivistic nor postpositivistic approach is sufficient when used in isolation of each other. Therefore, due to the nature of this study, a mixed methods approach that include the research characteristics typically associated with pragmatism was employed. Swartz (2019) adds that a pragmatic approach compliments mixed methods research in that the researcher can freely draw from both the qualitative and quantitative theories when they engage in their approach to solve the problem. The author continues that the validity of research is not linked to any specific approach, but rather it is linked to the meticulousness, appropriateness and effectiveness with which a particular method is applied. Hence, the motivation for employing mixed methods must be well-defined. However, various researchers (Doherty-Bigara, 2014; Delport and Fouché, 2017; Swartz, 2019), highlight a notable criticism imposed against the mixed methods approach in that there is seemingly an absence of concreteness and the final authority of a specific approach.

With reference to specific mixed methods research design, Plano Clark, Huddleston-Casas, Churchill, O' Neil and Garrett (2008) identified four major models of mixed methods research designs, each with a different purpose. These mixed methods research designs are known as exploratory, descriptive explanatory, triangulation and embedded design. A graphical representation is illustrated in Figure 4.2.



**Figure 4.2:** Four major mixed methods design adapted from Creswell and Plano Clark's (2007) discussion of mixed methods designs

Steered by Figure 4.2, this study employs a triangulation mixed methods design. The single-phase design of this study allowed the researcher to simultaneously use equivalently weighted quantitative and qualitative methods to best understand the phenomenon of interest. Creswell (2008) and Delport and Fouché (2017) highlight that this is accomplished through the concurrent, but separate, collection and analysis of quantitative and qualitative data in order to compare and contrast the different findings and to ascertain the extent to which they do or do not agree with each other. Advocates of mixed methods research assert that this methodology enables the researcher to produce more comprehensive, credible and well-validated conclusions (Babbie, 2010; Teddlie and Tashakkori, 2009; Creswell, 2014). Importantly however, the authors caution against the selective perception of qualitative research, where the researcher only supports the theoretical conclusions. Equally important, quantitative data does not allow the researcher to probe participants to capture the complete picture of the research problem (Neuman, 2010; Delport and Roestenburg, 2011).

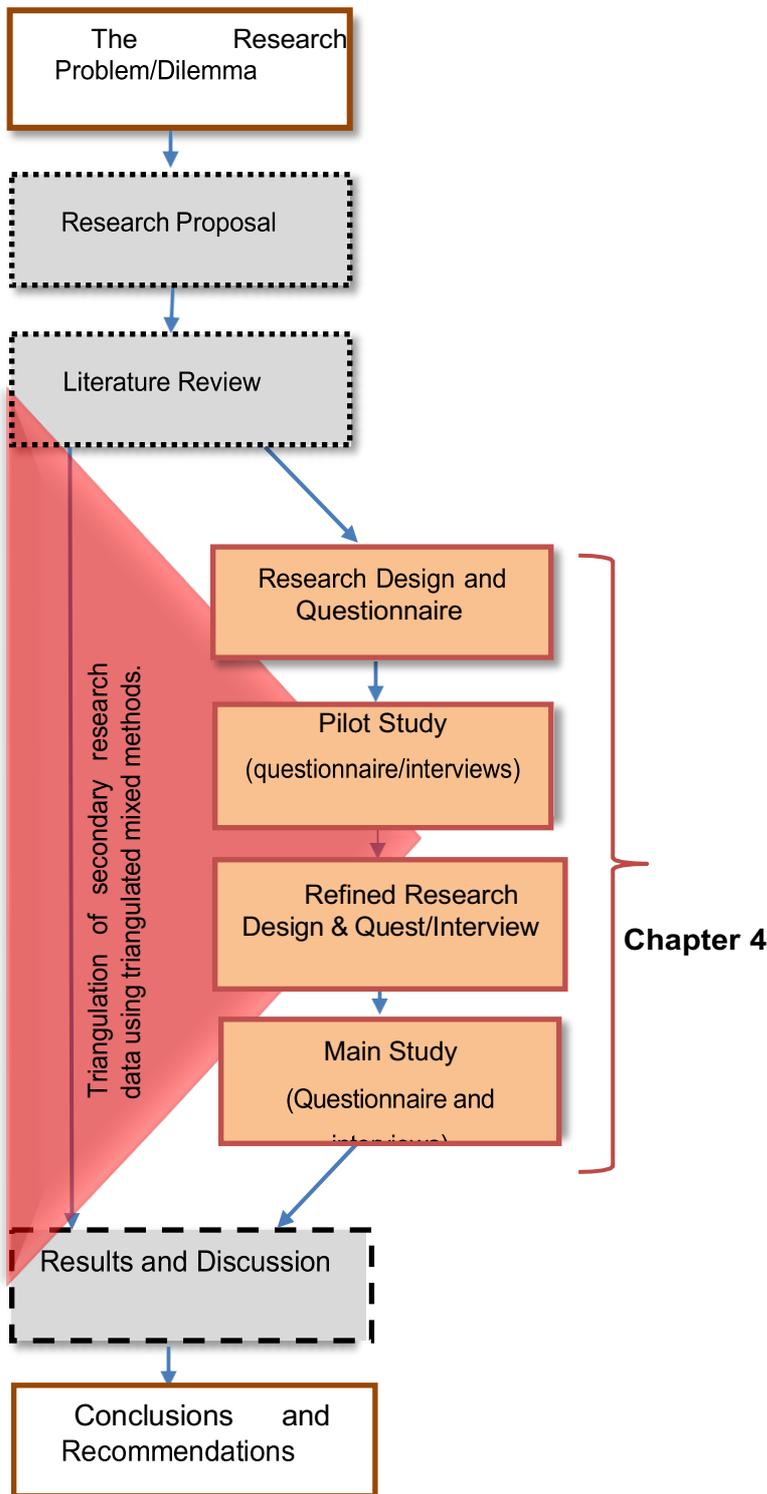
### **4.3 Methodological Paradigm of this Study**

The central premise of this research is the need for a comprehensive PMS at AFB Ysterplaat that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission. Thus, triangulated mixed methods are concurrently used in this research in a single phased approach to perform this research (Tashakkori and Teddlie, 2010; Cresswell, 2014). The order in which quantitative research and qualitative research took place in this study is not important as the results were triangulated, however quantitative research will be discussed first and thereafter qualitative research. Both questionnaires and semi-structured interviews were used to collect data from the participants in four distinct nominal subgroups (ranks) at AFB Ysterplaat namely, Senior Officers, Junior Officers, Warrant Officers and Non-Commissioned Officers all stationed at AFB Ysterplaat. The qualitative approach will be discussed next.

Literature and interviews with an Officer Commanding and a senior coordinator of operational units at AFB Ysterplaat contributed to the qualitative component of the study. Moreover, the results of the qualitative component are used to compare and corroborate the results of the quantitative component by probing the participants to gain a better understanding of the research problem. Following on the methodological paradigm of this study, the research process will be presented below.

A robust design is presented in Figure 4.3 as the research process which includes both the inductive and deductive processes. The design has been adapted by the researcher to compliment this study.

#### 4.4 The Research Process



#### SUMMARY OF ACTIVITIES

AFB Ysterplaat does not have a comprehensive PMS that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.

System engineering assessment for a PMS at AFB Ysterplaat. Research in PM and PMS at AFB Ysterplaat is fragmented. Management needs a tool to use.

Non-probability sample

Qualitative -Questionnaire n= 20

Qualitative- Semi structured interview n=2

Questionnaire using a Likert scale to gauge the strategy, PM and PMS of the 24 variables. Interviews to probe need for a PMS at AFB Ysterplaat.

Qualitative -Questionnaire n= 85

Qualitative-Semi structured interview n=2

Statistically analyses and content analysis discusses the findings in literature, questionnaire and semi structured interview to interrogate the strategy, PM and PMS at AFB Ysterplaat as a theoretical basis for further investigation.

Consolidates the theories from literature,

Figure 4.3: The Research Process as adapted from Doherty-Bigara (2014)

Figure 4.3 displays the quantitative and qualitative phases that are equally important in a triangulated mixed methods research design. The two empirical phases, take place simultaneously, yet independently and separately. The triangulated data obtained by both research instruments provide more comprehensive evidence regarding the need for a PMS at AFB Ysterplaat.

#### **4.5 The Sampling Process**

Strydom (2017) argues that the researcher must clearly understand the sampling process before selecting a sampling plan and conducting the main research. For this study, which consists of a quantitative and qualitative component, the target population is identified as AFB Ysterplaat and consist of 400 employees. Neuman (2010) and Strydom (2017) advise that to accurately represent the target population, an appropriate sample size needs to be selected. The sampling frame used in this research includes a sufficient variation in the demographics of the participants as far as gender and age is concerned. Additionally, the ranking category and service years also forms part of the sampling frame.

This research uses convenience sampling, which is an example of a non-probability sampling method (Cant, Gerber-Nel, Nel, and Kotzé, 2008). This means that the participants will be at the place where and when the sampling will occur and were selected at the convenience of the researcher. Cant *et al.*, (2008) notes that convenience sampling is a cost effective and least time-consuming sampling method. The main disadvantage of convenience sampling is the potential for bias, as the sample may not be representative of the target population. The issue of bias will be discussed later in this chapter. In addition, convenience sampling was selected as opposed to other sampling methods (Plano Clark, 2008; Strydom, 2017).

Sampling bias is the tendency to select certain individuals over others for the inclusion in a sample group (Laxton, 2004). This means that the sample group is non-reflective of the target population. Notably, sampling bias has the potential to undermine the integrity of the data that is collected (Cassim, 2011). To overcome sampling bias, the sample is increased which is above the prescribed guideline (Neuman, 2010; Strydom, 2017). The researcher is mindful of participant bias and demonstrated this by setting up the questionnaire so as to not impose his ideologies, thoughts and perceptions upon the participants. Biases, if not mitigated, can have far reaching effects on the data validity and reliability and ultimately the outcome of the research. The potential for non-sampling error was addressed by allocating a few minutes to explain the purpose of the research to all participants before handing out the questionnaire for completion, to mitigate biased communication.

## **4.6 Data Collection**

Data collection is critical in any type of study and inaccurate data collection can severely impact the integrity of a study and invalidate its results (Neuman, 2010). The data for this study is collected concurrently and analysed separately and independently, using techniques traditionally associated with both quantitative and qualitative research.

For the quantitative component, Neuman (2010) and Strydom (2017) advise that a sample size of 20 percent which equates to 80 in the case of this study is deemed appropriate. However, to contribute to the representativeness of the sampling frame, the sample size was increased to 85 participants. Concurrently, during the qualitative component of this study a sample size of two was used to gather data from participant's who were considered knowledgeable regarding management approaches and performance management and systems.

### **4.6.1. Quantitative Data Collection**

During the quantitative component of this study, hardcopy questionnaires were used to collect data from the different nominal subgroups (ranks). The questionnaire provided information from Senior Officers, Junior Officers, Warrant Officers and Non-Commissioned Officers who were all stationed at AFB Ysterplaat. Furthermore, data collected enabled the categorisation of participants into different age groups and years of experience to ensure that as far as possible the data was representative of the population being studied. A total of (n=85) questionnaires were distributed to the participants at AFB Ysterplaat over a period of 10 working days. Additionally, the questionnaire commenced with a consent section prior to the completion of the questionnaire (See Appendix A). It must be noted that the data collection process was performed during the COVID 19 pandemic. The researcher ensured that all COVID 19 protocols (i.e., social distancing, wearing of masks, sanitisation) were observed at all times.

#### **4.6.1.1 Structure of the Questionnaire**

The questionnaire comprised four sections, each with a different purpose (See Appendix B). The first section provided an introduction and request for biographical information from participants. Section two to four comprised questions relating to objectives one to three of the study.

Section two of the questionnaire was aimed at acquiring information pertaining to the rank category and years of experience of the AFB Ysterplaat research participants. The rank

category was included to determine the seniority of the AFB Ysterplaat participants completing the questionnaire.

Section three constituted the main section of the questionnaire. It consisted of 24 research variables (statements), which measured participants' perceptions on a three-point Likert scale. The variables were designed to ascertain aspects of AFB Ysterplaat's strategic performance management, criteria and requirements related to PM and PMS as well as implementation and improvement factors (i.e., benefits and barriers). The variables were subdivided into the different research objectives and will be described as the chapter proceeds.

Section four of the questionnaire thanked the participants for participating in the research.

#### **4.6.1.2 Design of the Questionnaire**

The questions were formulated to address the strategic performance management elements, the organisational requirements for a PMS and the benefits and barriers to implementation of a PMS at AFB Ysterplaat. The two-page questionnaire was printed back-to-back for easier control and was explained to the participants to avoid incomplete questionnaires being completed.

#### **4.6.2 Qualitative Data Collection**

During the qualitative component of this study, semi-structured interviews were used on two participants in order to determine their perceptions and understandings (Watkins, 2016) of PM and quality models and tools. The two participants are an Officer Commanding and a senior coordinator of an operational unit at AFB Ysterplaat. These participants are considered knowledgeable regarding management approaches and performance management and systems. The qualitative data enhances the quality of the quantitative evaluations by complimenting the design of questionnaire statements, clarifying and broadening the quantitative evaluation findings (Doherty-Bigara, 2014).

##### **4.6.2.1 Structure of the Interviews**

The interviews commenced with the researcher thanking the participant for agreeing to be interviewed. Thereafter, a brief explanation pertaining to the purpose of the research and assuring the participant that their responses would be anonymous and confidential before signing the consent form (See Appendix C). A blend of close and open-ended questions was used (See Appendix D).

The duration of the interviews did not exceed 60 minutes. The time allocated was considered adequate by the researcher to comprehensively probe and interrogate different aspects pertaining to the study.

#### **4.6.2.2 Design of the Interview Questions**

A semi-structured interview format was selected as it offered flexibility in following up on individual participants' responses, while maintaining consistency in the types of statements asked (Cassim, 2011). The same questions were used for both participants which made it easier to draw comparisons obtained from responses in different interviews.

The purpose of these interviews was to corroborate the findings in the questionnaire as part of the triangulated mixed methods approach. In addition, asking similar questions in a different style and format is advantageous for the triangulated mixed methods research process (Delpont and Fouché, 2017). The authors argue that while the technique aids in the validity of the overall research, the participants are not shown the interview schedule to minimise potential bias.

### **4.7 Pilot Study**

According to Strydom (2017), the pilot testing can be viewed as the dress rehearsal of the main investigation, though on a smaller scale. The pilot study consisted of a quantitative and a qualitative component that was conducted independently and separately to ascertain the feasibility of both components of the data collection instruments that was used in this study. Additionally, the pilot study for the questionnaire and interviews commenced with a consent section (See Appendix A and C). The same consent form was used in the main study. Firstly, the quantitative data collection instrument will be discussed.

#### **4.7.1 Questionnaire Pilot Study**

Pilot testing is useful in identifying shortcomings in the layout and content of the questionnaire. It also highlights different aspects pertaining to the understanding of the statements (Strydom, 2017).

The questionnaire was pilot tested by 20 participants of AFB Ysterplaat over a period of three days by means of convenience sampling (See Appendix E). The reason for the number selected was to get the data collected as representative as possible of different participants of

AFB Ysterplaat. Notably, the 20 participants that were used in the questionnaire pilot study were not the participants used in the main study.

After completing the questionnaire, the participants were asked how they experienced the questionnaire, whether it was clear to understand and complete. The participants were also asked about the presentation and if the format was user friendly. Eighteen participants completed the questionnaire, while two participants provided their input and comments on the layout, content and format of the questionnaire. The next section discusses the pilot study qualitative data collection instrument.

#### **4.7.2 Semi-structured Interview Pilot Study**

A pilot study on the qualitative component of the research design was conducted to assess the appropriateness of the interview questions (See Appendix F). The pilot study was conducted on two participants of AFB Ysterplaat that had similar characteristics as those selected in the main study. The interviews were conducted face to face in different locations at AFB Ysterplaat. The first participant was tasked to scrutinise and interrogate the interview design, pertaining to the sequencing, style, format, interview schedule, structure and wording of the statements, compliance and ethical considerations. The second participant was requested to be interviewed, so that the researcher could determine the time taken from the start to the finish of the interview, as well as the behaviour and knowledge of the research participant, when probing questions was asked.

After consideration of the feedback received from the participants, a number of amendments were made to the interview schedule. These included questions being added, while certain questions were reworded, rephrased and re-sequenced to be more reflective of the scope of the research. The second participant felt that more questions regarding performance management needed to be added and the current questions be broken down into smaller parts in order to be clear. Apart from the aforementioned amendments, both participants were satisfied that the questions were simple, clear and easy to comprehend. The participants agreed that the allotted one-hour interview time-frame was adequate for the interview. It was considered useful to perform the pilot study interviews as it highlighted various aspects that could aid in improving the research.

Ultimately, the qualitative pilot study informed the development of the main study. With reference to the questionnaire, the questioning statements were reordered, rephrased and reworded to compliment the interview questions. This was done to align the quantitative and qualitative data collection instruments, so as to comply with the triangulated mixed methods

research. The revised questionnaire and the interview schedules are presented in Appendix B and D.

#### 4.8 Data Analysis

Data analysis in the research process is the quest for meaning that requires the researcher to methodically organise and synthesise the collected data (Swartz, 2017). The research objectives of the main study remained unchanged from that of the pilot study even though amendments were made to the respective questionnaire and interview schedules. The data analysis conducted for this study comprises of a quantitative and qualitative component that is discussed below. Furthermore, the triangulation for each research objective is discussed.

##### 4.8.1 Research Objective One: To determine the elements required by AFB Ysterplaat in regard of Strategic Performance Management

Research Objective One sets out to identify and understand the elements of strategic performance management at AFB Ysterplaat by means of quantitative and qualitative data analysis and triangulation.

##### 4.8.1.1 Quantitative Data Analysis for Research Objective One

The quantitative data analysis for Research Objective One is based on the strategic, operational, and tactical levels of PM at AFB Ysterplaat which includes how performance was previously measured and how it is currently measured. In addition, the participants knowledge of strategic performance management tools is explored. Finally, it also set out to determine the regularity of performance appraisals conducted at AFB Ysterplaat. Supported by literature, variables (QV1, QV2, QV3, QV6, QV9, QV10, QV19) were developed for the quantitative research instrument to do the aforementioned. Table 4.2 depicts the data analysis plan to reach Research Objective One.

**Table 4.2:** Statistical analysis to explore the strategic performance management aspects at AFB Ysterplaat

Name of statistical analysis	Purpose of statistical analysis	Specific study details
Cronbach Alpha	Cronbach's Alpha is used to measure the internal reliability of data (Gorrell, Ford, Madden and Eaglestone, 2010).	Cronbach's Alpha test ensures that each conceptual elements of variables is internally reliable.

Descriptive statistics per individual variable	Univariate analysis is the analysing of one variable of data and expresses the proportion of participants per choice provided on the Lickert scale (Mann and Lacke, 2010).	Univariate analysis per variable in Section One, Two and Three) (which evaluated the strategic performance management elements of PM and PMS at AFB Ysterplaat) was performed.
Factor Analysis (Exploratory)	Exploratory Factor is a multivariate method that attempts to identify the smallest number of hypothetical constructs that can parsimoniously explain the covariation observed among a set of measured variables (Brown, 2015).	Exploratory factor analysis per group variable will explore Research Objective One of this study.
Inferential Statistics	Chi-square test for proportions indicates if there is a statistically significant difference between the proportions of participants who agree or disagree with a particular research variable (Field, 2012)	Chi-squared test will be used for Research Objective One with the variables that were developed.

#### 4.8.1.2 Qualitative Data Analysis for Research Objective One

The qualitative data analysis for Research Objective One is based on the strategic, operational, and tactical levels of PM at AFB Ysterplaat and sets out to corroborate the quantitative findings. This is achieved by means of the interview responses from both participants with respect to the AFB Ysterplaat's management processes, how performance was previously measured and how it is currently measured. In addition, it provided information on participant's knowledge of strategic performance management tools and the regularity of performance appraisals conducted at AFB Ysterplaat.

#### 4.8.1.3 Triangulation of Research Objective One

The triangulation of Research Objective One is based on the strategic, operational, and tactical levels of PM at AFB Ysterplaat. In addition, the triangulation of Research Objective One is achieved by condensing the results and findings of the questionnaire and interview responses

of the participants. The participant responses relate to the AFB Ysterplaat's management processes, how performance was previously measured and how it is currently measured. In addition, the participants responses showed knowledge of strategic performance management tools and how performance appraisals are conducted at a regular basis at AFB Ysterplaat.

#### **4.8.2 Research Objective Two: To determine the organisational requirements to develop a Performance Management System at AFB Ysterplaat**

Research Objective Two sets out to evaluate the organisational requirements for a PMS at AFB Ysterplaat by means of quantitative and qualitative data analysis and triangulation.

##### **4.8.2.1 Quantitative Data Analysis for Research Objective Two**

The quantitative data analysis for Research Objective Two is based on the strategic, operational and tactical levels of PM and consists of two groups of variables. The first group of variables considers internal and external customers of AFB Ysterplaat as well as the specific criteria and requirements for a PMS at AFB Ysterplaat. The variables that were developed for the first group were (QV4, QV5, QV14, QV15, QV16). The second group of variables consider how effective the EFQM was and the current RIMS and PMDS at AFB Ysterplaat. Furthermore, it explores the appropriateness of a PMS and finally, the implementation of a PMS that could lead to an improvement at AFB Ysterplaat. The variables that were developed for the second group of variables were (QV7, QV8, QV12, QV24). Table 4.3 below depicts the data plan to reach Research Objective Two.

**Table 4.3:** Statistical analysis to explore the organisational requirements for a PMS at AFB Ysterplaat

<b>Name of statistical analysis</b>	<b>Purpose of statistical analysis</b>	<b>Specific study details</b>
Cronbach Alpha	Cronbach's Alpha is used to measure the internal reliability of data (Gorrell, Ford, Madden and Eaglestone, 2010).	Cronbach's Alpha test ensures that each conceptual elements of variables is internally reliable.
Descriptive statistics per individual variable	Univariate analysis is the analysing of one variable of data and expresses the proportion of participants per choice provided on the Lickert scale (Mann and Lacke, 2010).	Univariate analysis per variable in Section One, Two and Three) (which evaluated the internal and external customers of AFB Ysterplaat as well as the specific criteria and requirements for a PMS

		at AFB Ysterplaat. Moreover, the appropriateness and performance improvement for AFB Ysterplaat.
Factor Analysis (Exploratory)	Exploratory Factor is a multivariate method that attempts to identify the smallest number of hypothetical constructs that can parsimoniously explain the covariation observed among a set of measured variables (Brown, 2015).	Exploratory factor analysis per group variable will explore Research Objective Two of this study.
Inferential Statistics	Chi-square test for proportions indicates if there is a statistically significant difference between the proportions of participants who agree or disagree with a particular research variable (Field, 2012)	Chi-squared test will be used for Research Objective Two with the variables that were developed.

#### 4.8.2.2 Qualitative Data Analysis for Research Objective Two

The qualitative data analysis for Research Objective Two is based on the strategic, operational, and tactical levels of PM at AFB Ysterplaat and sets out to corroborate the quantitative findings. This will be achieved by means of the interview responses from both participants with respect to internal and external customers of AFB Ysterplaat as well as the specific criteria and requirements for a PMS at AFB Ysterplaat. This will be followed by the second part of the research objective that will consider how effective the EFQM was and the current RIMS and PMDS at AFB Ysterplaat. Furthermore, the appropriateness of a PMS and whether the implementation of a PMS can lead to an improvement at AFB Ysterplaat will also be evaluated.

#### 4.8.2.3 Triangulation of Research Objective Two

The triangulation of Research Objective Two is based on the strategic, operational, and tactical levels of PM at AFB Ysterplaat. In addition, the triangulation of Research Objective Two is achieved by condensing the results and findings of the questionnaire and interview responses of the participants with respect to internal and external customers of AFB Ysterplaat as well as the specific criteria and requirements for a PMS. In addition, this objective is achieved by

condensing of results regarding the effectiveness of EFQM and the current RIMS and PMDS at AFB Ysterplaat. Furthermore, the appropriateness of a PMS and whether the implementation of a PMS can lead to an improvement at AFB Ysterplaat will also be condensed.

**4.8.3.1 Research Objective Three: To evaluate the benefits and barriers to implementation of a PMS at AFB Ysterplaat**

Research Objective Three set out to evaluate the benefits and barriers to implementation of a PMS at AFB Ysterplaat by means of quantitative and qualitative data analysis and triangulation.

**4.8.3.2 Quantitative Data Analysis for Research Objective Three**

The quantitative data analysis for Research Objective Three is based on the strategic, operational, and tactical levels of PM at AFB Ysterplaat and evaluates whether the management of a PMS will be considered an additional task, the need for a PMS and the capacity to develop and maintain a PMS at AFB Ysterplaat. In addition, the analysis evaluates the benefits and barriers, while implementation and improvement factors are also explored. The following variables are relevant to this research objective (QV11, QV13, QV17, QV18, QV20, QV21, QV22, QV23). Table 4.4 below depicts the data plan to reach Research Objective Three.

**Table 4.4:** Statistical analysis to explore the implementation and improvement factors at AFB Ysterplaat

<b>Name of statistical analysis</b>	<b>Purpose of statistical analysis</b>	<b>Specific study details</b>
Cronbach Alpha	Cronbach’s Alpha is used to measure the internal reliability of data (Gorrell, Ford, Madden and Eaglestone, 2010).	Cronbach’s Alpha test ensures that each conceptual elements of variables is internally reliable.
Descriptive statistics per individual variable	Univariate analysis is the analysing of one variable of data and expresses the proportion of participants per choice provided on the Lickert scale (Mann and Lacke, 2010).	Univariate analysis per variable in Section One, Two and Three) (which evaluated the benefits and barriers to implementation of a PMS at AFB Ysterplaat. In addition, can

		a PMS lead to improvement at AFB Ysterplaat.
Factor Analysis (Exploratory)	Exploratory Factor is a multivariate method that attempts to identify the smallest number of hypothetical constructs that can parsimoniously explain the covariation observed among a set of measured variables (Brown, 2015).	Exploratory factor analysis per group variable will explored Research Objective Three of this study.
Inferential Statistics	Chi-square test for proportions indicates if there is a statistically significant difference between the proportions of participants who agree or disagree with a particular research variable (Field, 2012)	Chi-squared test will be used for Research Objective Three with the variables that were developed.

#### 4.8.3.2 Qualitative Data Analysis for Research Objective Three

The qualitative data analysis for Research Objective Three is based on the strategic, operational, and tactical levels of PM at AFB Ysterplaat and sets out to corroborate the quantitative findings. This is achieved by means of the interview responses from both participants with respect to the management of a PMS being considered an additional task, the need for a PMS and the capacity to develop and maintain a PMS at AFB Ysterplaat. Furthermore, the responses with respect to the benefits and barriers, implementation and improvement factors are also explored.

#### 4.8.3.3 Triangulation of Research Objective Three

The triangulation of Research Objective Three is based on the strategic, operational, and tactical levels of PM at AFB Ysterplaat. In addition, the triangulation of Research Objective Three is achieved by condensing the results and findings of the questionnaire and interview responses of the participants with respect to the management of a PMS being considered an additional task, the need for a PMS and the capacity to develop and maintain a PMS at AFB Ysterplaat. In addition, the condensing of results of the benefits and barriers to implementation and improvement factors are also explored.

#### **4.9 Data Validity and Reliability**

Validity and reliability are essentially concepts that evaluate the quality of the research (Watkins, 2016; Neuman, 2010). Collis and Hussey (2014) refer to data validity as the authenticity of the data and the methodology and how it denotes what is happening within the research. In essence, the picture presented by the research must be the truest reflection possible of what is being studied. This research used the triangulated mixed methods approach that creates oversight and verifies data validity's credibility (Neuman, 2010; Creswell, 2014). Swartz (2019) citing Bartlett (2014) advocates that the pilot study ensures validity overall, including both quantitative and qualitative components of the research. Swartz (2019) opines that validity and reliability are not inherent properties pertaining to a method. The author adds that it is derived from the data collected and the conclusion reached by using a particular method in a particular context for a particular research purpose.

Neuman (2010) and Creswell (2014) report that reliability is concerned with the approach used to ensure that the research study provides consistent results that is repeatable. In this study, Cronbach Alpha will be used to gauge the internal consistency (Takavol and Dennick, 2011). The authors advise that a Cronbach Alpha above 0.7 indicates that if the research is applied again, the results will be the same and therefore will deem the study reliable. In addition, Strydom (2017) advocates that a sample size of 20 percent is appropriate, thus in this research study, 80 participants are considered acceptable. However, to ensure reliability and to contribute to the representativeness of the sampling frame, 85 participants will be selected for the sample.

#### **4.10 Guiding Ethical Principles and Considerations**

Watkins (2016) argues that ethics is the appropriateness of an individual's behaviour in relation to the rights of those subjected to the individuals work, or who are affected by it. Ethics and its consideration will be adhered to in this research study in accordance with FEBE Ethics guidelines as mandated by the CPUT DISE Department. Since research was conducted on participants of AFB Ysterplaat, it is paramount that their well-being be the top priority pertaining to the confidentiality of the information and consent obtained to conduct the questionnaires and semi-structured interviews.

#### **4.11 Chapter Summary**

This chapter presented the empirical (pragmatic) plan that was followed in this research. The methodological approach was explained prior to the broad details of the triangulated mixed

methods research design to meet the research objectives of this study. A pilot study was conducted and a data analysis plan to meet the objectives was introduced. Validity, reliability and ethical considerations pertaining to the research design were also discussed in this chapter.

The following chapter presents the statistical analysis of data collected in the initial empirical phase of this study. The analysis of the quantitative data as described, yields critical findings to meet the research objectives of the study. These findings will be supported and corroborated by the semi-structured interviews that were conducted. The concluding of the quantitative and qualitative results will be used for triangulation of each variable.

## CHAPTER FIVE - PRESENTATION OF RESULTS

*If at first you don't succeed, try two more times so that your failure is statistically significant*  
*- Anonymous*

### 5.1 Introduction and Data Collection overview

This chapter presents the results of data analysis and discusses the findings of the main study. In the forthcoming sections of this chapter, the results that are derived from the quantitative data analysis will be presented and thereafter the qualitative results from the interviews will be used to corroborate the quantitative findings during the process of triangulation. Internal validity (reliability) was assured by Cronbach's alpha in the quantitative phase for both the pilot and main study. Ultimately, the results presented in this chapter discuss the need for a comprehensive PMS at AFB Ysterplaat that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.

Quantitative data was collected using a questionnaire over a period of ten days from May and June 2021 at AFB Ysterplaat. The researcher ensured that the employees of AFB Ysterplaat were made aware that the questionnaire is in a back-to-back format prior to completion of the questionnaire, and that completing the questionnaire was voluntary, no rewards would be provided and there would be no penalty for refusing to complete it. A dedicated drop box was available for the completed questionnaires. A total of 85 questionnaires were completed by the strategic, operational and tactical team of management of AFB Ysterplaat, which comprised of different nominal groups (ranks). Significantly, a 100 percent response rate was achieved during the undertaking. Quantitative data was then analysed using SPSS version 27.0 in terms of, 1) the elements required by AFB Ysterplaat in regard to strategic performance management, 2) the organisational requirements to develop a PMS at AFB Ysterplaat and 3) the benefits and barriers to implementation of a PMS at AFB Ysterplaat.

Similarly, the qualitative data was collected using semi-structured interviews. Qualitative data collection took place after quantitative data collection over a period of two days in July 2021 at AFB Ysterplaat. The semi-structured interviews were conducted on an Officer Commanding and a senior coordinator of operational units at AFB Ysterplaat. Informed consent was obtained before the interviews were conducted. The interviews did not exceed the planned 60 minutes in duration. The time allocated was considered adequate by the researcher to comprehensively probe different aspects of performance management at AFB Ysterplaat with interviewees. The

audio recording was then transcribed, analysed and used to corroborate the findings derived from the analysis of quantitative data.

For both the quantitative and qualitative data collection, convenience sampling was performed at various times, Monday to Friday during 07h00 and 15h30, which is the AFB Ysterplaat official working hours. Participants were approached at their places and location of work. All the participants of AFB Ysterplaat were briefed on the project, before they signed the questionnaire and semi-structured interview consent forms respectively.

The quantitative and qualitative data collection process occurred during the COVID 19 pandemic, therefore, the researcher ensured that all COVID 19 protocols (i.e., social distancing, wearing of masks, sanitisation) were adhered to at all times.

## 5.2 Reliability of Grouped Variables

Prior to further data analysis, a Cronbach Alpha statistical test was performed to test the reliability of the questions and whether reproducible and reliable responses were received from the participants. Takavol and Dennick, (2011) point out that Cronbach Alpha statistical test is a statistic that measures the internal consistency amongst a set of questionnaire statements. Subsequently, the results derived from the analysis of the variable in each of these groups are presented in Table 5.1.

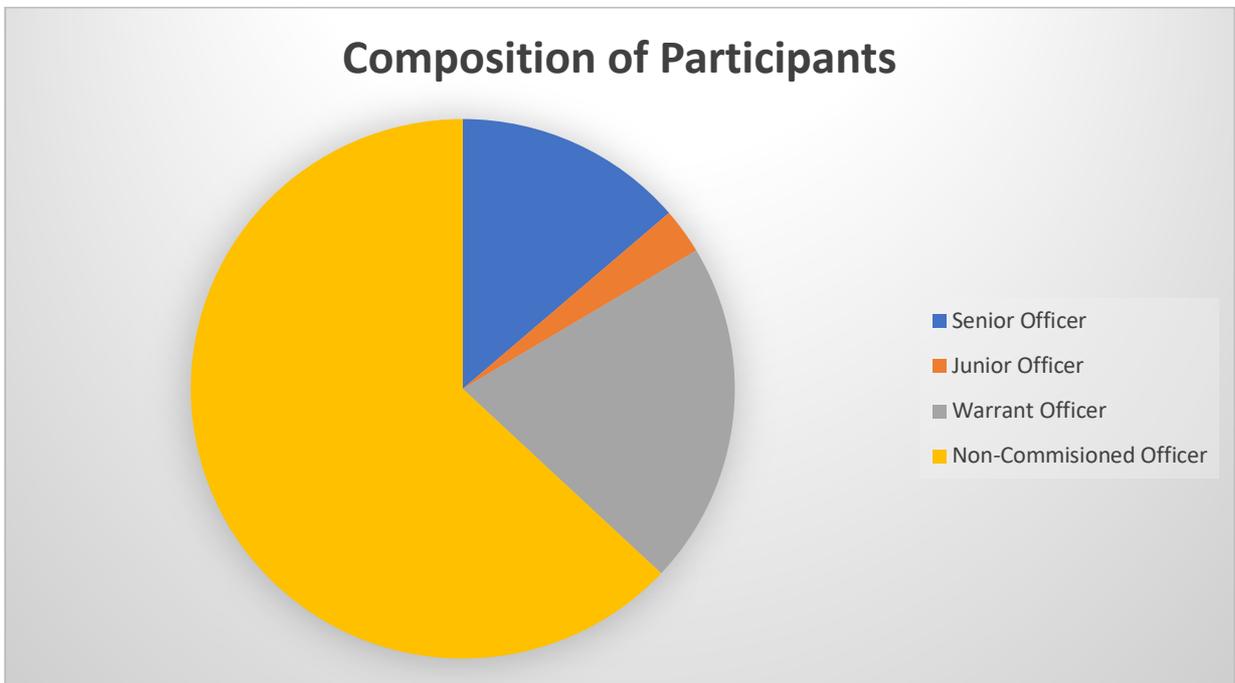
**Table 5.1:** Cronbach Alpha results for the three research objectives

S/N	Research Objective	Description	Cronbach Alpha
RO1	What are the aspects required by AFB Ysterplaat in regard to strategic performance management?	Strategic Performance Management aspects - RO1 (QV1, QV2, QV3, QV6, QV9, QV10 and QV19)	0.727
RO2	What are the requirements for a PMS at AFB Ysterplaat?	Performance management requirements – RO2a (QV4, QV5, QV14, QV15, QV16)	0.816
		Need and Appropriateness of a PMS at AFB Ysterplaat – RO2b QV7, QV8, QV12 and QV24)	0.717

RO3	What are the benefits and barriers to implementation of a PMS at AFB Ysterplaat?	Implementation and improvements aspects RO3 (QV11, QV13 QV17, QV18, QV20, QV21, QV22 and QV23)	0.808
<b>Legend:</b>			
<ul style="list-style-type: none"> <li>• RO = Research Objective</li> <li>• QV = Quantitative Variable</li> </ul>			

### 5.3 Composition of Research Participants

The composition of participants who completed the questionnaire and their different rankings is displayed in Figure 5.1.



**Figure 5.1:** Composition of Ranking

According to the analysis, 73/85 (86%) of the questionnaires were completed. It is evident from Figure 5.1 that a large number of participants fall in the Non-Commissioned Officer and Warrant Officer rank groups, 46/73 (64%) and 15/73 (21%) respectively. While the Senior Officers (SO's) and Junior Officers (JO's) contributed 10/73 (14%) and less than (2/73) 1% respectively to the completion of the questionnaire.

## 5.4 Factor Analysis

Factor analysis was employed as a statistical technique to reduce the quantity of data and to group the variables according to their common theme (Doherty-Bugari, 2014). The factor analysis of the responses to the twenty-four questions performed by SPSS identified six factor groups and is shown in Table 5.2.

**Table 5.2:** Factor Analysis according to SPSS

Item No	Factor Item Description	Factor Grouping (Theme)
QV17	PMS development capacity	1
QV18	PMS maintenance capacity	1
QV13	PMS need	1
QV22	PMS benefits	1
QV20	PMS implementation and improvement perceptions	1
QV24	PMS implementation and improvement	1
QV4	Internal customers	2
QV5	External customers	2
QV14	Strategic Performance Management specific criteria	2
QV15	PMS requirements	2
QV16	PMS requirements capability	3
QV7	EFQM Excellence Model effectiveness	3
QV8	Current measurement tools used	3
QV12	PMS appropriateness	3
QV23	PMS implementation perceptions	3
QV1	Management processes	4
QV2	Vision, mission, values, objectives and strategy visibility.	4
QV6	Previously used measurement tool effectiveness	4
QV9	Balanced Scorecard Familiarization	4
QV2	Vision, mission, values, objectives and strategy clear	5
QV10	Previously used measurement method effectiveness (how)	5
QV19	Performance appraisals	5
QV11	PMS as an additional task	6
QV21	Barriers to implementation of a PMS	6

The factor analysis table indicates the allocation by SPSS to each variable (and factor item) into one of the six groups that were identified. Although the response rate for this study is 86% (See Figure 5.1), an analysis of the grouping of the factored items by SPSS, provides no clear reason for responses to be grouped in this way. After consideration of the factored items in

each group and the research objectives, three groups were identified by combining the components in the group as: 1) What are the elements required by AFB Ysterplaat in regard to strategic performance management, 2) What are the organisational requirements to develop a PMS at AFB Ysterplaat and 3) What are the benefits and barriers to implementation of a PMS at AFB Ysterplaat. The refined component grouping that was developed is shown in Table 5.3.

**Table 5.3:** Factor item description with refined component grouping

<b>Item No.</b>	<b>Factor Item Description</b>	<b>Refined Component Grouping</b>
QV1	Management processes	1
QV2	Vision, mission, values, objectives and strategy clear	1
QV3	Vision, mission, values, objectives and strategy visibility	1
QV6	Previously used measurement method effectiveness (how)	1
QV9	Balanced scorecard familiarization	1
QV10	Currently measured performance	1
QV19	Performance appraisals	1
QV4	Internal customers	2a
QV5	External customers	2a
QV14	Strategic performance management specific criteria	2a
QV15	PMS requirements	2a
QV16	PMS requirements capability	2a
QV7	EFQM Excellence Model effectiveness	2b
QV8	Current measurement tool used	2b
QV12	PMS appropriateness	2b
QV23	PMS implementation perception	2b
QV11	PMS as an additional task	3
QV13	PMS need	3
QV17	PMS development capacity	3
QV18	PMS maintenance capacity	3
QV21	PMS barriers to implementation	3
QV22	PMS benefits	3
QV22	PMS implementation perception	3
QV24	PMS implementation and improvement	3

The aforementioned factor analysis table groups the content of the questions into three broad groups and is colour coded accordingly. A summarised frequency table with a description of the factor theme and factor item is represented below in Table 5.4

**Table 5.4:** Factor theme descriptors and number of variables per SPSS group

<b>Factor Number</b>	<b>Factor theme group descriptor</b>	<b>Total</b>
1.000	Strategic performance management elements	7
2.000	PMS organisational requirements.	9
3.000	PMS implementation and improvement factors	8

Factor analysis was used to support the results of Cronbach Alpha and thereby the groupings were confirmed as represented in Table 5.1 - Table 5.4. The following sections will analyse and discuss the respective research objectives.

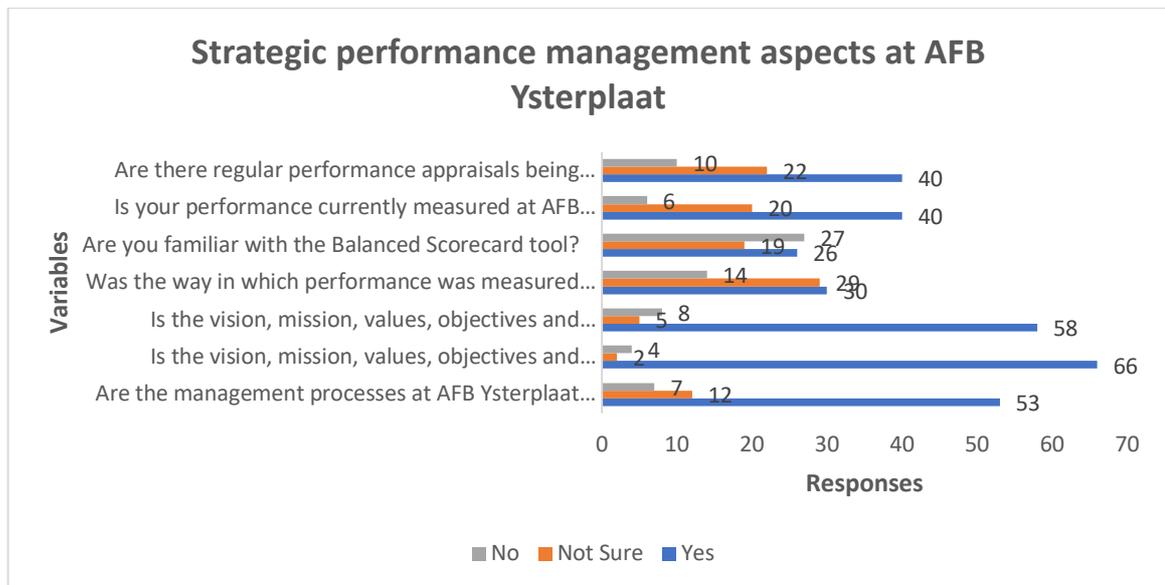
### **5.5 Research Objective One: To determine the elements required by AFB Ysterplaat in regard to strategic performance management**

There were seven variables related to the first research objective. These variables are listed in Table 5.5.

**Table 5.5:** Variable Description for Research Objective One

<b>Variable No.</b>	<b>Variable Description</b>
<b>QV1</b>	Clarity on management processes at AFB Ysterplaat clear Management processes.
<b>QV2</b>	Clarity of the vision, mission, values, objectives and strategy of AFB Ysterplaat.
<b>QV3</b>	Visibility of the vision, mission, values, objectives and strategy of AFB Ysterplaat at prominent places in and around the base.
<b>QV6</b>	Effectiveness of how performance was measured previously.
<b>QV9</b>	Familiarity with the Balanced Scorecard tool.
<b>QV10</b>	Individual performance measured at AFB Ysterplaat.
<b>QV19</b>	Regular performance appraisals conducted at AFB Ysterplaat.

The distribution of the responses from the participants is shown in Figure 5.2. Each variable is analysed accordingly.



**Figure 5.2:** Strategic Performance Management Aspects

### 5.5.1 Clarity on the Management Processes at AFB Ysterplaat

The management process at AFB Ysterplaat refers to the higher-level processes such as command and control, aviation safety, communication, reporting, human resource, asset and facility management and financial management.

**Table 5.5.1:** Clarity on the management processes at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV1	Clarity on the management processes at AFB Ysterplaat	Senior Officer	9	1	0
		Junior Officer	2	0	0
		Warrant Officer	13	0	1
		Non-Commissioned Officer	29	11	6

An analysis of Table 5.5.1 indicates the following:

- 73.6% of participants agreed that the management processes were clear.
- 16.7% of participants were not sure about the management processes.
- 9.7% of participants indicated that the management processes were not clear.

Most participants ( $n=43$ ) reported that the management processes at AFB Ysterplaat are clear. The majority of participants that agreed with this statement were from the NCO's and WO's

ranks. It should be noted that although the SO's and JO's had fewer responses, their response percentage reflects 90% and 100% respectively.

Further analysis was undertaken to explore whether there was any significant difference between the management processes at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (6, N=72) = 45.214, p = 0.00001$ .

The responses from the interview regarding the management processes at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, if I look at various meetings that take place like the BCC meeting, the different procurement and financial meetings, the employee wellbeing and so on. So, there is clear guidance for these management meetings and is scheduled according to the year planner.*

*Participant 2: Well, with respect to the different management meetings that take place during the week and also on a monthly basis. I would say that the management processes are clear, and this makes the base function effectively.*

The responses from the Officer Commanding and senior coordinator of the operational units suggest that the management processes at AFB Ysterplaat are clear.

The responses from the strategic, operational and tactical levels of management also indicated that the management processes are clear, therefore it can be concluded that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the management processes at AFB Ysterplaat are clear.

### **5.5.2 Clarity on the Vision, Mission, Values, Objectives and Strategy of AFB Ysterplaat**

The vision, mission, values, objectives and strategy of AFB Ysterplaat is reflected by how well the above-mentioned is formulated, documented and the participants' perception of how clear it is.

**Table 5.5.2:** Clarity on the vision, mission, values, objectives and strategy of AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV2	Clarity of the vision, mission, values, objectives and strategy of AFB Ysterplaat	Senior Officer	10	0	0
		Junior Officer	2	0	0
		Warrant Officer	13	1	1
		Non-Commissioned Officer	41	1	3

An analysis of Table 5.5.2 indicates the following:

- 91.7% of participants agreed that the vision, mission, values, objectives and strategy of AFB Ysterplaat were clear.
- 2.8% of participants were not sure that the vision, mission, values, objectives and strategy of AFB Ysterplaat were clear.
- 5.6% of participants indicated that the vision, mission, values, objectives and strategy of AFB Ysterplaat were not clear.

Most participants ( $n=66$ ) indicated that the vision, mission, values, objectives and strategy of AFB Ysterplaat is clear. This result is an indication that the strategic direction has been crafted effectively and that the employees understand.

Further analysis was undertaken to explore whether there was any significant difference between the clarity of the vision, mission, values, objectives and strategy of AFB Ysterplaat and responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (6, N=72) = 134.000, p = 0.00001$ .

The responses from the interview regarding the vision, mission, values, objectives and strategy of AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, I think it is clear. We do go through the process of evaluating whether they are still valid.*

*Participant 2: Yes, there is a vision and mission and there are strategic objectives. However, this gets managed on an annual basis.*

Analysis of qualitative data found that the Officer Commanding and senior coordinator of the operational units concur that the vision, mission, values, objectives and strategy of AFB

Ysterplaat is clear. Moreover, qualitative analysis of the responses from the strategic, operational and tactical levels of management yielded the same results. Thus, it can be concluded that the qualitative analysis corroborates the findings revealed, that the vision, mission, values, objectives and strategy of AFB Ysterplaat is clear.

### 5.5.3 Visibility of the Vision, Mission, Values, Objectives and Strategy of AFB Ysterplaat at prominent places in and around the Base

This question analyses how well the vision, mission, values, objectives and strategy of AFB Ysterplaat is communicated by way of publicising it around the base for all employees to see, interpret and experience. This result is an indication that the strategic direction is communicated effectively and is understood by the employees.

**Table 5.5.3:** Visibility of the vision, mission, values, objectives and strategy of AFB Ysterplaat at prominent places in and around the base

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV3	Visibility of the vision, mission, values, objectives and strategy of AFB Ysterplaat at prominent places in and around the base	Senior Officer	8	1	1
		Junior Officer	1	1	0
		Warrant Officer	13	0	2
		Non-Commissioned Officer	36	3	5

An analysis of Table 5.5.3 indicates the following:

- 81.7% of participants agreed that the vision, mission, values, objectives and strategy of AFB Ysterplaat were visible at prominent places in and around the base.
- 7.0% of participants were not sure about the vision, mission, values, objectives and strategy of AFB Ysterplaat were visible at prominent places in and around the base.
- 11.3% of participants indicated that the vision, mission, values, objectives and strategy of AFB Ysterplaat were not visible at prominent places in and around the base.

Further analysis was undertaken to explore whether there was any significant difference between the vision, mission, values, objectives and strategy of AFB Ysterplaat being visible at prominent places in and around the base and the responses from the different ranks. A chi-

square test of independence revealed that there is an association between these variables,  $\chi^2(6, N=71) = 83.741, p = 0.00001$ ).

The responses from the interview regarding the vision, mission, values, objectives and strategy of AFB Ysterplaat being visible at prominent places in and around the base are shown below. The participants stated the following:

*Participant 1: Yes, I have been on the base for quite some time and if you walk into the foyer of any of the units, you will find these posters up of the vision, mission, the values and so on. The strategy however is normally documented in our business plan.*

*Participant 2: Yes, definitely, if you enter the base, there is a huge board displaying the vision, mission values of the base. There are other places like at the units where it is also displayed.*

These qualitative responses from the Officer Commanding and senior coordinator of the operational units suggest that the values, objectives and strategy of AFB Ysterplaat are displayed at prominent places in and around the base. This is firmly in support of the responses from the strategic, operational and tactical levels of management. Therefore, this study deduces that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the vision, mission, values, objectives and strategy of AFB Ysterplaat is visible at prominent places in and around the base.

#### 5.5.4 Effectiveness of how performance was measured previously

The question analyses the way performance was previously measured (i.e., EFQM, SAEF) at AFB Ysterplaat.

**Table 5.5.4:** Effectiveness of how performance was measured previously

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV6	Effectiveness of how performance was measured previously	Senior Officer	5	3	2
		Junior Officer	0	2	0
		Warrant Officer	9	2	4
		Non-Commissioned Officer	16	22	8

An analysis of Table 5.5.4 indicates the following:

- 41.1% of participants agreed that the way in which performance was previously measured was effective.
- 39.7% of participants were not sure whether the way in which performance was previously measured was effective.
- 19.2% of participants indicated that that the way in which performance was previously measured was not effective.

The analysis shows a large number of the participants were unsure whether performance was effectively measured in the past ( $n=29$ ), while ( $n=14$ ) believes that the way performance was previously measured was ineffective.

Further analysis was undertaken to explore whether there was any significant difference between the way in which performance was previously measured and the responses from the different ranks. A chi-square test of independence revealed that there is no association between these variables,  $\chi^2 (6, N=73) = 4.894, p = 0.087$ .

The responses from the interview regarding the way in which performance was measured previously are shown below. The participants stated the following:

*Participant 1: It became so monotonous in a way because the way the measurement worked seemed like it was more for a profit-making company, which made it difficult for employees of say Air Force Base Ysterplaat or whichever military organisation.*

*Participant 2: I've been an NCO, I wasn't really exposed to all the TQM, SAEF and EFQM that we actually had.*

Even though the experience of the participants is different with regards to the previously used performance model, there is consensus from both the Officer Commanding and the senior coordinator that the way performance was previously measured was ineffective. This is consistent with the responses from the strategic, operational and tactical levels of management. It can be concluded that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the previous performance measurement models and tools were not effective.

### 5.5.5 Familiarity with the Balanced Scorecard Tool

The balanced scorecard is a strategic performance management tool used to measure organisational performance (Thota and Munir, 2011). The question interrogated the familiarity of the participants regarding strategic performance management tools available.

**Table 5.5.5:** Familiarity with the Balanced Scorecard tool

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV9	Familiarity with the Balanced Scorecard tool.	Senior Officer	4	0	6
		Junior Officer	1	1	0
		Warrant Officer	9	3	2
		Non-Commissioned Officer	12	15	19

An analysis of Table 5.5.5 indicates the following:

- 36.1% of participants were familiar with the Balanced Scorecard tool.
- 26.4% of participants were not sure what the Balanced Scorecard is tool.
- 37.5% of participants indicated that they did not know what the Balanced Scorecard tool is.

The analysis shows a large number of the participants either have no knowledge of what the Balanced Scorecard is ( $n=27$ ) or are unsure ( $n=19$ ) what the Balanced Scorecard tool is. This is indicative of the limited knowledge from the strategic, operational and tactical levels of management at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between the familiarity of the Balanced Scorecard and the responses from the different ranks. A chi-square test of independence revealed that there is no association between these variables,  $\chi^2 (6, N=72) = 2.786, p=0.248$ .

The responses from the interview regarding participant knowledge of the Balanced Scorecard are shown below. The participants stated the following:

*Participant 1: The balanced scorecard I think it would move more in the direction of what we would want to measure, what is our particular output as a company that or an organisation that prevents loss.*

*Participant 2: Balanced Scorecard, it is basically also a management tool, with which you can also measure the output with performance. How exactly it works, I'm not really sure.*

Although the views of the two participants differ in terms of the BSC, there is agreement that both the Officer Commanding and the senior coordinator of the operational units have limited knowledge of the BSC. This concurs with the responses from the strategic, operational and tactical levels of management. Thus, it can be deduced that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the participants have limited knowledge pertaining to quality and performance tools available.

### 5.5.6 Individual Performance Measured at AFB Ysterplaat

This question analyses the individual's performance being measured by means of the PMDS.

**Table 5.5.6:** Individual performance measured at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV10	Individual performance measured at AFB Ysterplaat	Senior Officer	9	1	0
		Junior Officer	2	0	0
		Warrant Officer	11	2	1
		Non-Commissioned Officer	18	17	5

An analysis of Table 5.5.6 indicates the following:

- 60.6% of participants agreed that their performance is currently measured at AFB Ysterplaat.
- 30.3% of participants were not sure whether their performance is currently measured at AFB Ysterplaat.
- 9.1% of participants indicated that their performance is not currently measured at AFB Ysterplaat.

Most participants ( $n=40$ ) agreed that their performance is currently measured at AFB Ysterplaat, while ( $n=26$ ) were either not sure or disagreed that their performance was measured at AFB Ysterplaat.

The analysis shows a large number of the participants either have no knowledge of what the Balanced Scorecard is ( $n=27$ ) or are unsure ( $n=19$ ) what the Balanced Scorecard is. This is indicative of the limited knowledge from the strategic, operational and tactical levels of management at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between the individual's performance measurement and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2(6, N=66) = 32.909, p = 0.00001$ . The responses from the interview on whether the participant's performance is measured at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, we have something that's called the PMDS.*

*Participant 2: Yes, we make use of the PMDS and that also is a type of a management tool that the Department of Defence uses.*

Both participants responses indicate that individual performance is measured at AFB Ysterplaat by means of the PMDS that is used throughout the Department of Defence. This confirms that employee performance is primarily measured on a tactical level. For this reason, and with regard to the responses from the strategic, operational and tactical levels of management, it can be inferred that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the individual's performance is measured at AFB Ysterplaat using the PMDS.

### 5.5.7 Regular Performance Appraisals conducted at AFB Ysterplaat

The question posed refers to the frequency of performance appraisals at AFB Ysterplaat.

**Table 5.5.7:** Regular performance appraisals conducted at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV19	Regular performance appraisals conducted at AFB Ysterplaat	Senior Officer	7	2	1
		Junior Officer	1	1	0
		Warrant Officer	11	2	2
		Non-Commissioned Officer	21	17	7

An analysis of Table 5.5.7 indicates the following:

- 55.6% of participants agreed that regular performance appraisals were conducted at AFB Ysterplaat.
- 30.6% of participants were not sure whether regular performance appraisals were conducted at AFB Ysterplaat.
- 13.9% of participants indicated that regular performance appraisals were not conducted at AFB Ysterplaat.

Most participants ( $n=40$ ) agreed that regular performance appraisals were conducted at AFB Ysterplaat, while ( $n=32$ ) were either not sure or disagreed that regular performance appraisals are being conducted at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between regular performance appraisals being conducted at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (6, N=72) = 25.470, p = 0.00001$ .

The responses from the interview regarding regular performance appraisals being conducted at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: The performance appraisal at AFB Ysterplaat. Well, it's supposed to be annually, but you get a midterm in-between. And then, before the end of the financial year, there's a final assessment.*

*Participant 2: They built into the system a bi annual assessment, I think. The bi-annual hardly happens as supposed to but the focus is at the end of the year, because I've actually got to submit something onto the system.*

The Officer Commanding and senior coordinator of the operational units indicate that two performance appraisals are being conducted per year at AFB Ysterplaat. Participant 2 suggested that the performance appraisal is just to submit something onto the system. The responses from the strategic, operational and tactical levels of management confirms that the qualitative analysis corroborates the findings revealed by the quantitative analysis that although regular performance appraisals are being conducted at AFB Ysterplaat, participants complete the assessment as a last-minute compliance exercise (Saravanja, 2010; Swartz, 2017).

## 5.6 Research Objective Two: To determine the organisational requirements to develop a PMS at AFB Ysterplaat

This research objective comprises two groups of variables. The first group of variables analysed the performance management requirements. The second group of variables analysed the appropriateness of a PMS at AFB Ysterplaat. Both groups of variables will be discussed next in more detail.

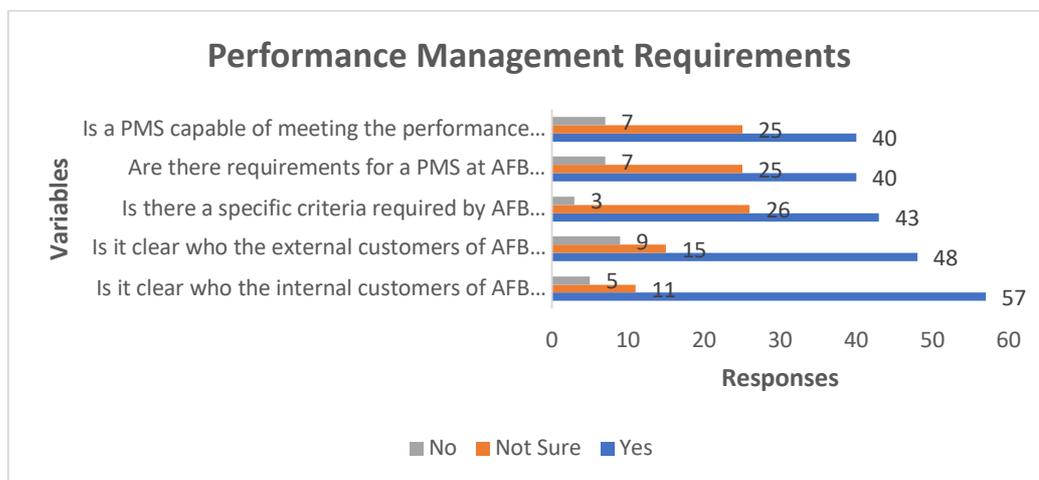
### 5.6.1 Research Objective Two (a): Performance Management Requirements

The first part of the second research objective analysed internal and external customers of AFB Ysterplaat as well as the specific criteria and organisational requirements for a PMS at AFB Ysterplaat. In addition, the capability of a PMS to meet the performance requirements of AFB Ysterplaat is analysed. These variables are listed in Table 5.6a.

**Table 5.6a:** Variable description of Research Objective Two (a)

Variable No.	Variable Description
QV4	Clarity who the internal customers of AFB Ysterplaat are.
QV5	Clarity who the external customers of AFB Ysterplaat are.
QV14	Specific criteria required by AFB Ysterplaat in regard to PM.
QV15	Organisational requirements for a PMS at AFB Ysterplaat.
QV16	Capability of PMS to meet the performance requirements of AFB Ysterplaat.

The distribution of the responses from the participants is shown in Figure 5.3a



**Figure 5.3a:** Performance Management Requirements

### 5.6.1.1 Clarity on the Internal Customers of AFB Ysterplaat

The question analyses the knowledge of the participants with regard to the AFB Ysterplaat internal customers.

**Table 5.6.1a:** Internal customers of AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV4	Clarity on the internal customers of AFB Ysterplaat.	Senior Officer	9	1	0
		Junior Officer	2	0	0
		Warrant Officer	14	0	1
		Non-Commissioned Officer	32	10	4

An analysis of Table 5.6.1a indicates the following:

- 78.1% of participants agreed that it is clear who the internal customers of AFB Ysterplaat are.
- 15.1% of participants were not sure who AFB Ysterplaat's internal customers are.
- 6.8% of participants indicated they did not know who AFB Ysterplaat's internal customers are.

Most participants ( $n=57$ ) from all the rank groups agreed that it is clear who the internal customers of AFB Ysterplaat are. The remaining participants ( $n=16$ ) were either not sure or had no knowledge of who the internal customers of AFB Ysterplaat are. This is possibly because the participants are new employees on the base and have not gone through the induction programme that the base presents.

Further analysis was undertaken to explore whether there was any significant difference between who the internal customers of AFB Ysterplaat are and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (4, N=73) = 67.788, p = 0.00001$ .

The responses from the interview regarding the internal customers of AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, well, just the uniformed employees either living or working on Air Force Base Ysterplaat and also the operational units.*

*Participant 2: I would use the word stakeholders; your internal stakeholders are most probably your employees which are the people working on the base and providing a service.*

Qualitative responses indicate that the participants are fully aware of internal customers, however, the participants refer to them using different terminology. This is consistent pertaining to the responses from the strategic, operational and tactical levels of management. It concludes that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the participants are aware who the internal customers of AFB Ysterplaat are.

### 5.6.1.2 Clarity on the External Customers of AFB Ysterplaat

The question analyses the knowledge of the participants with regard to the AFB Ysterplaat external customers.

**Table 5.6.2a:** External Customers of AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV5	Clarity on the external customers of AFB Ysterplaat	Senior Officer	8	2	0
		Junior Officer	2	0	0
		Warrant Officer	14	0	1
		Non-Commissioned Officer	24	13	8

An analysis of Table 5.6.2a indicates the following:

- 66.7% of participants agreed that it is clear who the external customers of AFB Ysterplaat are.
- 20.8% of participants were not sure who AFB Ysterplaat’s external customers are.
- 12.5% of participants indicated they did not know who AFB Ysterplaat’s external customers are.

Most participants ( $n=48$ ) from all the rank groups agreed that it is clear who the external customers of AFB Ysterplaat are. The remaining participants ( $n=24$ ) were either not sure or had no knowledge of who the external customers of AFB Ysterplaat are. This is possibly because the participants are new employees on the base and have not gone through the induction program that the base presents.

Further analysis was undertaken to explore whether there was any significant difference between who the external customers of AFB Ysterplaat are and the responses from the

different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (4, N=72) = 34.929, p = 0.00001$ ).

The responses from the interview regarding the external customers of AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, the external customers are the different arms of service like the Navy, SAHMS and Army bases that we do need to support.*

*Participant 2: Yes, if we talk about external stakeholders, your immediate external stakeholders, I would say your community and society around the base.*

Qualitative responses indicate that both participants are fully aware of the external customers of AFB Ysterplaat. However, Participant 2 refers to external customers as external stakeholders with the same emphasis. It can be construed from the responses of the strategic, operational and tactical levels of management, that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the participants are aware who the external customers of AFB Ysterplaat are.

### 5.6.1.3 Specific Criteria required by AFB Ysterplaat in regard to Strategic PM

The question analyses whether there are specific criteria required by AFB Ysterplaat regarding PM.

**Table 5.6.3a:** Specific Criteria required by AFB Ysterplaat in regard to PM

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV14	Specific criteria required by AFB Ysterplaat in regard of PM?	Senior Officer	7	3	0
		Junior Officer	2	0	0
		Warrant Officer	14	0	1
		Non-Commissioned Officer	20	23	2

An analysis of Table 5.6.3a indicates the following:

- 59.7% of participants agreed that there are specific criteria required by AFB Ysterplaat in regard to PM.
- 36.1% of participants were not sure whether there are specific criteria required by AFB Ysterplaat in regard to PM.

- 4.2% of participants indicated that there are no specific criteria required by AFB Ysterplaat in regard to PM.

Most participants ( $n=43$ ) from all the rank groups agreed that there are specific criteria required for a PMS at AFB Ysterplaat. The remaining participants ( $n=29$ ) were either not sure or had no knowledge whether there are specific criteria required by AFB Ysterplaat with regard to a PMS. This is possibly because participants are functioning at the lower management levels of AFB Ysterplaat as indicated in the responses.

Further analysis was undertaken to explore whether there was any significant difference between specific criteria required by AFB Ysterplaat in regard to strategic PM and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2(4, N=72) = 38.337, p = 0.00001$ .

The responses from the interview regarding specific criteria required by AFB Ysterplaat in regard of strategic PM are shown below. The participants stated the following:

*Participant 1: With Ysterplaat and the criteria, you start with what is our business and our core business is operations, it's flying hours and you got to somehow measure those flying hours.*

*Participant 2: Yes, I think the specific criteria still needs to be developed in terms of guidelines, instruction, what is required and what is to be measured.*

Qualitative response from Participant 1 reveal that the specific criteria must start with the core business, while Participant 2 suggests that the specific criteria need to be developed with considerations for policies and instructions. Both participants agree that there are specific criteria for a PMS at AFB Ysterplaat which is consistent with the responses from the strategic, operational and tactical levels of management. Thus, the qualitative analysis corroborates the findings revealed by the quantitative analysis that there are specific criteria required by AFB Ysterplaat in regard to strategic PM.

#### **5.6.1.4 Organisational Requirements for the PMS at AFB Ysterplaat**

This question analyses AFB Ysterplaat's organisational requirements for a PMS.

**Table 5.6.4a:** Organisational requirements for a PMS at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV15	Organisational requirements for the PMS at AFB Ysterplaat?	Senior Officer	8	1	1
		Junior Officer	1	1	0
		Warrant Officer	11	3	1
		Non-Commissioned Officer	20	20	5

An analysis of Table 5.6.4a indicates the following:

- 55.6% of participants agreed that there are organisational requirements for a PMS at AFB Ysterplaat.
- 34.7% of participants indicated that they were not sure of the organisational requirements for a PMS at AFB Ysterplaat.
- 9.7% of participants indicated that they do not know what the organisational requirements for a PMS at AFB Ysterplaat are.

Most participants ( $n=40$ ) from all the rank groups agreed that there are organisational requirements for a PMS at AFB Ysterplaat. The remaining of participants ( $n=32$ ) were either not sure or had no knowledge whether there are organisational requirements for a PMS by AFB Ysterplaat. This is possibly due to participants that are functioning at the lower levels of management at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between organisational requirements for the PMS at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (4, N=72) = 27.214, p = 0.00001$ .

The responses from the interview regarding the organisational requirements for a PMS at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, I think there are organisational requirements that the base will have in terms of performance management. One such requirement must be that the performance management system must be clearly defined.*

*Participant 2: Firstly, you need to determine what is our purpose here. You can't have a requirement and you don't know what the purpose is. If we put all the*

*organisational requirements together, it must show that we are striving towards the vision and mission of the base.*

The qualitative responses from the two participants not only confirmed quantitative findings, but they also elaborated that the PMS must be clearly defined. In addition, Participant 2, accentuated the purpose and strategy as a departure point to developing the organisational requirements. Therefore, the responses from the strategic, operational and tactical levels of management, concluded that the qualitative analysis corroborates the findings revealed by the quantitative analysis that there are organisational requirements for a PMS at AFB Ysterplaat.

#### **5.6.1.5 Capability of a PMS to meet the Performance Requirements of AFB Ysterplaat**

This question analyses whether a PMS will be capable of meeting the performance requirements of AFB Ysterplaat.

**Table 5.6.5a:** Capability of a PMS to meet the performance requirements of AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV16	Capability of a PMS to meet the performance requirements of AFB Ysterplaat	Senior Officer	7	1	2
		Junior Officer	2	0	0
		Warrant Officer	9	5	1
		Non-Commissioned Officer	22	19	4

An analysis of Table 5.6.5a indicates the following:

- 55.6% of participants agreed that a PMS will be capable of meeting the performance requirements of AFB Ysterplaat.
- 34.7% of participants were not sure that a PMS will be capable of meeting the performance requirements of AFB Ysterplaat.
- 9.7% of participants disagreed that a PMS will be capable of meeting the performance requirements of AFB Ysterplaat.

Most participants ( $n=40$ ) from all the rank groups agreed that PMS will be capable of meeting the performance requirements of AFB Ysterplaat. The remaining of participants ( $n=32$ ) were either not sure or could not with certainty indicate that a PMS will be capable of meeting the performance requirements of AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between a PMS being capable of meeting the performance requirements of AFB Ysterplaat and responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (4, N=72) = 26.000, p = 0.00001$ ).

The responses from the interview regarding the PMS being capable of meeting the performance requirements of AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, I think that a PMS can add some structure in terms of how we measure performance at this stage. Currently, we don't have a system that really gives units performance information on whether they are improving or are idling.*

*Participant 2: Yes, because there are many reporting systems running on the base, but I can say that there is not really a structured system that measures our output performance in terms of systems and operations.*

Qualitative responses from both participants indicate that AFB Ysterplaat is measuring their output performance in an unstructured way. Armstrong (2014) highlights that when an organisation is managing different systems in an unstructured way, the outcome of their performance tends to be less effective. However, both participants agree that a PMS has the ability to meet the organisational performance requirements of AFB Ysterplaat. This is consistent with the responses from the strategic, operational and tactical levels of management. For this reason, the qualitative analysis corroborates the findings revealed by the quantitative analysis that a PMS is capable of meeting the performance requirements of AFB Ysterplaat.

### **5.6.2 Research Objective 2.b: Appropriateness of a PMS**

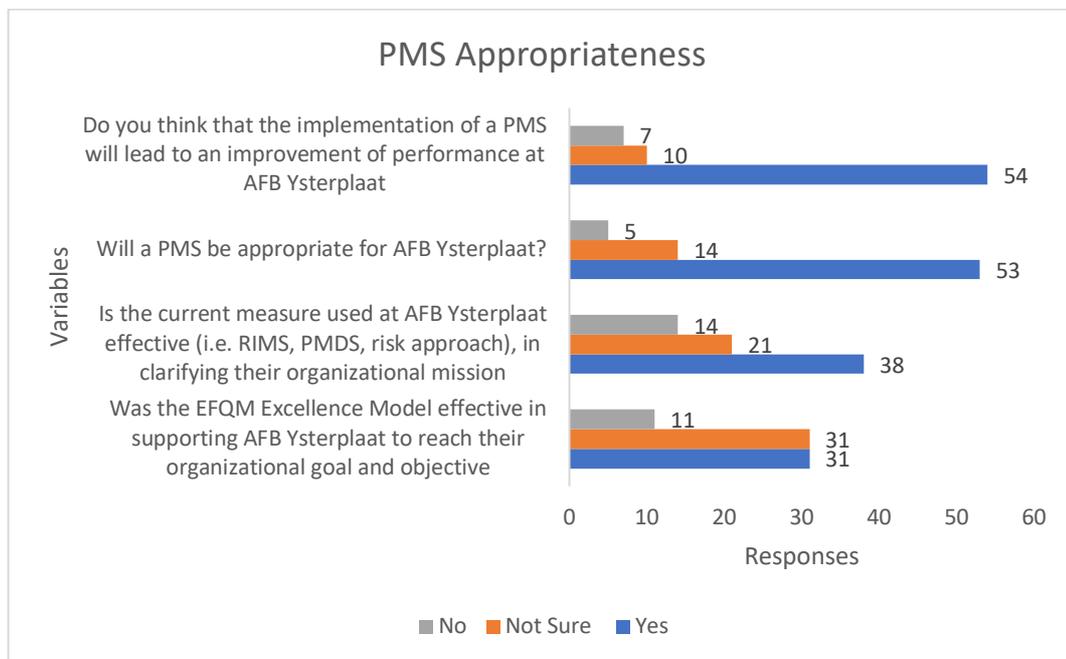
The second part of the second research objective analysed the effectiveness of the EFQM as well as the current RIMS and PMDS at AFB Ysterplaat. Furthermore, it explored the appropriateness of a PMS and finally, the implementation of a PMS leading to an improvement at AFB Ysterplaat.

There were four variables related to the second part of Research Objective Two. These variables are listed in Table 5.6b.

**Table 5.6b:** Variable description of Research Objective Two (b)

Variable No.	Variable Description
QV7	Effectiveness of EFQM Model in supporting AFB Ysterplaat to reach their organisational goals and objectives.
QV8	Effectiveness of the current measurement tools used (i.e., RIMS and PMDS) at AFB Ysterplaat.
QV12	Appropriateness of a PMS for AFB Ysterplaat.
QV24	Perception of PMS implementation leading to an improvement of performance at AFB Ysterplaat.

The distribution of the responses from the participants is shown in Figure 5.3b.



**Figure 5.3b:** Appropriateness of a PMS at AFB Ysterplaat

### 5.6.2.1 Effectiveness of EFQM model in supporting AFB Ysterplaat to reach their Organisational Goals and Objectives

The question analysed the perception of the participants regarding the effectiveness of the EFQM model in supporting AFB Ysterplaat to reach their organisational goals and objectives. While ( $n=31$ ) participants indicated that EFQM was effective, ( $n=43$ ) were either unsure or disagreed that EFQM was effective.

**Table 5.6.1b: EFQM effectiveness**

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV7	Effectiveness of EFQM model in supporting AFB Ysterplaat to reach their organisational goals and objectives.	Senior Officer	3	3	4
		Junior Officer	1	1	0
		Warrant Officer	11	2	2
		Non-Commissioned Officer	16	25	5

An analysis of Table 5.6.1b indicates the following:

- 42.5% of participants agreed that the EFQM model was effective in supporting AFB Ysterplaat to reach their organisational goals and objectives.
- 42.5% of participants were not sure that the EFQM model was effective in supporting AFB Ysterplaat to reach their organisational goals and objectives.
- 15.0% of participants disagreed that the EFQM model was effective in supporting AFB Ysterplaat to reach their organisational goals and objectives.

While ( $n=31$ ) participants indicated that the EFQM model was effective, a larger number of participants ( $n=43$ ) were either unsure or disagreed that EFQM was effective. This possibly indicates that AFB Ysterplaat lacked the willingness and acceptance from employees to participate and an ineffective strategy to implement the model at the strategic, operational and tactical level of management at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between EFQM being effective in supporting AFB Ysterplaat to reach their organisational goals and objectives and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (3, N=73) = 12.729, p = 0.002$ ).

The responses from the interview regarding the effectiveness of the EFQM model supporting AFB Ysterplaat to reach their organisational goals and objectives are shown below. The participants stated the following:

*Participant 1: So EFQM was not very effective. It was not written correctly from the start for us to use. The context of that particular model does measure efficiency. But the way it's structured is for a business model because we are not a profit-making business, so your interpretation of it becomes difficult.*

*Participant 2: With EFQM and those type of models, in the past, your lower levels are not really exposed to that. Where we did have EFQM is when we go into supervisor of managerial posts and if you are not exposed to that you won't know about it. That was my experience.*

The qualitative responses from the Officer Commanding and senior coordinator of the operational units suggest that the EFQM is ineffective in supporting AFB Ysterplaat to reach their organisational goals and objectives. It can be construed, that the reasons provided by the participants of the qualitative analysis and the responses from the strategic, operational and tactical levels of management contributed to the disbandment of the EFQM at AFB Ysterplaat. Therefore, the qualitative analysis corroborates the findings revealed by the quantitative analysis that EFQM was not effective in supporting AFB Ysterplaat to reach their organisational goals and objectives.

#### **5.6.2.2 Effectiveness of the current Performance-Based Tools used at AFB Ysterplaat**

The question analysed how effective the current measurement tool used at AFB Ysterplaat (i.e., RIMS and PMDS) is in clarifying their organisational mission.

**Table 5.6.2b:** Effectiveness of the current performance-based tools used at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV8	Effectiveness of the current performance-based tools used (i.e., RIMS and PMDS) at AFB Ysterplaat.	Senior Officer	5	3	2
		Junior Officer	2	0	0
		Warrant Officer	13	1	1
		Non-Commissioned Officer	18	17	11

An analysis of Table 5.6.2b indicates the following:

- 52.1% of participants agreed that the current performance-based tools (i.e., RIMS and PMDS) used at AFB Ysterplaat is effective in clarifying their organisational mission.
- 28.8% of participants were not sure that the current performance-based tools (i.e., RIMS and PMDS) used at AFB Ysterplaat is effective in clarifying their organisational mission.

- 19.2% of participants disagreed that the current performance-based tools (i.e., RIMS and PMDS) used at AFB Ysterplaat is effective in clarifying their organisational mission.

There is a close margin between the participants that agree ( $n=38$ ) compared to the ( $n=34$ ) participants that either disagree or are not sure that the current performance-based tools (i.e., RIMS and PMDS) used at AFB Ysterplaat is effective in clarifying their organisational mission. Notably, there are more participants in the non-commissioned officers ranks ( $n=28$ ) that indicated that they are either unsure or disagreed that the current performance-based tools (i.e., RIMS and PMDS) used at AFB Ysterplaat is effective in clarifying AFB Ysterplaat's organisational mission.

Further analysis was undertaken to explore whether there was any significant difference between the current measurement tool used at AFB Ysterplaat (i.e., RIMS and PMDS) being effective in clarifying their organisational mission and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (3, N=73) = 11.318, p = 0.003$ .

The responses from the interview regarding the current performance-based tools used at AFB Ysterplaat (i.e., RIMS and PMDS) being effective in clarifying their organisational mission are shown below. The participants stated the following:

*Participant 1: Without sounding too critical, the RIMS is flawed. Once again, the formulas are incorrect. If the criteria were not set correctly from the start. The implementation roll out was not done correctly. And this is probably the same for your risk based and PMDS.*

*Participant 2: Unfortunately, the broader organisation has not really rolled out these systems correctly which leaves the user of the system just inputting data with no real meaning to their operations or output.*

Qualitative responses from the Officer Commanding and senior coordinator of the operational units suggest that the current performance-based tools used at AFB Ysterplaat (i.e., RIMS and PMDS) is flawed and ultimately provide inaccurate output information. In addition, the data that is inputted into the systems is not translated into meaningful management information that can be used to improve efficiency of operations. The responses from the strategic, operational and tactical levels of management deduced that the qualitative analysis does not corroborate the

findings revealed by the quantitative analysis that current performance-based tool used at AFB Ysterplaat (i.e., RIMS and PMDS) is effective in clarifying their organisational mission.

### 5.6.2.3 Appropriateness of a PMS for AFB Ysterplaat

The question analysed whether a PMS will be appropriate for AFB Ysterplaat.

**Table 5.6.3b** Appropriateness of a PMS for AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV12	Appropriateness of a PMS for AFB Ysterplaat.	Senior Officer	8	1	1
		Junior Officer	2	0	0
		Warrant Officer	13	1	1
		Non-Commissioned Officer	30	12	3

An analysis of Table 5.6.3b indicates the following:

- 73.6% of participants agreed that a PMS will be appropriate for AFB Ysterplaat.
- 19.4% of participants were not sure that a PMS will be appropriate for AFB Ysterplaat.
- 6.9% of participants disagreed that a PMS will be appropriate for AFB Ysterplaat.

While ( $n=53$ ) participants indicated that a PMS will be appropriate for AFB Ysterplaat, ( $n=19$ ) participants were either unsure or disagreed that a PMS will be appropriate for AFB Ysterplaat. This possibly indicates that employees from all management levels at AFB Ysterplaat will accept the PMS should it be implemented in the near future.

Further analysis was undertaken to explore whether there was any significant difference between the appropriateness of a PMS at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (3, N=72) = 66.500, p = 0.00001$ .

The responses from the interview regarding the appropriateness of a PMS at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, I think it will actually give focus if you really want to structure it towards your vision, to give a focus for the average person on the base to work towards for that vision, irrespective of the type of work that you are doing.*

*Participant 2: Yes, a PMS will be appropriate, however, it is just a matter of how you manage it, because ultimately you need output.*

Qualitative responses from both participants confirms that a PMS will be appropriate for AFB Ysterplaat as it will allow AFB Ysterplaat to focus the strategy of the base towards that organisational mission. This is firmly in support of the responses from the strategic, operational and tactical levels of management. Thus, it can be inferred that the qualitative analysis corroborates the findings revealed by the quantitative analysis that a PMS will be appropriate at AFB Ysterplaat.

#### **5.6.2.4 Perception of PMS implementation leading to an improvement of performance at AFB Ysterplaat**

The question analysed whether the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat.

**Table 5.6.4b:** Perception of PMS implementation leading to an improvement of performance at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV24	Perception of PMS implementation leading to an improvement of performance at AFB Ysterplaat	Senior Officer	5	4	1
		Junior Officer	2	0	0
		Warrant Officer	13	1	1
		Non-Commissioned Officer	34	5	5

An analysis of Table 5.6.4b indicates the following:

- 76.1% of participants agreed that the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat.
- 14.1% of participants were not sure that the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat.
- 9.8% of participants disagreed that the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat.

While ( $n=54$ ) participants indicated that the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat, ( $n=17$ ) participants were either unsure or

disagreed whether the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat. This possibly indicates that employees from all management levels at AFB Ysterplaat will accept the PMS should it be implemented in the near future.

Further analysis was undertaken to explore whether there was any significant difference between the implementation of a PMS that will lead to an improvement of performance at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (3, N=71) = 114.952, p = 0.00001$ ).

The responses from the interview on whether the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, definitely. For the last three years running being the top performing base in the SAAF and it's not just because of what sometimes people say its window dressing, or I actually think for long now we've been performing at that level, whether it's spending our money or keeping our infrastructure in order.*

*Participant 2: Yes, Again, it is nothing to implement the system but the continuous management of the system that is important. So, we can implement as many systems as we want. But if you don't continuously revise and improve your system is going to take the same road as the other system has taken.*

The qualitative responses reveal that the participants agree that a PMS can lead to improvement at AFB Ysterplaat provided that is implemented correctly, and it is continuously revised. This is consistent with the responses from the strategic, operational and tactical levels of management. For this reason, it can be surmised that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat.

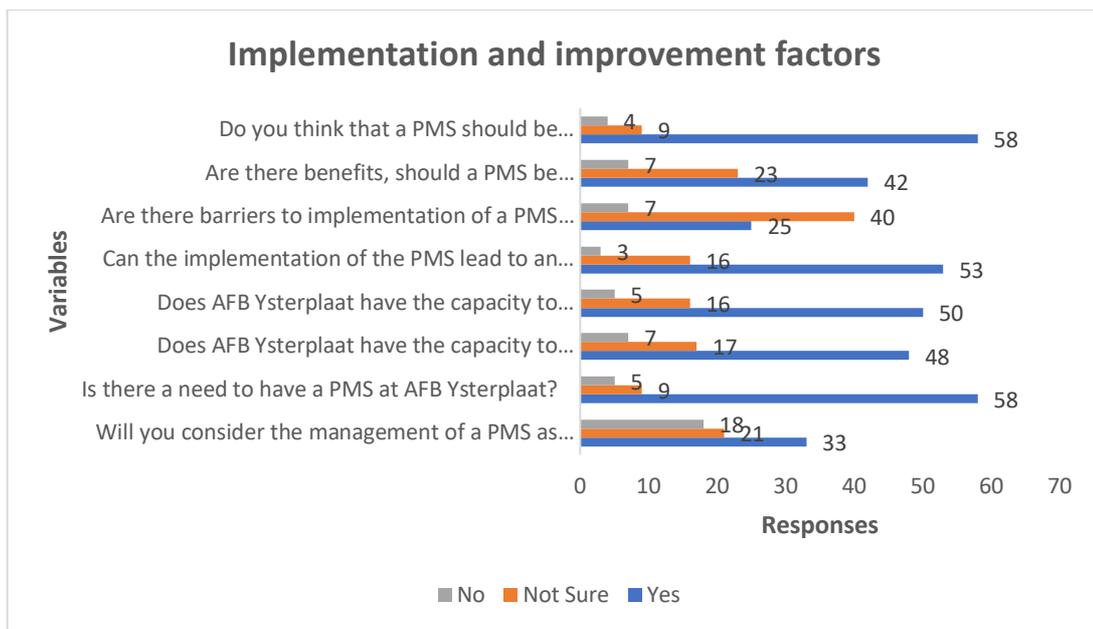
### **5.7 Research Objective Three: To evaluate the benefits and barriers to implementation of a PMS at AFB Ysterplaat**

There were eight variables related to the third research objective. These variables are listed in Table 5.7.

**Table 5.7:** Variable description for Research Objectives Three

Variable No.	Variable Description
QV11	Management of a PMS as an additional task.
QV13	Need for a PMS at AFB Ysterplaat.
QV17	Capacity to develop a PMS at AFB Ysterplaat.
QV18	Capacity to maintain a PMS at AFB Ysterplaat.
QV20	Implementation of a PMS that can lead to an improvement at AFB Ysterplaat.
QV21	Barriers to implementation of a PMS at AFB Ysterplaat.
QV22	Benefits, should a PMS be implemented at AFB Ysterplaat.
QV23	Perception if a PMS should be implemented at AFB Ysterplaat.

The distribution of the responses from the participants is shown in Figure 5.4. Each variable was analysed accordingly.



**Figure 5.4:** Implementation and improvement factors

### 5.7.1 Management of a Performance Management System as an additional task

The question analyses whether the management of a PMS will be considered as an additional task.

**Table 5.7.1:** Management of a Performance Management System as an additional task

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV11	Management of a Performance Management System as an additional task	Senior Officer	5	2	3
		Junior Officer	2	0	0
		Warrant Officer	6	5	3
		Non-Commissioned Officer	20	14	12

An analysis of Table 5.7.1 indicates the following:

- 45.8% of participants agreed that the management of a PMS will be considered as an additional task.
- 29.2% of participants were not sure that the management of a PMS will be considered as an additional task.
- 25.0% of participants disagreed that the management of a PMS will be considered as an additional task.

While ( $n=33$ ) participants indicated that the management of a PMS will be considered as an additional task, ( $n=39$ ) participants were either unsure or disagreed whether the management of a PMS will be considered as an additional task at AFB Ysterplaat. This possibly indicates that these employees' function at a lower level at AFB Ysterplaat and do not completely comprehend the question.

Further analysis was undertaken to explore whether there was any significant difference between whether a PMS will be considered as an additional task and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (7, N=72) = 6.643, p = 0.036$ .

The responses from the interview as to whether the PMS will be considered as an additional task are shown below. The participants stated the following:

*Participant 1: If people do not perceive something as useful, they end up actually ignoring it, and it becomes a waste. So, you need to structure it in such a way that it becomes part of your day to day.*

*Participant 2: Yes, I would feel it is an additional administrative task because I am already recording a lot of data and stats for either the base, the directorate or even HQ. I will however say that if all the stats and data can be integrated into, let's say a PMS, it might change my attitude towards a lot of these stats that I need to capture.*

Qualitative response from Participant 1 believes that the management of a PMS should add value and should be part of good management practices, otherwise it will be less useful and perceived as an additional task. Participant 2 feels that the management of a PMS will be administratively demanding if the PMS is implemented in an unstructured fashion. The responses from the strategic, operational and tactical levels of management, concludes that the qualitative analysis does not corroborate the findings revealed by the quantitative analysis that the management of a PMS at AFB Ysterplaat will be considered as an additional task.

### 5.7.2. Need for a Performance Management System at AFB Ysterplaat

The question analyses whether there is a need for a PMS at AFB Ysterplaat.

**Table 5.7.2:** Need for a Performance Management System at AFB Ysterplaat.

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV13	Need for a Performance Management System at AFB Ysterplaat.	Senior Officer	8	1	1
		Junior Officer	2	0	0
		Warrant Officer	11	3	1
		Non-Commissioned Officer	37	5	3

An analysis of Table 5.7.2 indicates the following:

- 80.6% of participants agreed that there is a need for a PMS at AFB Ysterplaat.
- 12.5% of participants were not aware that there is a need for a PMS at AFB Ysterplaat.
- 6.9% of participants disagreed that there is a need for a PMS at AFB Ysterplaat.

Most participants ( $n=58$ ) reported that there is a need for a PMS at AFB Ysterplaat. The majority of participants that were in agreement with this statement stems from the strategic, operational and tactical levels of management at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between a need for the PMS at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (7, N=72) = 94.571, p = 0.00001$ .

The responses from the interview regarding the need for a PMS at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, definitely, as there is no formal way that we as a base are measuring our performance. The last time we sort of measured performance was with the EFQM.*

*Participant 2: Yes, I think that there is a need for a performance management system here at the base. My problem is that there are many systems running parallel on the base, but they are all scattered and there is nothing bringing these systems together. If a performance management system can help in integrating these systems, then it has my buy-in.*

The responses from the Officer Commanding and senior coordinator of the operational units suggest that there is a need for a PMS at AFB Ysterplaat.

Based on the responses from the strategic, operational and tactical levels of management, it can be concluded that the qualitative analysis corroborates the findings revealed by the quantitative analysis that there is a need for a PMS at AFB Ysterplaat.

### 5.7.3 Capacity to develop a Performance Management System at AFB Ysterplaat

The question analyses whether AFB Ysterplaat have the capacity to develop a PMS.

**Table 5.7.3:** AFB Ysterplaat's capacity to develop a PMS

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV17	Capacity to develop a Performance Management System at AFB Ysterplaat.	Senior Officer	6	2	2
		Junior Officer	2	0	0
		Warrant Officer	13	0	2
		Non-Commissioned Officer	27	15	3

An analysis of Table 5.7.3 indicates the following:

- 66,7% of participants agreed AFB Ysterplaat have the capacity to develop a PMS.
- 23.6% of participants were not sure whether AFB Ysterplaat have the capacity to develop a PMS.
- 9.7% of participants disagreed that AFB Ysterplaat have the capacity to develop a PMS.

Most participants ( $n=48$ ) agreed that AFB Ysterplaat has the capacity to develop a PMS, while ( $n=24$ ) were either unsure or disagreed that AFB Ysterplaat has the capacity to develop a PMS.

Further analysis was undertaken to explore whether there was any significant difference between whether AFB Ysterplaat has the capacity to develop a PMS and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (7, N=72) = 39.929, p = 0.00001$ .

The responses from the interview on whether AFB Ysterplaat has the capacity to develop a PMS are shown below. The participants stated the following:

*Participant 1: Yes, I think with someone like you doing the research, and actually picking the criteria, we should have capacity within the command structure on this base to be able to roll something like that out.*

*Participant 2: I believe they can. If they design it and implement it correctly, then it is a matter of maintaining it.*

Qualitative responses from the Officer Commanding and senior coordinator of the operational units suggest that AFB Ysterplaat has the capacity to develop a PMS provided that the implementation process takes place correctly. This is supported by the responses from the strategic, operational and tactical levels of management. Therefore, it concludes that the qualitative analysis corroborates the findings revealed by the quantitative analysis that AFB Ysterplaat have the capacity to develop a PMS.

#### **5.7.4 Capacity to maintain a Performance Management System at AFB Ysterplaat**

The question analyses whether AFB Ysterplaat has the capacity to maintain a PMS.

**Table 5.7.4:** AFB Ysterplaat's capacity to maintain a PMS

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV18	Capacity to develop a Performance Management System at AFB Ysterplaat	Senior Officer	7	1	2
		Junior Officer	2	0	0
		Warrant Officer	12	2	1
		Non-Commissioned Officer	29	13	2

An analysis of Table 5.7.4 indicates the following:

- 70.4% of participants agreed AFB Ysterplaat has the capacity to maintain a PMS.
- 22.5% of participants were not sure whether AFB Ysterplaat has the capacity to maintain a PMS.
- 7.1% of participants disagreed that AFB Ysterplaat has the capacity to maintain a PMS.

Most participants ( $n=50$ ) agreed that AFB Ysterplaat has the capacity to maintain a PMS, while ( $n=21$ ) were either unsure or disagreed that AFB Ysterplaat has the capacity to maintain a PMS.

Further analysis was undertaken to explore whether there was any significant difference between whether AFB Ysterplaat has the capacity to maintain a PMS and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (7, N=71) = 53.952, p = 0.00001$ .

The responses from the interview on AFB Ysterplaat's capacity to maintain a PMS are shown below. The participants stated the following:

*Participant 1: That will depend on the command structure of the base and how they will enforce it at the various units. I would advise that a work team or steering committee be established to give direction as to how to maintain the performance management system.*

*Participant 2: They should be able to maintain it provided that there are adequate employees, and they are knowledgeable to guide when something goes wrong in the system.*

Qualitative responses from both participants present conditions such as establishing a steering committee and must be knowledgeable on PMS's. The conditions indicated by the participants are relevant and form part of an implementation proposed by Goetsch and Davis (2012). In addition, both participants agree that AFB Ysterplaat can maintain the PMS. Furthermore, from the responses of the strategic, operational and tactical levels of management, it can be deduced that the qualitative analysis corroborates the findings revealed by the quantitative analysis that AFB Ysterplaat has the capacity to maintain a PMS.

### 5.7.5 Implementation of a PMS that can lead to an improvement in performance at AFB Ysterplaat

The question analyses whether the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat?

**Table 5.7.5:** Implementation of the PMS that can lead to an improvement in performance at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV20	Implementation of the PMS that can lead to an improvement in performance at AFB Ysterplaat.	Senior Officer	6	4	0
		Junior Officer	2	0	0
		Warrant Officer	12	2	1
		Non-Commissioned Officer	33	10	2

An analysis of Table 5.7.5 indicates the following:

- 73.6% of participants agreed that the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat.
- 22.2% of participants were not sure whether the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat.
- 4.2% of participants disagreed that the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat.

Most participants ( $n=53$ ) agreed that the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat, while ( $n=19$ ) were either unsure or disagreed that the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between whether the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (7, N=72) = 68.643, p = 0.00001$ ). The responses from the interview on whether the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, I think a performance management system can help us as a base in that regard and also in terms of improvement.*

*Participant 2: Yes, a performance management system, only if it is implemented correctly and continuously revised for improvement can help the base.*

The responses from the Officer Commanding and senior coordinator of the operational units suggest that the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat. Based on the responses from the strategic, operational and tactical levels of management, it can be concluded that the qualitative analysis corroborates the findings revealed by the quantitative analysis that the implementation of the PMS can lead to an improvement in performance at AFB Ysterplaat.

### 5.7.6 Barriers to Implementation of a Performance Management System at AFB Ysterplaat?

The question analyses whether there are barriers to implementation of a PMS at AFB Ysterplaat.

**Table 5.7.6:** Barriers to implementation of a Performance Management System at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV21	Barriers to implementation of a Performance Management System at AFB Ysterplaat	Senior Officer	5	3	2
		Junior Officer	1	1	0
		Warrant Officer	6	7	2
		Non-Commissioned Officer	13	29	3

An analysis of Table 5.7.6 indicates the following:

- 34.7% of participants agreed that there are barriers to implementation of a PMS at AFB Ysterplaat.
- 55.6% of participants were not sure whether there are barriers to implementation of a PMS at AFB Ysterplaat.
- 9.7% of participants disagreed that there are barriers to implementation of a PMS at AFB Ysterplaat.

While ( $n=25$ ) participants indicated that there are barriers to implementation of a PMS at AFB Ysterplaat, the majority of participants ( $n=40$ ) were unsure and ( $n=7$ ) disagreed that there are barriers to implementation of a PMS at AFB Ysterplaat. Notably, most of the participants that were unsure are from the non-commissioned officers' ranks. This possibly indicates that most participants did not entirely understand whether there are barriers to implementation of a PMS at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between the barriers to implementation of a PMS at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2(7, N=72) = 24.000, p = 0.00001$ .

The responses from the interview on whether there are barriers to implementation of a PMS at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, there are barriers to implementation like continuous command commitment to see that the implementation is executed effectively. Other barriers will include the competence and skill set of the employees that need to use the system.*

*Participant 2: People have already built up this barrier in their mind that there is now another system that's going to fail. Because they have seen these systems as just extra work and nothing changes, even if you fill in these forms.*

The qualitative response from Participant 1 provides a crucial barrier to PMS regarding the skills set and competence of the employees when an organisation sets out to implement a PMS. Brudan (2010) and Swartz (2017) explain that often an organisation formulates an elaborate plan to implement a PMS but fails to equip the end user effectively to use the system. Furthermore, Participant 2 points out an inherent barrier pertaining to the implementation of a

new system and it being a form-filling exercise. This is consistent with studies by Goetsch and Davis (2012) and Armstrong (2014) where the authors highlight implementation of a new system after previous systems have failed in an organisation. The new system is perceived by the employee's as additional work or '*The flavour of the month*' or '*Watch out, here comes another one*'. This is supported by the responses from the strategic, operational and tactical levels of management. Thus, it can be concluded that the qualitative analysis corroborates the findings revealed by the quantitative analysis that there are barriers to implementation of a PMS at AFB Ysterplaat.

### 5.7.7 Benefits to Implementation of a Performance Management System at AFB Ysterplaat?

The question analyses whether there are benefits to implementation of a PMS at AFB Ysterplaat.

**Table 5.7.7:** Benefits to implementation of a PMS at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV22	Benefits to implementation of a PMS at AFB Ysterplaat	Senior Officer	6	3	1
		Junior Officer	2	0	0
		Warrant Officer	10	4	1
		Non-Commissioned Officer	24	16	5

An analysis of Table 5.7.7 indicates the following:

- 58.3% of participants agreed that there are benefits to implementation of a PMS at AFB Ysterplaat.
- 32.0% of participants were not sure whether there are benefits to implementation of a PMS at AFB Ysterplaat.
- 9.7% of participants disagreed that there are benefits to implementation of a PMS at AFB Ysterplaat.

While most participants ( $n=42$ ) indicated that there are benefits to implementation of a PMS at AFB Ysterplaat, there were ( $n=30$ ) participants that were either unsure or disagreed that there are benefits to implementation of a PMS at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between the benefits to implementation of a PMS at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (7, N=72) = 35.429, p = 0.00001$ ).

The responses from the interview on whether there are benefits to implementation of a PMS at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: I think people are going to be more focused to output and probably value their own work environments more if there can be measures to what the organisation output is.*

*Participant 2: I would say that one of the typical benefits of a performance management system is that it would give the base a structured focus on their output.*

Qualitative responses from the Officer Commanding and senior coordinator of the operational units suggest that there are benefits to implementation of a PMS at AFB Ysterplaat and can provide a structured approach to the data that is currently being reported. In addition, it will provide employees with a sense of value towards their work environment. Furthermore, various authors argue that a well-designed PMS at AFB Ysterplaat can benefit the base by streamlining the activities of their operations and that of their employees for realising their organisational mission (Brudan, 2010; Cassim, 2011; Armstrong, 2014; Swartz, 2017). More benefits of PMS are that the PMS aligns the strategic, operational and tactical functions so that the focus is directed towards the achievement of the organisational goal. The benefits to the implementation of a PMS at AFB Ysterplaat are also evident in the responses from the strategic, operational and tactical levels of management. This concludes that the qualitative analysis corroborates the findings revealed by the quantitative analysis that there are benefits to implementation of a PMS at AFB Ysterplaat.

#### **5.7.8 Perceptions on PMS implementation at AFB Ysterplaat**

The question analyses the perceptions of the participants on whether a PMS should be implemented at AFB Ysterplaat.

**Table 5.7.8:** Perception on the implementation of a PMS at AFB Ysterplaat

S/N	Description	Ranking	Responses		
			Yes	Not Sure	No
QV23	Perception if a PMS should be implemented at AFB Ysterplaat.	Senior Officer	6	3	1
		Junior Officer	2	0	0
		Warrant Officer	14	0	1
		Non-Commissioned Officer	36	6	2

An analysis of Table 5.7.8 indicates the following:

- 81.7% of participants agreed that a PMS should be implemented at AFB Ysterplaat.
- 12.7% of participants were not sure whether a PMS should be implemented at AFB Ysterplaat.
- 5.6% of participants disagreed that a PMS should be implemented at AFB Ysterplaat.

The majority of participants ( $n=58$ ) indicated that a PMS should be implemented at AFB Ysterplaat, while ( $n=13$ ) participants were either unsure or disagreed that a PMS should be implemented at AFB Ysterplaat.

Further analysis was undertaken to explore whether there was any significant difference between a PMS that should be implemented at AFB Ysterplaat and the responses from the different ranks. A chi-square test of independence revealed that there is an association between these variables,  $\chi^2 (7, N=71) = 88.651, p = 0.00001$ .

The responses from the interview regarding a PMS that should be implemented at AFB Ysterplaat are shown below. The participants stated the following:

*Participant 1: Yes, I think it should be that it should be implemented as I think it will be valuable as we don't have anything now.*

*Participant 2: Yes, because everyone is reporting on a lot of things, but what gets done with the information.*

Qualitative responses from the both participants agree that a PMS should implemented as the current performance-based tools are reporting a vast amount data, but it is not within a

structured framework, so it tends to add minimal value compared to the effort from the employee to record the data. This is supported by the responses from the strategic, operational and tactical levels of management. For this reason, it can be deduced that the qualitative analysis corroborates the findings revealed by the quantitative analysis that a PMS should be implemented at AFB Ysterplaat.

## **5.8 Conclusion**

This chapter consolidates the findings of the quantitative and qualitative analysis presented in Chapter 4. In addition, the chapter presented results of the data collection process. The results presented coincided with the research objectives of this study which are 1) the elements required by AFB Ysterplaat in regard to strategic performance management, 2) the organisational requirements to develop a PMS at AFB Ysterplaat and 3) the benefits and barriers to implementation of a PMS at AFB Ysterplaat. Moreover, through the process of triangulation, the qualitative findings not only confirmed the quantitative result, but also gave an indication of why certain phenomena was taking place and proposed solutions to problems. Ultimately, the results revealed in this chapter established that there is a need for a PMS at AFB Ysterplaat that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.

In the next chapter, the conclusion of this research is presented, and broad recommendations stemming from this study will be presented.

## CHAPTER SIX - CONCLUSIONS AND RECOMMENDATIONS

*A conclusion is the place where you get tired of thinking*  
*- Arthur Bloch*

### 6.1 Introduction

This research constituted a system engineering assessment of a performance management system at AFB Ysterplaat in Cape Town. The purpose of this final chapter is to provide a conclusive summary of all the key findings related to each of the research objectives, as indicated in Chapter One and operationalised in the succeeding chapters of this study. This chapter concludes with recommendations for future research and a chapter summary.

### 6.2 Summary of Preceding Chapters

A summary of the context lay out of each chapter is explained in the section below.

Chapter 1 provided an introduction and background to the research problem in terms of a need for PMS at AFB Ysterplaat. The research problem statement, aim of the study, primary research question, investigative questions and research objectives to be embarked upon were articulated respectively. This chapter further presented a brief introduction to the conceptual framework, methodology and research design, data collection and analysis, data validity, ethics, research assumptions and research constraints. This chapter concluded by offering a summary of each of the chapters.

In Chapter 2, the problem analysis began by orienting the reader in terms of AFB Ysterplaat relative to the management levels of the SAAF, which was followed by the composition of AFB Ysterplaat. In addition, the chapter provided an analysis of AFB Ysterplaat's strategy that introduced the three levels of strategy for an organisation. The chapter continued by discussing the previously used performance model that AFB Ysterplaat used and the current performance-based tools at AFB Ysterplaat. The chapter concluded with a chapter summary.

Chapter 3, the literature review examined literature pertaining to the concepts of military hierarchy and introduced the command-and-control approach. This was followed by discussions on the process of strategy formulation, strategy implementation and its connection to PM. Thereafter, PM and its different levels were discussed. In addition, performance measurement and the difference between performance appraisal and PM were presented,

following which the performance management tools were discussed. Finally, the concept of implementation was discussed prior to introducing the barriers and benefits to implementation of a PMS. Based on the literature examined and according to de Waal, Goedegebuure and Geradts (2011), the use of a PMS is one of the few management techniques which has been proven to help organisations improve their results.

In Chapter 4, the research design and methodology of the study was introduced by presenting the empirical (pragmatic) plan that was followed in this research. The methodological approach was explained prior to the broad details of the triangulated mixed methods research design to meet the research objectives of this study. A pilot study was conducted and a data analysis plan to meet the objectives was introduced. Validity, reliability and ethical considerations pertaining to the research design were also discussed in this chapter.

Chapter 5, the presentation of results, presented the statistical analysis of data collected in the initial empirical phase of this study. The analysis of the quantitative data as described yields critical findings to meet the research objectives of the study. These findings were supported and corroborated by the semi-structured interviews that was conducted. The concluding of the quantitative and qualitative results was used for triangulation of each variable.

### **6.3 The Research Problem and Objectives Revisited**

The research problem presented in Chapter One is “AFB Ysterplaat does not have a comprehensive PMS that allows AFB Ysterplaat to focus their strategy and ensure that operations are directed towards the success of their organisational mission.” Thus, in an effort to solve this problem, this study set out to accomplish three objectives. The section that follows presents a brief outline of how the research objectives were accomplished.

#### **6.3.1 Research Objective One Revisited**

- To determine the elements required by AFB Ysterplaat in regard to strategic performance management.

##### **6.3.1.1 Analogies drawn from Literature Review for Research Objective One**

Literature revealed that in terms of strategic performance management, it is important to have a strategy that is effectively implemented at all levels of an organisation (Brudan, 2010; Swartz, 2017). For the strategy to be realised, the process of strategy formulation and strategy implementation are key.

Formulating an organisation's strategy is a challenging task for any management team. However, implementing the organisation's strategy is even more difficult than formulating the strategy (Hrebiniak, 2006; Setino, 2020). While both the process of strategy formulation and strategy implementation can be dealt with separately, research by Jooste and Fourie (2009), Heinzen, Loveridge and Marinho (2020) and Setino (2020) advise that these concepts should be aligned and integrated to the organisation strategy. Thus, this implies that an organisation like AFB Ysterplaat's efforts might be in vain if they only reach the strategy formulation stage and not the strategy implementation stage, as strategy implementation is the key to superior organisational performance (Jooste and Fourie, 2009; Heinzen, Loveridge and Marinho, 2020; Setino, 2020).

#### **6.3.1.2 Analogies drawn from Data Analysis of Research Objective One**

The most important findings from the data analysis of Research Objective One is that the management processes and the strategy at AFB Ysterplaat are clear and visible. However, the way performance was previously measured was ineffective and the current performance-based system is used to primarily report data on a tactical level of management that pertains to employee performance and the readiness status of AFB Ysterplaat. In addition, limited knowledge regarding available performance tools was evident amongst the different rank groups. In this study, measurement of the PMDS previously was considered a last-minute compliance exercise.

#### **6.3.1.3 Conclusion for Research Objective One**

Although AFB Ysterplaat has a strategy, this research found that they need a vehicle to drive the strategy. Thus, the use of a PMS is recommended as it will aid in communicating and implementing an organisation's strategy and strategic goals. In addition, PM places emphasis on the process of strategy implementation and that the execution of the strategy becomes everyone's main priority. For this reason, it is accepted that for an organisation like AFB Ysterplaat's strategy to be successful, PM should be used as a tool to ensure that sufficient focus is placed on formulation and implementation to continue to provide deployable maritime and landward air capabilities to the SANDF. By AFB Ysterplaat ensuring that PM adequately drives both formulation and implementation, the organisational mission can be accomplished.

### **6.3.2 Objective Two Revisited**

- To determine the organisational requirements for a performance management system at AFB Ysterplaat.

#### **6.3.2.1 Analogies drawn from Literature Review Research Objective Two**

The main analogies drawn from literature is that AFB Ysterplaat is a military organisation. A military organisation's core task is to maintain security for their country (Kark, Karazi-Presler and Tubi, 2016). The authors assert that for thousands of years, military forces were distinguished with a strict military hierarchy in the form of a rank structure. The SA Defence Review 2015 (2016) explains that the rank structure is used to maintain order under stress in battle and during operations. Accompanied by the rank structure is the hierarchical chain of command. Erasmus and Uys (2012) advance that the chain of command is a system in a military or public organisation by which commands and instructions are passed from one person to another.

A consequence to the hierarchical approach is that power is centralised to the employee who holds the highest rank, and this can inadvertently be a significant and potential obstacle to the implementation of a PMS (Gabrielli, Russo and Ciceri, 2019). Followed by the hierarchical approach is the command-and-control approach that stems from the military where the commander is in command and controls the subordinate (Webster, 2021). It is founded on, and emphasises a distinction between, commanders on the one hand and subordinates on the other.

Armstrong (2014) argues that PM dating back to the previous century mostly reflected a command-and-control approach. Cassim (2011) reports that the command-and-control approach to PM is mechanistic because it uses financial performance indicators, sets performance deliverables for employees and measures whether these are completed. Citing Brudan (2010), the author adds that organisations were regarded as hierarchies, in which management exercised top-down controls such as administrative controls in the form of procedures and rules.

Moreover, with regards to the organisational requirements for a PMS, it must be developed so that the three broad categories of the PM process are effectively incorporated. The three broad categories are goal setting, performance review and the performance improvement process (Swartz, 2017). Finally, PM must be a continuous process and not just an event and should reflect normal good management practices of setting direction, monitoring and measuring

performance and taking action accordingly (Armstrong, 2014). The author advises that PM should not be imposed on employees from any level of management (i.e., strategic, operational and tactical) that may result in increasing employee resistance and ultimately leading to a decline in performance.

#### **6.3.2.2 Analogies drawn from Data Analysis Research Objective Two**

The critical findings from the first part of Research Objective Two is that the strategic, operational and tactical levels of management are aware of the internal and external customers of the base. The findings further show that a PMS can satisfy the organisational requirements of AFB Ysterplaat. However, the PMS must allow for specific criteria to be developed in terms of the strategy, policies and compliance standards of AFB Ysterplaat. In addition, the organisational requirements of AFB Ysterplaat within the PMS must be well defined and focused on the strategy and purpose of the base.

The critical findings from the second part of Research Objective Two is that the EFQM Model was ineffective as it was revealed to have various implementation flaws such as the mismatched criteria for a military setting. A key finding was that the strategic, operational and tactical levels of management considered a PMS to be appropriate for AFB Ysterplaat. Moreover, the participants believed that a PMS would lead to an improvement of performance at AFB Ysterplaat.

#### **6.3.2.3 Conclusion for Research Objective Two**

The PMS and tools must be designed to address the needs of AFB Ysterplaat. The design process should involve comprehensive consultation with internal and external customers of AFB Ysterplaat and especially with future users of the system. The process must consider the specific criteria and organisational requirements that are appropriate to AFB Ysterplaat. Applying an incomplete system leads to loss of credibility, financial and human resources, loss of time, and increases resistance to change. Consequently, it leads to a declined acceptance of the new PMS. Employees involved in the design of the system must have knowledge and expertise pertaining to PM and an understanding of the bases context. AFB Ysterplaat may seek external consultants, however, caution that overreliance on external consultants might be a costly exercise for developing the system. Moreover, external consultants add to the adverse consequences of dependency and lack of ownership of the new PMS.

#### **6.3.3 Objective Three Revisited**

- To evaluate the benefits and barriers to implementation of a performance management system at AFB Ysterplaat.

#### **6.3.3.1 Analogies drawn from Literature Review of Research Objective Three**

The main analogies from literature indicated that the implementation of whatsoever system in an organisation has a greater propensity to fail than to see it through to realisation rate (de Waal, 2007; Brudan, 2010; Musandiwa, 2019). Common reasons for implementation failures are unclear vision and mission of the organisation, and miscommunications between employer and employee (Woyessa, 2015). The focus on the implementation of a PMS also presents an organisation with various barriers like all levels of management that place low importance on the implementation, or the PMS takes longer to implement than initially expected (Armstrong, 2014). In addition, the author cites the lack of a positive attitude from the employees towards the PMS due to previous performance models failing (Armstrong, 2014). Research shows that there will always be barriers in the implementation of a PMS (de Waal, 2007; Brudan, 2010; Musandiwa, 2019). However, it is important that an organisation devises context specific strategies to overcome these barriers and move towards the effective implementation of the PMS.

#### **6.3.3.2 Analogies drawn from Data Analysis of Research Objective Three**

The most important findings from Research Objective Three were that there is a need for a PMS and that it should be implemented at AFB Ysterplaat. However, the present research does not categorically indicate that PMS will be considered an additional task or whether AFB Ysterplaat has the capacity to maintain the system after it has been developed. The present research does highlight barriers like the skills set and competence of the employees when an organisation sets out to implement a PMS. In addition, an inherent barrier pertaining to the implementation of a new system and it being a form-filling exercise and that new system is perceived by the employees as additional work. Accordingly, the benefits of a PMS can provide a structured approach to the data that is currently being reported and will provide employees with a sense of value towards their work environment. Furthermore, a well-designed PMS at AFB Ysterplaat can benefit the base by streamlining the activities of their operations and that of their employees for realising their organisational mission. A further benefit of a PMS at AFB Ysterplaat is that the PMS aligns the strategic, operational and tactical functions so that the focus is directed towards the achievement of the organisational goal.

#### **6.3.3.3 Conclusion for Research Objective Three**

A well-defined implementation plan must be crafted and driven to realisation from the strategic management level of AFB Ysterplaat. A steering committee must be established to mitigate the barriers to implementation and build on the strengths of the human resource capability. An effective communication process should be put in place, which will explain the benefits of the PMS and communicate progress with the implementation in order to reduce uncertainties, fears and anxieties. A consultative and innovative approach as well as interaction are necessary to build trust and relationships with employees and relevant stakeholders prior to and during the PMS implementation process. PM should be a continuous process and not an activity conducted once or twice a year. Performance feedback should be timely and continuous. The organisational structure should be reviewed and issues of command-and-control, layers of bureaucracy, organograms, accountabilities, reporting and communication channels should be analysed. In addition, organisational processes should be standardised, simplified and made user-friendly to motivate employees and not to discourage them with red-tape and bureaucratic procedures.

#### **6.4 Recommendations**

If AFB Ysterplaat decides to implement a PMS at the base, the following broad considerations are recommended.

##### **6.4.1 Integration**

This study revealed that there are a number of systems operating in parallel, without an approved framework that brings it together to effectively measure and manage the performance in terms of strategic, operational and tactical performance. PM has to be approached from an integrated perspective (de Waal, 2007; Brudan, 2010; Saravanja, 2010; Swartz, 2017). Synergy must be developed between the PMS, the management processes, organisational structure and all other major organisational systems and processes at AFB Ysterplaat. The strategic, operational and tactical levels of management's objectives must be synchronised.

##### **6.4.2 Command Commitment**

The implementation of the PMS must be supported and driven by the top command and management echelon of AFB Ysterplaat. Commanders and coordinators must be committed to implementing the PMS until realisation. The command structure should be encouraged to develop the capacity to create a shared vision, inspire employees and develop a PMS that drives the entire base towards a common purpose. In this regard, Swartz (2017) asserts that

public service agencies with the best PM results have strong mission-driven leaders at the reigns who communicate the mission, motivate employees, shape strategies in times of uncertainty, provide support, rewards, and advocate achievements.

#### **6.4.3 Competence**

The employees involved in the PMS process must possess suitable knowledge, attitudes and skills to utilise the system. According to Armstrong (2014), the following major skills are required, 1) development of performance indicators, 2) key results areas, 3) core management competencies and performance agreements 4) measurement of performance indicators and 5) communication of results and feedback 6) monitoring and evaluation of the PMS. Proactive training and development interventions should be implemented to ensure that the users of the PMS are continuously developed.

#### **6.4.4 Reward System**

A rewards system, comprising both monetary and non-monetary rewards, should be developed to reward high performing units at AFB Ysterplaat and to discourage low or mediocre performance. The comprehensive and holistic reward system, which includes various rewards such as financial rewards, public acknowledgments, merit awards, greater work responsibilities, learning and development opportunities, should be developed and communicated to employees. To this end, greater emphasis must be given to non-monetary rewards. Mechanisms must be put in place to take corrective action against low performers. With a large number of non-performers, there cannot be high performance at AFB Ysterplaat.

#### **6.4.5 Communication**

Communication is one of the most critical success factors of the entire PMS and therefore, a proactive communication strategy and process must be followed throughout the implementation of the PMS. In the planning and design phases, good communication will enable buy-in from the internal and external customers of AFB Ysterplaat. Effective communication will aid with the management of resistance to change and building positive momentum. Users of the system must be trained to communicate effectively during the process of conducting performance appraisals and when communicating the outcomes and feedback. Effective communication requires the provision of relevant information and ensures buy-in from the users of the system, reduces fears and anxieties, reduces resistance to change and generates commitment to the system.

#### **6.4.6 Morale**

AFB Ysterplaat must ensure high levels of inspiration and morale of their employees which requires continuous investment in the human resource component. If the morale of employees is left unmanaged, their motivation deteriorates that can hamper the PMS implementation process. Programmes are required to ensure high levels of morale and commitment to the new PMS, which may include a variety of activities such as team building, strategic planning, internal forums and awards, learning and development opportunities, sporting activities, and similar. Performance feedback should be provided in a timely manner and continuously as opposed to only once or twice a year following the performance appraisal process. High morale and motivation generally lead to high performance and enhances *esprit de corps* amongst employees of AFB Ysterplaat. PMS cannot be successful where low morale exists, irrespective of how well the system is developed.

#### **6.4.7 Monitoring and Evaluation**

The PMS implementation must be continuously monitored. Problems must be detected at an early stage to enable prompt corrective action. Monitoring systems must be developed to systematically collect information, analyse and interpret it, and use it for decision-making. If the monitoring and evaluation is performed effectively, it aids with the data from the RIMS and PMDS to be translated into management information in order to make meaningful decisions. The evaluation process must be conducted at regular intervals to enable the detection of problems at an early stage. Importantly, the PMS must be continuously evaluated and improved.

#### **6.5 Contribution to Future Research**

This research provides AFB Ysterplaat with sound literature pertaining to PM that can serve the base well as a departure point when deciding on an appropriate performance management system. In addition, the study concludes by establishing that a PMS is a viable option for AFB Ysterplaat to implement, in order to measure their strategic, operational and tactical performance.

## **6.6 Chapter Summary**

This chapter commenced with a summary of the preceding chapters and thereafter revisited the research problem and research objectives and established that there is a need for a PMS at AFB Ysterplaat in Cape Town. Following this were the analogies drawn from the literature review and data analysis before concluding each research objective. It is the researcher's opinion that this research problem has been adequately addressed through the literature review, and the analysis of the available data. The study also presented practical recommendations should AFB Ysterplaat decide to pursue the implementation of a PMS at the base. In addition, this research concludes and revealed that a PMS is a viable option for AFB Ysterplaat to measure their strategic, operational and tactical performance and in doing, ensure that operations are directed towards the success of their organisational mission.

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**APPENDICES**

**APPENDIX A: CONSENT FORM FOR QUESTIONNAIRE**

**Consent Form**

**Project: A Systems Engineering assessment for a Performance Management System at Air Force Ysterplaat in Cape Town**

Researcher: Mr C. Ah Shene

---

Cape Peninsula University of Technology (CPUT) and those conducting this research (**Researcher: Mr C. Ah Shene**) subscribe to the ethical conduct of academia and research and to the protection at all times of the interests, comfort, and safety of participants. This form and the information that it contains are given to you for your own protection and full understanding of the procedures. Your signature on this form will signify that you have been informed about the interview procedures and the benefits of this research. It also confirms that you have had adequate opportunity to consider the information communicated to you, and that you voluntarily agree to be interviewed. Any information that is obtained during this interview will be used as per the agreement, viz. that it will be documented for scholarly purposes only, and for public information, where relevant and applicable, and only with this prior consent.

**Consent Form**

I have been asked by the researchers of this study at to be part of an [redacted] questionnaire (delete that which does not apply) in the study “*A Systems Engineering assessment for a Performance Management System at Air Force Ysterplaat in Cape Town*”

I ..... understand that I am participating in this **interview/questionnaire** for my research project and have consented to this. I understand the procedures that will take place.

I also understand that whether or not I give this permission is a personal decision, and it is entirely voluntary. There will be no rewards for giving this permission, as there will of course be no penalty for refusing it. I have the right to withdraw my permission at any stage and my data will then be excluded from the study. The researchers will use data for the purpose of this study only and not for any other purpose. My identity will be protected.

I also understand that I may register any concerns that I may have with **C. Ah Shene (cell number: 073 651 8697 and email: chosenahshene@gmail.com)** I understand that the information gathered for this study is intended for public access.

By signing this form, I am acknowledging that I understand the contents of this document.

Name.....

Address: .....

Signature: .....

Witness: .....

Date: .....

**With thanks,  
Mr C. Ah Shene**

## APPENDIX B: QUESTIONNAIRE SCHEDULE FOR MAIN STUDY

Dear Respondent, thank you for participating in this research. It is hereby requested that you complete the following questionnaire. The questionnaire forms part of my M Eng (Quality) studies. Your responses are confidential and anonymous.

1. Demographic detail: please tick the appropriate box

<b>Gender</b>	Male	Female		
<b>Race*</b>	African	White	Coloured	Asian
<b>Age</b>	20-29	30-39	40-49	50-59

\*Included to determine if AFB Ysterplaat employees from different racial groups have different experiences and expectations.

2. Please indicate your rank category and years of service

<b>Ranking</b>	Senior Officer	Junior Officer	Warrant Officer	Non-Commissioned Officer
<b>Years' of Service</b>	3-10	11-20	21-30	31-40

3. Please indicate below your choice by marking with a **X** in the boxes provided (**Yes, Not Sure or No**).

	Yes	Not Sure	No
<b>Q1.</b> Are the management processes at AFB Ysterplaat clear?			
<b>Q2.</b> Is the vision, mission, values, objectives and strategy of AFB Ysterplaat clear?			
<b>Q3.</b> Is the vision, mission, values, objectives and strategy of AFB Ysterplaat visible at prominent places in and around the base?			
<b>Q4.</b> Is it clear who the internal customers of AFB Ysterplaat are?			
<b>Q5.</b> Is it clear who the external customers of AFB Ysterplaat are?			
<b>Q6.</b> Was the way in which performance was measured previously effective?			

<b>Q7.</b> Was the EFQM Excellence Model effective in supporting AFB Ysterplaat to reach their organisational goal and objectives?			
<b>Q8.</b> Is the current measurement tool used at AFB Ysterplaat effective (i.e. RIMS, PMDS, risk approach), in clarifying their organisational mission?			
<b>Q9</b> Are you familiar with the Balanced Scorecard?			
<b>Q10.</b> Is your performance currently measured at AFB Ysterplaat?			
<b>Q11.</b> Will you consider the management of a PMS as an additional task?			
	<b>Yes</b>	<b>Not Sure</b>	<b>No</b>
<b>Q12.</b> Will a Performance Management System be appropriate for AFB Ysterplaat?			
<b>Q13.</b> Is there a need to have a Performance Management System at AFB Ysterplaat?			
<b>Q14.</b> Are there a specific criteria required by AFB Ysterplaat in regard to strategic performance management?			
<b>Q15.</b> Are there requirements for a PMS at AFB Ysterplaat?			
<b>Q16.</b> Is a PMS capable of meeting the requirements of AFB Ysterplaat.?			
<b>Q17.</b> Does AFB Ysterplaat have the capacity to develop a Performance Management System?			
<b>Q18.</b> Does AFB Ysterplaat have the capacity to maintain a Performance Management System?			
<b>Q19.</b> Are there regular performance appraisals being conducted at AFB Ysterplaat?			
<b>Q20.</b> Can the implementation of the Performance Management System lead to improvement at AFB Ysterplaat?			
<b>Q21.</b> Are there barriers to implementation of a PMS at AFB Ysterplaat?			

<b>Q22.</b> Are there benefits, should a PMS be implemented at AFB Ysterplaat?			
<b>Q23.</b> Do you think that a Performance Management System should be implemented at AFB Ysterplaat?			
<b>Q24.</b> Do you think that the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat?			

**Thank you for your participation**

**APPENDIX C: CONSENT FORM FOR SEMI-STRUCTURED INTERVIEWS**

**Consent Form**

**Project: A Systems Engineering assessment for a Performance Management System at Air Force Ysterplaat in Cape Town**

Researcher: Mr C. Ah Shene

---

Cape Peninsula University of Technology (CPUT) and those conducting this research (**Researcher: Mr C. Ah Shene**) subscribe to the ethical conduct of academia and research and to the protection at all times of the interests, comfort, and safety of participants. This form and the information that it contains are given to you for your own protection and full understanding of the procedures. Your signature on this form will signify that you have been informed about the interview procedures and the benefits of this research. It also confirms that you have had adequate opportunity to consider the information communicated to you, and that you voluntarily agree to be interviewed. Any information that is obtained during this interview will be used as per the agreement, viz. that it will be documented for scholarly purposes only, and for public information, where relevant and applicable, and only with this prior consent.

\*\*\*\*\*

**Consent Form**

I have been asked by the researchers of this study at to be part of an interview/ [redacted] (delete that which does not apply) in the study “*A Systems Engineering assessment for a Performance Management System at Air Force Ysterplaat in Cape Town*”

I ..... understand that I am participating in this **interview/questionnaire** for my research project and have consented to this. I understand the procedures that will take place.

I also understand that whether or not I give this permission is a personal decision, and it is entirely voluntary. There will be no rewards for giving this permission, as there will of course be no penalty for refusing it. I have the right to withdraw my permission at any stage and my data will then be excluded from the study. The researchers will use data for the purpose of this study only and not for any other purpose. My identity will be protected.

I also understand that I may register any concerns that I may have with **C. Ah Shene (cell number: 073 651 8697 and email: chosenahshene@gmail.com)** I understand that the information gathered for this study is intended for public access.

By signing this form, I am acknowledging that I understand the contents of this document.

Name.....

Address: .....

Signature: .....

Witness: .....

Date: .....

**With thanks,  
Mr C. Ah Shene**

## **APPENDIX D: INTERVIEW SCHEDULE FOR MAIN STUDY**

Dear Interviewee,

Thank you for agreeing to be interviewed as part of my M Eng (Quality) research. My research deals with a System Engineering Assessment for a Performance Management System at Air Force Base Ysterplaat in Cape Town. It is hoped that the findings of my research project can contribute to improving the performance management system at AFB Ysterplaat. I do have permission to conduct the research from the Officer Commanding AFB Ysterplaat. Your responses are confidential and anonymous. The research is also conducted in accordance with the CPUT Ethical Compliance. You can at any time stop the interview, should anything or questions are unclear. Do you have any questions before we begin?

### **Question 1**

How long have you been working for the South African Air Force?

### **Question 2**

How long have been working at Air Force Base Ysterplaat?

### **Question 3**

What do you understand by Performance Management? You do not have to give a technical definition.

### **Question 4**

What is the vision of AFB Ysterplaat?

Is there a mission statement and what are the values of AFB Ysterplaat?

Finally, what are the objectives of AFB Ysterplaat?

### **Question 5**

Who are the internal customers of AFB Ysterplaat?

### **Question 6**

Who are the external customers of AFB Ysterplaat?

### **Question 7**

How effective was the way in which performance was measured previously? Referring to EFQM /SAEM and Why?

**Question 8**

What do you understand by the Balanced Scorecard tool?

**Question 9**

How appropriate will a Performance Management System be for AFB Ysterplaat?

**Question 10**

How is your performance currently measured at AFB Ysterplaat?

**Question 11**

How regular are performance appraisals being conducted at AFB Ysterplaat? Do you think these helps or hinder you from reaching your targets?

**Question 12**

How effective is the RIMS, risk-based assessment and the annual Inspector General Inspection? Why?

**Question 13**

Do you think that there is a need for a Performance Management System at AFB Ysterplaat? And if so, What the specific criteria required by AFB Ysterplaat in regard of a Performance Management System?

**Question 14**

Would you consider a PMS at AFB Ysterplaat as an additional task? Why?

**Question 15**

What are the requirements for a PMS at AFB Ysterplaat? Please answer just as it comes to mind.

**Question 16**

Do you think that AFB Ysterplaat has the capacity to develop a Performance Management System? And Why?

**Question 17**

Do you think that AFB Ysterplaat has the capacity to maintain a Performance Management System? And Why?

**Question 18**

Do you think that a Performance Management System should be implemented at AFB Ysterplaat? And Why?

**Question 19**

What are the barriers to implementation of a PMS at AFB Ysterplaat? (like top management commitment, inadequate organisational Structure, Please elaborate?

**Question 20**

What are the benefits, should a PMS be implemented at AFB Ysterplaat?

**Question 21**

Do you think that the implementation of a PMS will lead to an improvement of performance at AFB Ysterplaat? Why?

**Thank you for your participation**

## APPENDIX E: QUESTIONNAIRE SCHEDULE FOR PILOT STUDY

### QUESTIONNAIRE SCHEDULE FOR PILOT STUDY

Dear Respondent, thank you for participating in this research. It is hereby requested that you complete the following questionnaire. The questionnaire forms part of my M Eng (Quality) studies. Your responses are confidential and anonymous.

1. Demographic detail: please tick the appropriate box

<b>Gender</b>	Male	Female		
<b>Race</b>	African	White	Coloured	Asian
<b>Ranking</b>	Senior Officer	Junior Officer	Warrant Officer	Non-Commissioned Officer
<b>Age</b>	20-29	30-39	40-49	50-59

2. Please indicate below your choice by marking with a **X** in the boxes provided (Yes, Not Sure or No).

	<b>Yes</b>	<b>Not Sure</b>	<b>No</b>
<b>Q1.</b> Is there a need to have a Performance Management System at AFB Ysterplaat?			
<b>Q2.</b> Are the management processes at AFB Ysterplaat clear and understandable?			
<b>Q3.</b> Is the vision, mission, values and strategy of AFB Ysterplaat clear and understandable?			
<b>Q4.</b> Is the vision, mission, values and strategy of AFB Ysterplaat communicated and visible at prominent places in and around the base?			
<b>Q5.</b> Is it clear who the customers of AFB Ysterplaat are?			
<b>Q6.</b> Was the EFQM Excellence Model effective in supporting AFB Ysterplaat to reach their organisational goal and objectives?			
<b>Q7.</b> Is the current measurement tool used at AFB Ysterplaat effective (i.e., RIMS, PMDS, risk approach), in clarifying their organisational mission?			
<b>Q8.</b> Are you familiar with the Balanced Scorecard?			
<b>Q9.</b> Does AFB Ysterplaat have the capacity to develop and maintain a Performance Management System?			

<b>Q10.</b> Can the implementation of the Performance Management System lead to improvement at AFB Ysterplaat?			
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**Thank you for your participation**

## **APPENDIX F: INTERVIEW SCHEDULE FOR PILOT STUDY**

Dear Interviewee,

Thank you for agreeing to be interviewed as part of my M Eng (Quality) research. My research deals with a System Engineering Assessment for a Performance Management System at Air Force Ysterplaat in Cape Town. It is hoped that the findings of my research project can contribute to improving the management system at AFB Ysterplaat. I do have permission to conduct the research from the Officer Commanding AFB Ysterplaat. Your responses are confidential and anonymous. The research is also conducted in accordance with the CPUT Ethical Compliance. You can at any time stop the interview, should anything or questions are unclear. Do you have any questions before we begin?

### **Question 1**

How long have you been working for the SAAF?

### **Question 2**

How long have been working at AFB Ysterplaat?

### **Question 3**

What do you understand by Performance Management? You don't have to give a technical definition.

### **Question 4**

What is the vision of AFB Ysterplaat? Is there a mission statement and what are the values of AFB Ysterplaat?

### **Question 5**

Is your management or duty directive signed and up to date?

### **Question 6**

Are you aware of your roles and responsibilities at AFB Ysterplaat?

**Question 7**

How is performance currently measured at AFB Ysterplaat? Is it effective? Specifically referring to the RIMS, risk-based assessment and the annual Inspector General Inspection.

**Question 8**

How was the performance measured previously? Was it effective?

**Question 9**

Do you think that there is a need for a Performance Management System at AFB Ysterplaat?

**Question 10**

Are you familiar with the Balanced Scorecard?

**Question 11**

Do you think that the BSC is appropriate to be implemented at AFB Ysterplaat?

**Question 12**

Do you think that the implementation of the BSC will lead to an improvement of performance at AFB Ysterplaat?

**Question 13**

Do you think that a Performance Management System should be implemented at AFB Ysterplaat?

**Question 14**

Do you think that AFB Ysterplaat has the capacity to develop and maintain a Performance Management System?

**Thank you for your participation**

## APPENDIX G: EDITING CERTIFICATE

### **NERESHNEE GOVENDER COMMUNICATIONS (PTY) LTD**

REGISTRATION NUMBER: 2016/369223/07

DR NERESHNEE GOVENDER (PhD)

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WRITING PRACTITIONER • EDITOR • COPYWRITER • TRAINER

PhD-Management Sciences; PG DIP - Higher Education - Academic Developers (Cum laude); M-Tech Public Relations; B-Tech Public Relations (Cum laude); B-Tech Journalism (Cum laude)

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23/11/2021

CLINT LESTER THOMAS AH SHENE

chosenahshene@gmail.com

### **RE: EDITING CERTIFICATE**

**FOCUS AREA: A SYSTEMS ENGINEERING ASSESSMENT FOR A PERFORMANCE MANAGEMENT SYSTEM AT AIR FORCE BASE YSTERPLAAT IN CAPE TOWN**

Master of Engineering in Quality in the Faculty of Engineering and the Built Environment  
at the Cape Peninsula University of Technology

This serves to confirm that this research report has been edited for clarity, language and layout.

Kind regards,



Nereshnee Govender (PhD)

**APPENDIX H: PERMISSION TO CONDUCT RESEARCH**



**sa air force**  
Department  
Defence  
REPUBLIC OF SOUTH AFRICA

YPLT/R/98226525MC

Telephone: (021) 508-6528  
Fax No: (021) 508-6402  
Enquiries: Major C.L.T. Ah Shene

Air Force Base Ysterplaat  
Private bag X4  
Ysterplaat  
7405  
26 August 2019

Reference A: Defence Intelligence (Di) Security Instruction 040/2016

**PERMISSION TO CONDUCT RESEARCH AND COLLECT DATA FOR MASTER IN ENGINEERING (QUALITY) PROJECT**

1. I, 98226525MC Major C.L.T. Ah Shene (Student Number 217297196), am a M Eng Quality student at Cape Peninsula University of Technology and have to submit a full thesis. My topic reads as follows. *"The applicability of the Balanced Scorecard within the South African Air Force context"*.
2. In order to be successful in my research, research and collection of data needs to be carried out in the South African Air Force (SAAF) in an ethical manner.
3. I therefore request to make use of data where applicable. It is emphasised that all information will be dealt with ethical consideration, data will remain confidential and the Intellectual Property of the SAAF and may not be disclosed to external or third party without formal consent.
4. Please advise

(C.L.T. AH SHENE)  
ACTING CHIEF TECHNICAL SUPPORT OFFICER: MAJOR

**COMMENTS BY ACTING OFFICER COMMANDING AIR FORCE BASE YSTERPLAAT**

Approved

(T.J. VAN DER HORST)  
ACTING OFFICER COMMANDING AIR FORCE BASE YSTERPLAAT: LIEUTENANT COLONEL



## APPENDIX I: ETHICS APPROVAL

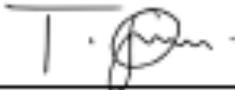


<b>FACULTY OF ENGINEERING &amp; THE BUILT ENVIRONMENT</b>
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On 07 July 2020, the Engineering and Built Environment Ethics Committee of the Cape Peninsula University of Technology granted ethics approval to Mr **AH SHENE CLINT LESTER THOMAS** student number **217297196** for research activities related to his research proposal at the Cape Peninsula University of Technology.

<b>Title of Proposal</b>	Systems Engineering assessment of the Balanced Scorecard tool within the South African Air Force.
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**Comments:**  
Data collection is required

	23/07/2020
Prof TV Ojumu Research and Innovation Coordinator – Faculty of Engineering and the Built Environment (Acting)	Date

2020FEREC-STD-041