Cape Peninsula
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MONITORING AND CONTROLLING OF PROJECTS WITHIN SELECTED ORGANISATIONS IN THE PUBLIC SECTOR

by

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DECLARATION

I, Saadick Kahaar, declare that the contents of this study represent my own unaided work, and that the study 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**

ABSTRACT

The study is located within a Project Management paradigm. The South African national Department of Education's (the DOE) approach to e-Education and its directive issued in 2004 to integrate Information and Communication Technologies (ICT's) into teaching and learning forms the premise of this study. In 2009, the Western Cape Government adopted the Modernisation Programme to bring the provincial government on par with international best practice, to ensure that government officials are fit for their respective purposes. The challenge for the Western Cape Government was its ability to implement a project management approach to all activities performed by all stakeholders and role players in the project implementation process. The core objective of the study was to develop a theoretical framework to monitor and control projects and practices within selected provincial government departments in the Western Cape, with specific reference to the Department of the Premier (DotP) and the Western Cape Education Department, in order to achieve and provide an improved project management approach to monitor and control projects when implementing strategy and, in turn, enhance effective and efficient service delivery. A qualitative research approach was used, as the researchers were keen to hear verbal accounts around the experiences and perceptions of selected individuals within the Department of the Premier and Western Cape Education Department around the MSPiL Training Project in particular, and how it is monitored and controlled. Applicable literature was consulted which indicated the complexity of project management in the public sector as it relates to monitoring and control of projects. Methods/mechanisms, procedures and systems for defining, planning, scheduling, controlling, organising, monitoring and evaluating project activities to enhance service delivery, were forwarded. One of the core findings of the study was that an agile project management approach/methodology is best suited to an environment that has faster turnaround times with more streamlined, speedier approvals and processes, red tape reduction, as well as more direct communication channels. The aforementioned lacked in the South African public sector. A recommendation forwarded is that the Department of the Premier, Centre for e-Innovation's (Directorate GITO: Education, Cultural Affairs and Sport) project office and a task team that specifically deal with the MSPiL project should clearly understand their department's requirements whilst defining, planning and managing projects to improve project management maturity, as well as constantly communicate the roadmap, benefits and progress at both project/programme, departmental and provincial level by 2019, since this is when the Western Cape Provincial Strategic Plan reaches its end. This will assist the department and its MSPiL project team to improve project tasks and activities for future projects with similar characteristics.

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DEDICATION

I dedicate this study to my father, Shafiek Kahaar, and mother, Janap Kahaar. I would like to express my gratitude to my parents, wife, daughter, family, friends and colleagues for their words of encouragement, motivation and unconditional support during this journey.

I would also like to say a special word of thanks to all acquaintances that supported me throughout the process; I will always appreciate their assistance throughout the development and completion of this qualification.

Table of Contents

ANNEXURES

CHAPTER ONE
INTRODUCTION AND BACKGROUND

1. Introduction and background

The White Paper on e-Education signifies the national Department of Education's (DOE) approach to e-Education and the directive that it issued to integrate Information and Communication Technology (ICT) into teaching and learning. Amongst other projects, ICT was used as an enabler to provide greater access to learning opportunities, redress inequalities, improve the quality of teaching and learning, and to provide the impetus to accelerate the achievement of national education goals (South Africa. Department of Education, 2004: 16).

In order to develop capacity and competency, which match the DOE's, as well as the Western Cape Education Department's (WCED's) strategic objectives and priorities, staff in the education environment needed the requisite knowledge and skills to integrate ICT into teaching and learning.

The pilot MSPiL Training Project, which was launched in 2008 with twenty-six (26) training venues and approximately five hundred and twenty (520) educators, was a remarkable success. In 2013 the project made provision for approximately seventy (70) training venues and one thousand four hundred (1400) educators to upgrade WCED educators' skills in respect of ICT, as per the department's annual performance plans (e-Government Strategy, 2012-2019: 14-20).

The 2010/11 financial year represented the first year of delivery against the new 2010/11 – 2014/15 strategic plan of the Western Cape, Department of the Premier (the DotP). In May 2009, with the advent of a new political dispensation in the Western Cape Government, the DotP took the lead to institutionalise the new strategic mandate across the province. One of the key outcomes of this process related to the development of a number of blueprints under the banner of the Modernisation Programme. The aim of the Modernisation Programme was to bring the provincial government on par with international best practice, and hence ensure that government officials were fit for their respective purposes, whilst serving the public in a cost effective and efficient way. The leadership of the Western Cape Province identified four key areas to be addressed in 2009, namely the legislative framework, organisational capacity building, physical resource management and e-Governance (Media statement, 2009).
The key areas that were identified saw the adoption by the provincial Cabinet of a blueprint entitled "Organisational Design: Department of the Premier". The DotP' s Centre for e-

Innovation (the Ce-I) branch was mandated to capacitate the WCED schools, which were identified as training venues in the 2013/2014 MS Partners in Learning “ICT Skills for Educators” Training Project that was known as the “MSPiL Training Project” (Western Cape, 2009:5).

This project (MSPiL) facilitates ICT capacity development interventions for Western Cape Government educators in the Western Cape Education Department through the Microsoft Partners in Learning program for educators:

- The Microsoft Partners in Learning course comprises approximately 40 hours of contact time (about two hours per week after school hours), as well as another 20 - 40 hours of self-directed learning, during which time participants are expected to compile a Portfolio of Evidence comprising 30 assignments or tasks;
- The Microsoft Partners in Learning course is presented at approximately 90 school venues, where groups of 20 educators from surrounding schools are offered an opportunity to participate across 8 educational districts; and
- The training is conducted once a week over 20 training sessions (South Africa. Department of the Premier, 2009:5).

1.2 Statement of the research problem

Brynard and Hannekom (2006:12) maintains that the idea of a problem statement is to demarcate the problem clearly for any person who reads the statement, and who will be able to understand it without any form of explanation or intervention.

The core problem which this study addresses revolved around the lack of capacity within the Western Cape Government and its (WCG) ability to implement a project management approach to all activities performed by all stakeholders and role players in the project life cycle in order to monitor and control projects when implementing policy frameworks strategy and, in turn, enhance effective and efficient service delivery.

Other factors, which attributed to government’s inability to deliver on the vision of executing authorities, included a lack of adequate skills, a lack of funding, high vacancy rates, inadequate systems, and non-cooperation from other spheres of government and administrative red tape on the part of key stakeholders.

1.3 The aim and objective of the study

The core purpose of this study is of a dual nature, namely to develop a theoretical framework to monitor and control projects and practices within selected provincial government departments in the Western Cape, (with specific reference to the DotP and the WCED). Secondly to, achieve an improved project management approach to monitor and control projects when implementing strategies while enhancing the capacity and the ability of project managers with in the Western Cape government to become more effective and efficient in the provision of service delivery.

The research objectives of the study are to:

- Establish the nature of projects and project management within the public sector, holistically;
- Identify possible improvements for project management approaches in respect of e-Education, which sets out a policy framework for the implementation of a strategy to expand the use of ICTs as a means to increase the effectiveness and quality of teaching and learning that will produce learners who can compete in the global knowledge economy;
- Develop an integrated project monitoring approach to enhance the standard of project management methodology and approaches in the public sector; and
- Identify possible gaps in current project planning and control systems and procedures.

1.4 Research questions

The research questions for the study are as follows:

- What are the current project management methodologies and/or approaches that are used to implement a project?
- How are projects monitored and controlled effectively within government?
- What internal control measures have been established to monitor and control the allocation of resources within projects?

1.5 Research methodology

Research methodology explains the nature and process of research so that readers can conduct their own research of a specific problem. It also explains the logic behind research methods and techniques. There are two main approaches for research, namely quantitative and qualitative research (Welman, Kruger & Mitchell, 2005:1-6).

1.5.1 Definition of quantitative research methodology

Mouton and Marias (1988:29) defines quantitative research as analytical research, and says that its purpose is to arrive at a universal statement. Bryman (2002:77) defines quantitative research as that, which is underpinned by a distinctive theory in terms of what would pass as warrantable knowledge. It requires methods such as experiments and surveys to describe and explain phenomena. This method includes techniques such as observations, preliminary investigations, quantitative analysis and questionnaires.

1.5.2 Definition of qualitative research methodology

Brynard and Hannekom (2006:37) refer to qualitative research methodology as research that produces descriptive data, generally, in participants' own written or spoken words regarding their experiences or perceptions. Usually, no numbers or figures are assigned to these observations. The authors further maintain that qualitative research allows the researcher to know people personally, whilst seeing them as they are, and experiencing their daily struggles when confronted with real life situations. This methodology enables the researcher to interpret and describe participants' actions.

In view of the above definitions, the researcher opted to make use of a qualitative research methodology approach as he was keen to hear oral accounts of the experiences and perceptions of selected individuals within the Department of the Premier and Western Cape Education Department regarding the MSPiL Training Project, and how it was monitored and controlled in order to achieve the objectives and outcomes of the project, as planned.

1.6 Significance of the study

The study should contribute significantly to project management within the public sector. The researcher envisaged that the study would provide an improved theoretical framework for project management approaches and practices on an operational level within the public sector, whilst determining whether the standard operational procedures within government impacts

on service delivery's inefficiency and ineffectiveness. The study outlined the fundamentals and nature of projects and project management in order to monitor, control and evaluate deliverables, which are based on the literature that was available on the subject of the study. Furthermore, the study should assist the public sector with methods/mechanisms, procedures and systems to define, plan, schedule, control, organise, monitor and evaluate project activities. In this context, the integration of project agile would be valuable to project managers and the public sector as a useful management tool when aligning programmes and projects directly to strategy and policy in order to enhance service delivery.

1.7 Organisation of the study

Chapter 1: Introduction and background of the study

This chapter contained the researcher's proposal and introduced the research situation or problem, background of the problem, the problem statement, and identified the research objectives and research questions. It explained the use of research methodology and provided a brief overview of the study's literature review.

Chapter 2: Legislative and theoretical overview

This chapter provided the legislative and theoretical overview of the problem and explained the purpose of the research. This chapter also provided various authors' views about the researcher's chosen topic and provided a theoretical and legislative overview of project management within a South African public sector context.

Chapter 3: Research methodology

This chapter explained and discussed the difference between qualitative and quantitative methodology, and the reason why the researcher chose to use either one or both techniques. The data collection tools that the research study utilised were interrogated in this chapter.

Chapter 4: Data analysis

This chapter presented data that the researcher gathered for analysis and interpretation of the chosen topic.

Chapter 5: Conclusion and recommendations

This chapter concluded the study and provided final recommendations regarding the theoretical framework to monitor projects within the selected organisations in the public sector (DotP and WCED).

1.8 Chapter Summary

Chapter one introduced the research situation or problem, background of the problem, the statement of the problem, the research objectives and the research questions. It explained the use of the research methodology and the study's literature review. Unstructured interviews were conducted with eighteen (18) government officials in total, and they all reside within the studied Department.

It further delineated the significance of the study. The research methodology was outlined. The data collection techniques that were employed identified the study as qualitative research methodology and a content analysis approach was followed. Unstructured interviews were administered.

The study will now move onto conduct a legislative and theoretical overview of literature relevant to the research topic in an attempt to provide the readers with a holistic overview.

CHAPTER TWO
LEGISLATIVE AND THEORETICAL OVERVIEW

2.1 Introduction

This chapter provides a legislative and theoretical overview relating to the problem and the purpose of the research. The chapter provides various authors' views about the researcher's chosen topic and provides a legislative and theoretical overview of project management within a South African public sector context.

The aim of the legislative and theoretical overview explains the purpose of the research and creates an understanding of the legal framework in which projects are governed, as well as what authors and academics have researched or published within this context. Furthermore, the authors' views about the researcher's chosen topic provide a theoretical and legislative overview of project management within a South African public sector context. The monitoring and controlling of tasks in the public sector is solely focused on the standard and quality of service delivery to citizens, unlike in the private sector, which is measured based on its turnover over a certain period of time. As a democratic developing country since 1994, South Africa has the legal mandate to develop, implement, monitor, control and evaluate in accordance with the Constitution of the Republic of the South Africa, Act 108 of 1996, as the supreme law of the country.

It is important to note that the Constitution, legislation and policies, including principles, influence the framework of accountability and good governance in the province, and the public sector as a whole. The legal framework, for example, is designed to achieve the five elements of effective project governance, which are:

- Accountability;
- Measurement;
- Public participation;
- Greater accountability – better performance; and
- More public involvement – to hold government accountable for its performance.

Despite the fact that Acts, principles and policies that have been formulated are aligned to the foregoing, they play an independent role in governing what they were established to do. An example of an Act is the Public Financial Management Act (PFMA) and bodies such as

Chapter 9 institutions. The role and functions of the public sector environment are seen as projects, which are assigned to officials from the highest to the lowest level within government departments.

In an attempt to provide clarity to the reader regarding the legal framework in which public project management operates the researcher has briefly discussed certain pieces of legislation such as The Constitution of the Republic of South Africa Act 108 of 1996, the Public Financial Management Act 1 of 1999, the Public Service Act 103 of 1994 and the Public Administration Act 11 of 2014. With the legal framework section of this study the researcher further attempted to provide the reader with a holistic understanding of the legal framework of the public project management environment.

2.1.1 Constitution of the Republic of South Africa (Act 108 of 1996)

The country's transition from being an *Apartheid* state to that of a democratic one was negotiated with an interim constitution, amongst representatives from organisations that had been involved in the liberation struggle; hence, representing political parties and other interest groups. A new constitution was written following the first democratic elections on 27 April 1994. Members of the National Assembly and Senate, as the elected public representatives at the time, met as a body, which was called the Constitutional Assembly to draft the new constitution. In 1996, after much debate and two years of public consultation, the new Constitution was finally adopted (South Africa. Parliament, n.d.).

The researcher opines and understands that the Constitution provides a foundation for an open society, which is based on democratic values, social justice and fundamental human rights; it is recognised internationally as being progressive. It is the highest law of the land and all that live in the country must act according to its provisions and principles, including Parliament. Therefore, it is the supreme law of the country and ensures government by the people under the Constitution. Being a constitutional state, all laws that are made by Parliament must pass the constitutionality test. Parliament has to always ensure that the laws that it makes are in line with the letter and spirit of the Constitution. The Constitution contains laws, which were agreed upon by the people's representatives, and this demonstrates how the state is constituted and operated, namely in terms of citizens' rights and responsibilities, and the creation of particular institutions to support and safeguard the country's democracy (South Africa, 1996:3).

In view of the above legislative overview, the researcher felt it is imperative to include and contextualise the linkage of the legal frame relevant to the topic. The intension was to provide the readers with an understanding of how the public sector operates and the mandatory roles and responsibilities in terms of service delivery.

In other words, if there is a problem, to what extent could Programme and Project Management be part of the solution? Generally, it is easy to claim that Programme and Project Management is the solution to the service delivery problems and various challenges that are experienced. The drivers behind the emphasis on Programme and Project Management should thus be uncovered.

Arguably, the main driver behind the application of project management in the public sector is to improve the ability of government institutions to deliver efficient, effective and high quality services to all citizens. The Constitution of the Republic of South Africa Act of 1996, Chapter 10, Section 195(1)(b) and (c), for example, stipulates that South Africa's public service must promote efficient, economic and effective use of resources and it must be development oriented (South Africa, 1996:99).

2.1.1.1 Understanding how the state is constituted and governed

The South African Constitution incorporates an important democratic principle, which is called the separation of powers. This means that the power of the state is divided between three different but interdependent components or arms, namely the executive (Cabinet), the legislature (Parliament) and the judiciary (Courts of law) (Brand South Africa, 2015).

- **The executive**

The President is the head of state and the leader of the national executive. He exercises executive authority together with other members of the Cabinet, namely the Deputy President and the respective ministers. The executive drafts policy, for example, by preparing and initiating legislation, which it submits to Parliament for approval. It then implements that policy by operating the country's administration by means of different government departments. The executive must account for its actions and policies to Parliament (Freedman, 2013:118-149).

- **The legislature (Parliament)**

The national legislature, namely Parliament, consists of two Houses, which are the National Assembly and National Council of Provinces, whose members are elected by South African

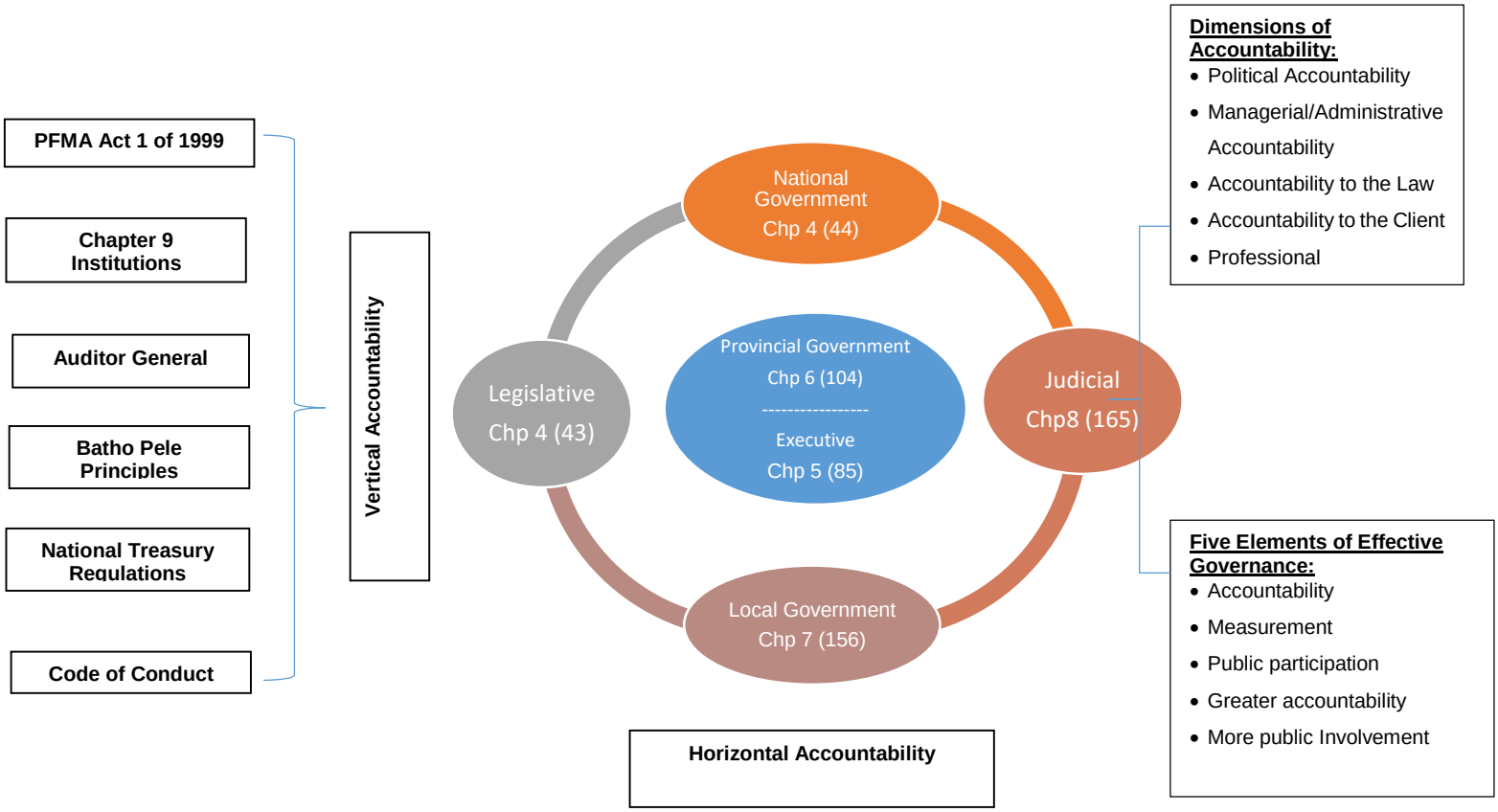
citizens. Each House has its own distinct functions and powers, as set out in the country's Constitution (South Africa, 1996: 99).

The National Assembly is responsible for appointing the President, passing laws, ensuring that the members of the executive perform their work efficiently, and providing a forum where the people's representatives can publicly debate issues (Freedman, 2013:55).

The National Council of Provinces is also involved in law-making and provides a forum for debate on issues, which affect the provinces. Its main focus is to ensure that provincial interests are taken into account in the national sphere of government. In specific cases, local government representatives also participate in debates in the National Council of Provinces (Freedman, 2013:235-239).

- **The judiciary**

The judiciary comprises the courts such as the Constitutional Court, the Supreme Court of Appeal, High Courts, Magistrates' Courts and other courts that were established and are recognised through an Act of Parliament. The head of the Constitutional Court is known as the Chief Justice of South Africa. The Constitution states that the courts must be independent and must act impartially. Organs of state such as Parliament and the executive must assist and protect the courts in order to ensure their independence, equality, dignity, accessibility and effectiveness (Du Toit et al., 2002:123-157).



The above diagram above represents the accountability and influences of project management within public sector in terms of monitoring and controlling. The reader should note the projects within the public sector are derived from the above legislation. It should be further noted that legislation exist within every sector, the following process exist in order to implement legislation:

- Public policies are formulated as guidelines to implement legislation;
- Strategies are then formulated as an action plan to implement public policy;
- Portfolios and Programmes are then formulated to simplify strategies and work breakdown structures; and
- Final step within the above mentioned process is the formulation of projects and its functional areas.

Hence, the diagram above depicts the importance of the adherence to the enabling environment created by the Constitution of the Republic of South Africa Act 108 of 1996 as well as various other forms of legislation for project monitoring and control. The researcher will now explore various theory pertaining to the research topic in an attempt to provide further clarity to the reader regarding the monitoring and controlling of projects.

2.1.1.2 Institutions that support and safeguard constitutional democracy

Freedman (2013:32-87) maintains that a significant feature of the Constitution is that it sets up several independent bodies to support and safeguard the democracy. Informally, these bodies are often referred to as the “Chapter 9 Institutions”, because the most important of these are provided for in Chapter 9 of the Constitution. These include the Human Rights Commission, the Commission for Gender Equality, the Auditor General, the Public Protector, and the Electoral Commission. Although the National Assembly may not interfere with the independence of these institutions, they are accountable to the National Assembly and have to report on their activities, as well as the performance of their functions to the Assembly on an annual basis (Du Toit et al., 2002:56-71).

In view of the above overview of the Constitution, the researcher observed the fact that public sector organisations are under increasing stakeholder pressure to demonstrate accountability and transparency when implementing policies and adapting to change. The value of using project management is to implement governance (monitoring, control and reporting) responsibility is hence a key factor. For public sector initiatives, determination requires the drive to invest in project management, as well as in public sector practices in order to establish effective governance frameworks to deliver services effectively and efficiently.

Subsequent to this, the Constitution remains the supreme law of the country and makes provision for guidance for policy making/ formulation, strategy development and implementation plans in this regard. Projects and the management thereof emanates from this legal framework amongst others to ensure the achievement of its objectives following effective and efficient service delivery.

Furthermore, the constitutional obligation of the public sector is measured on the level and standard of service delivery to the citizens and not by the revenue / profit as the private sector. Hence, project management being the starting point for the identification of key governance issues within the public sector and therefore anchors the need for monitoring and controlling of projects.

2.1.2 Public Finance Management Act (PFMA) (ACT NO. 1 OF 1999)

The Public Finance Management Act (PFMA) (Act No. 1 of 1999) (as amended by Act No. 29 of 1999) is one of the most important pieces of legislation, which was passed by the first democratic government in South Africa. The Act promotes the objective of good financial management in order to maximise service delivery through the effective and efficient use of the country's limited resources (South Africa, 1999:14).

The key objectives of the Act may be summarized as follows:

- To modernise the system of financial management in the public sector;
- To enable public sector managers to manage, but at the same time be held more accountable;
- To ensure the timely provision of quality information; and
- To eliminate waste and corruption in the use of public assets.

The Act, which came into effect on 1 April 2000, gives reference to sections 213, 215 and 219 of the Constitution of the Republic of South Africa (Act No. 108 of 1996) for the country's national and provincial spheres of government. These sections require national legislation to establish a national treasury, to introduce uniform treasury norms and standards, to prescribe measures that ensure transparency and expenditure control in all spheres of government, and to set operational procedures to borrow, guarantee, procure and oversee various national and provincial revenue funds (Wilderman & Jogo, 2012:123-138).

The PFMA adopts an approach to financial management, which focuses on outputs and responsibilities rather than on the rule driven approach of the previous Exchequer Acts. The

Act is part of a broader strategy to improve financial management within the public sector (South Africa, 1999:23-38).

The PFMA must be read together with the Public Finance Management Amendment Act (Act No. 29 of 1999), as independently, they do not make sense - the initial consolidated bill had to be separated into two bills for technical reasons as means to comply with the Constitution, which determines various procedures for the passage of bills through Parliament. The first Bill (now Act No. 1 of 1999) had to apply only to the national sphere, and be passed as a section 75 bill, as outlined in that particular section of the Constitution. Almost all references to provinces were removed from this Act, which resulted in missing numbering in the Act in order to protect the numbering system for the consolidated Act. A second bill (now Act No. 29 of 1999), which amended Act No. 1 of 1999 was introduced to incorporate provinces - this Bill had to be passed in terms of section 76(1) procedure in Parliament, as outlined in that particular section of the Constitution (Du Toit et al., 2002:56-71).

The PFMA gives effect to section 216(1) of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), which requires national legislation to "establish a national treasury and prescribes measures to ensure transparency and expenditure control in each sphere of government", by introducing:

- recognised accounting practices;
- uniform expenditure classifications; and
- uniform treasury norms and standards.

The Act also gives effect to other sections in Chapter 13 of the Constitution. These sections are:

- Section 213 that limits exclusions and withdrawals from the National Revenue Fund through an Act of Parliament;
- Section 215, which indicates that budgets and the budgetary process "must promote transparency, accountability and the effective financial management of the economy, debt and the public sector", and for national legislation to "prescribe" budget formats for all spheres of government;
- Section 217 on procurement should be "in accordance with a system, which is fair, equitable, transparent, competitive and cost-effective;
- Section 218 on conditions for the issue of guarantees by a government in any sphere;

- Section 226 that limits an exclusion from a provincial revenue fund through an Act of Parliament; and
- Sections 100 and 216 on intervention by national government when an organ fails to perform an executive function, which relates to financial management and circumstances under, which funds may be withheld.

The PFMA will replace or supersede the various national and provincial Exchequer Acts and the Reporting of Public Entities Act, which are currently in place. Financial accountability was undermined as different legislation was applied to different entities. Furthermore, legislation that regulates financial management was narrowly focused on expenditure control (Wilderman & Jogo, 2012:123-138).

This Act assumes that the political head of a department (Cabinet Minister or a provincial MEC) is responsible for policy matters and outcomes; this includes seeking Parliamentary (or provincial legislature) approval and adoption of the department's budget vote. The head official (Director-General of a national department or provincial head of department) is responsible for outputs and implementation, and is accountable to Parliament or provincial legislature for the management of the implementation of that particular budget. This approach is on par with the approach of the new Public Service Regulations, which relies on a performance-driven system that is based on measurable outputs (Du Toit et al., 2002:56-71).

This Act also gives effect to section 216 and other sections of the constitution. It will apply to the national and provincial spheres and public entities under their ownership control. Parliament, provincial legislatures and independent institutions that have been established by the Constitution are also covered in this Act. The Municipal Finance Management Act, No. 56 of 2003, covers local government (South Africa, 1999: 15).

Khalo, Mafunisa, Makondo and Nsingo (2007:16) maintain that an important objective of this Act is to establish a more effective financial accountability system over public entities. All entities are required to be listed. The major public entities, which are listed in Schedule 2, enjoy full managerial autonomy, while government is only able to intervene in its capacity as a majority or sole shareholder. Other public entities are listed in Schedule 3, and hence enjoy lesser degrees of autonomy.

Composition of the National Treasury - the National Treasury comprises of the Minister, in conjunction with the national department or departments that are responsible for financial and fiscal matters, while the Minister is the head of the Treasury (Khalo et al., 2007:16).

Powers of the National Treasury - The Constitution confers extensive powers on national government to determine the financial management framework over all organs of state within all spheres of government. National government must, through national legislation, determine uniform treasury norms and standards, which the National Treasury also monitor and enforce. The National Treasury, therefore, not only implements the budget of the national government, but also oversees the financial aspects of other organs of state in all spheres of government (Khalo et al., 2007:16).

Establishment of Provincial Treasuries - their role and function - this Act establishes provincial treasuries, which are responsible for preparing and managing provincial budgets, and enforcing uniform treasury norms and standards, which have been prescribed by the National Treasury and this Act. This chapter is excluded in the first bill as it applies to provinces, but was included in the second, section 76, amendment bill (Khalo et al., 2007:16).

Accounting Officers - this Act confers specific responsibilities on accounting officers. The Act establishes four key responsibilities, which are:

- the operation of basic financial management systems, including internal controls in departments and any entities that they control;
- ensure that departments do not overspend their budgets;
- report on a monthly and annual basis, including the submission of annual financial statements two months after the end of a financial year; and
- publish annual reports in a prescribed format, which will introduce performance reporting.

Furthermore, the accounting officers who are negligent and make no effort to comply with these responsibilities will face strict disciplinary sanctions, including dismissal. Similar sanctions will apply to treasury officials who fail to carry out their responsibilities. The new Public Service Act regulations and the trend towards performance contracts will complement this approach. Accounting officers are expected to appoint chief financial officers as part of their senior management to enable them to fulfil these responsibilities (Du Toit et al., 2002:127-139). Similar fiduciary responsibilities and sanctions are also outlined for the Boards (called accounting authorities) of public entities.

The Act requires parliament to vote by programme ("main divisions within a vote") rather than by departmental votes. This requires further information on outputs per programme, and limits the powers of accounting officers to transfer funds between programmes (Wilderman & Jogo, 2012:123-38).

The Act has the following aims: to address the problem of the late submission of financial statements within government; to comply with the constitutional obligations for generally recognised accounting practices and greater transparency; and to improve financial management and accountability through better and timelier information flows. It has also established an Accounting Standard Board to determine generally recognised accounting practices for all spheres of government, including the local sphere (Du Toit et al., 2002:127-139).

Taking the above into account, the researcher perceives that there are various factors, which could be attributed to the public sector's inability to deliver on the vision of executing authorities, of which the lack of adequate skills, lack of funding, high vacancy rates, inadequate systems, non-cooperation from other spheres of government and administrative red tape are often identified as the major causes. At times, the lack of planning and or performance management are also identified as possible causes, which places the spotlight on the departments themselves, whereas the factors mentioned previously can easily be placed at the door of a third party.

Hence, when looking objectively at the prescribed planning and budgeting processes of the departments, it becomes evident that the formal processes do allow for adequate discussion and consultation. Policy priorities, strategic objectives and funding options are thoroughly discussed at structures such as the Medium Term Expenditure Committee (MTEC) and the Standing Committees on Public Accounts (SCOPA). Therefore, the researcher perceives that everything, which is reflected in departments' annual performance plans are enforced by conducting budgetary consideration. This is to ensure that public finances are spent and prioritised correctly on service delivery matters.

In relation to the aforementioned, typically, Project Managers are not members of Steering Committees but are "contracted" by Steering Committees to ensure that project deliverables are undertaken as agreed. Steering Committees, in turn, must provide support, guidance and the executive oversight of progress. Steering Committee members should understand the strategic implications and outcomes of initiatives being pursued through project outputs and appreciate the significance of the project for some or all major stakeholders. Members should be an advocate for the project's outcomes by being committed to and actively involved in pursuing the project's outcomes. They should also consider ideas and issues raised and foster positive communication outside of the Steering Committee regarding the projects' progress and outcomes; review the progress of the project; and check adherence of project activities to standards of best practice, both within the institution and in a wider context

Hence, PMFA Part 2 Section 38(b) stipulates that accounting officers are responsible for the effective, efficient, economical and transparent use of the resources of the department". As statutory drivers, these stipulations place significant emphasis on the optimal utilisation of departmental resources by focusing on outcomes. Furthermore, it focuses and prudent on getting things done on time (efficient), within the budget (economical) and according to specified quality standards (effective).

2.1.3 Public Service Act (Act NO. 103 OF 1994)

Proclamation 103, published in the Government Gazette (15791 of 3 June 1994) provides for the organisation and administration of public service for the Republic, the regulation of the conditions of employment, terms of office, discipline, retirement and the discharge of members of the public service, and any related matters (South Africa, 1994:1).

The preceding Act governs the public sector and its regulations. The administration of the public sector is outlined in the following Act.

2.1.4 Public Administration Act (Act NO.11 OF 2014)

The above act promotes the basic values and principles, which govern public administration referred to in section 195(1) of the Constitution; provides for the transfer and secondment of employees in public administration; regulates conducting business with the State; provides for capacity development and training; provides for the establishment of the National School of Government; provides for the use of information and communication technologies in the public administration; establishes the Public Administration Ethics, Integrity and Disciplinary Technical Assistance Unit; provides for the Minister to set minimum norms and standards for public administration; establishes the Office of Standards and Compliance to ensure compliance with minimum norms and standards; empowers the Minister to make regulations; and provides for related matters (South Africa, 2014: 1).

The Act also seeks to promote a high standard of professional ethics within public administration. As part of promoting professional ethics and integrity amongst employees, the Act prohibits public servants from conducting business with the State or being a director of a public or private company that conducts any business with the State. Failure to comply with this prohibition constitutes serious misconduct, which may result in the employer terminating the employment. The Act also requires employees to disclose their financial interests, while failure to comply with this obligation constitutes misconduct (South Africa, 2014: 10).

The researcher is of the understanding that the Acts has a direct linkage to this study. The Act clarifies the expectation of how public sector official should present themselves and carry out the job functions and duties.

The researcher perceives that, based on legislation as defined earlier in the study; the public sector is measured on satisfaction levels and the quality of services rendered, to its citizens. Hence, effective measures have been established to ensure that activities are implemented and that the expected objectives and intended outcomes are met. Hence, projects are required to be implemented, monitored and controlled in all phases of the life cycle to ensure that project stakeholders and role players are accountable for maintaining the project according to the project plan.

Furthermore, the public sector is often regarded as being inefficient and ineffective in the execution of strategy. This can be attributed to the inability of departments to monitor their performance on a continuous basis, thereby ensuring their responsibility for the achievement of objectives.

Now that that researcher has discussed various relevant legislation to the study, it is imperative that the study explores various forms of literature in an attempt to gain a holistic understanding of what has been previously written on the research topic by various authors.

2.2 Theoretical Overview

Following the content discussed in 2.1, this section discusses and details various authors' views regarding project management in relation to the topic of this study. The section allowed the researcher to engage with available theory on the topic, whilst determining the level of implementation in public sector operations.

Furthermore, the researcher was keen to determine and identify the relationship alluded to legislation and theory. In respect on this study, the research aims to possibly identify gaps in terms of what the legislation and theory said and determine and how it is implemented in the workplace by using the MSPiL project as an example.

2.2.1 Project Defined

Jamil (2015: 2-11) maintains that a project is a temporary endeavour undertaken to create a unique product, service or result. The temporary nature of projects indicates a definite

beginning and end. The end is reached when the project objectives have been achieved, or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists. Temporary does not necessarily mean short in duration. Temporary does not generally apply to the product, service, or result, which is created by the project. Most projects are undertaken to create a lasting outcome. For example, a project to build a national monument will create a result that is expected to last centuries. Projects can also have social, economic, and environmental impacts that far outlast the projects themselves.

Every project creates a unique product, service or result. Although repetitive elements may be present in some project deliverables, this reputation does not change the fundamental uniqueness of the project's work. For example, office buildings are constructed with the same or similar building materials or by the same team, but each location is unique with a different design, different circumstances and different contractors (Jamil, 2015: 2-11).

Furthermore, the Project Management Institute (2008:5) maintains that ongoing work effort is a generally repetitive process because it follows an organisation's existing procedures. In contrast, because of the unique nature of the projects, there may be uncertainties about the products, services or results that the project creates. Project tasks can be new to a project team, which necessitates more, indicated planning than other routine work. In addition, projects are undertaken at all organisational levels. A project can involve a single person, a signal organisation or unit, or multiple organisational units.

A project can create the following:

- A product that can either be a component of another item or an end item in itself;
- A capability to perform a service (for example, a business function that supports production or distribution); or
- A result such as an outcome or document (for example, a research project that develops knowledge that can be used to determine whether a trend is present or a new process will benefit society).

Table 2. Examples of what projects include, but are not limited to

Developing a new product or service
Effecting a change in the structure, staffing, or style of an organisation
Developing or acquiring a new modified information system
Constructing a building or infrastructure
Implementing a new business process or procedure

Source: Nokes & Kelly (2007: 41)

Nokes and Kelly (2007:41) maintain that it is important to understand the project life cycle, which follows three basic steps, namely:

- What must be done;
- How to do it; and
- Doing it.

2.2.2 Project Management Defined

Project Management Institute (2008:6) defines project management as the application of knowledge, skills, tools and techniques that project activities to meet the project's requirements. Project management is accomplished through the appropriate application and integration of the 42 logically grouped project management processes, which comprise five process groups, which are:

- Initiating;
- Planning;
- Executing/implementing;
- Monitoring and controlling; and
- Closing.

Managing a project typically includes:

- Identifying requirements;
- Addressing the various needs, concerns and expectations of the stakeholders as the project is planned and carried out; and
- Balancing the competing project constraints, including, but not limited to:
- Scope;
- Quality;

- Schedule;
- Budget;
- Resources; and
- Risk.

The specific project will influence the constraints on which the project manager should focus. The relationship among these factors is such that if any one factor changes, at least one other factor is likely to be affected. For example, if the schedule is shortened, often the budget should be increased to add additional resources to complete the same amount of work in less time. If a budget increase is not possible, the scope or quality may be reduced to deliver the product in less time for the same budget. Project stakeholders may shave differing ideas as to which factors are the most important, creating an even greater challenge. Changing the project requirements may create additional risks. The project team must be able to assess the situation and balance the demands in order to deliver a successful project (Kattani & Moulin, 2015:11).

Because of the potential for change, the project management plan is iterative and engages in progressive elaboration throughout the project's life cycle. Progressive elaboration involves continuously improving and detailing a plan as more-detailed and more specific information and more accurate estimates become available. Progressive elaboration allows a project management team to manage to a greater level of detail as the project evolves (Kattani & Moulin, 2015:11).

Oosthuizen., Venter, Bricknell, Fasser, Goldman, Kara, Lubuschange, Maritz, Gregor, Radford and Van der Linde (2012:3-10) maintain that a project is a complex, non-routine, one-time temporary endeavour, which is undertaken to create a unique product or service. It includes the application of knowledge, skills, tools and techniques in order to meet or exceed stakeholder needs and expectations within a definite starting and ending period. It is limited by time, budgets, resources and performance specifications that are designed to meet customer needs.

In lieu of the above definition, it is understood that project management is the application of different skills sets and various factors to ensure that deliverables are met within the expected time frame and according to the client's satisfaction.

Project management can be split into four classifications, which are shown below:

1. Project: as defined in the above definition;
2. Megaproject: large scale investment projects with substantial risk and comprising minor projects within a broader scale;
3. Portfolio: collection of projects to ensure effective management. This involves reporting on different factors such as objectives, costs and resources; and
4. Programme: This is on-going with the aim of achieving a strategic objective and benefits are normally management oriented.

Common project attributes consist of the following:

- Well defined objective;
- Quality, scope, cost and time;
- Interdependent tasks;
- Various resources;
- Time frame or finite life span;
- Uniqueness;
- Customers; and
- Risks.

Keeping in mind the above attributes, all projects should consider any constraints that might affect the project. Constraints in a project are also referred as the project management triangle or triple constraint. The traditional train of thought for the triple constraint lists scope, time and cost as none of these can be changed without it having an effect on one of the others. There are also other constraints that can have an effect on the project (Oosthuizen. et al, 2012: 7-10), which are listed below:

- Resources;
- Deliverables;
- Environmental issues;
- Budgets; and
- Functionality.

Every project has different phases that it experiences from start to finish. This is known as the project's life cycle, and these phases are:

- Defining or initiating;
- Planning;
- Executing; and

- Delivering or closing.

The above life cycle ensures that pre-defined activities are accomplished to achieve the project's goals or objectives. There are two important variables that impact on projects. Stakeholders and risk can have a direct bearing on the outcome of any project. Stakeholders are an integral part of all projects and have a vested interest in the outcomes or results of the project. They will reap the benefits of the project and it is vital that project managers identify the stakeholders correctly (Oosthuizen. et al, 2012: 7- 8). Therefore, it is beneficial to use the stakeholder approach as follows:

- Obtain their views in the initial stages of the project;
- Support;
- Open communication lines; and
- Anticipate

Based on the above definitions provided by the authors, the researcher agrees that project management can be summarised as unique with a definite start and end. A good practical example to interpret and visualise a project is a person's life. Every person(s) has a purpose of existence and are not the same physically, mentally and characteristically. Life starts and ends and during this process there are unique characteristics, milestones, deliverables and possible risks that may limit/restrict which will influence their strategic goals either negative or positive. Hence the need for effective monitoring and controlling of his/her life will assist a person to achieve his/her goals (this can be compared to the various stages of a project).

2.2.3 Relationship between Project Management, Programme Management and Portfolio Management

In mature project management organisations, project management exists in a broader context that is governed by programme management and portfolio management. Organisational strategies and priorities are linked and have relationships between portfolios and programmes, and between programmes and individuals' projects. Organisational planning impacts projects by means of project prioritisation, which is based on risk, funding and the organisation's strategic plan. Organisational planning can direct the funding and support for the component projects on the basis of risk categories, specific lines of business or general types of projects such as infrastructure and internal process improvement (Burke, 2012:96).

2.2.4 Portfolio Management Defined

Burke (2012:342) maintains that a portfolio refers to a collection of projects or programmes and other work, which is grouped together to facilitate effective management of that work as means to meet strategic business objectives. The projects or programmes of the portfolio may not necessarily be interdependent or directly related. Portfolio management refers to the centralised management of one or more portfolios, which includes identifying, prioritising, authorising, managing, and controlling projects, programmes, and other related work in order to achieve specific strategic business objectives. This focuses on ensuring that projects and programmes are reviewed to prioritise resource allocation, whilst management of the portfolio is consistent with and aligned to organisational strategy.

2.2.5 Programme Management Defined

A programme is defined as a group of related projects that are managed in a coordinated way to obtain benefits and control, which are not available from managing them individually. Programmes may include elements of related work outside of the scope of the discrete projects in the programme. A project may or may not be part of a programme, but a programme will always have projects (Project Management Institute, 2008:9).

Programme management can also be defined as the centralised coordinated management of a programme, which is used to achieve the programme's strategic objectives and benefits. Projects within a programme are related through the common outcome or collective capability. If the relationship between projects is only that of a shared client, seller, technology, or resource, the effort should be managed as a portfolio of projects rather than as a programme (Gao & Rusu, 2015:122). Therefore, based on the definitions, the researcher understands that programme management focuses on the project's interdependencies and helps to determine the optimal approach to manage them. Actions, which relate to these interdependencies, may include the following:

- Resolving resource constraints and/or conflicts that affect multiple projects within a programme;
- Aligning organisational/strategic direction that affects project and programme goals and objectives; and
- Resolving issues and changing management within a shared governance structure.

2.2.5.1 Project and Strategic Planning

Projects are used as a means to achieve an organisation's strategic plan. Projects are typically authorised as a result of one or more of the following strategic considerations:

- Market demands;
- Strategic opportunity/business needs
- Customer requests;
- Technological advances; and
- Legal requirements.

In view of the aforementioned projects, programmes or portfolios are means to achieve organisational goals and objectives, which are often in the context of a strategic plan. Although a group of projects within a programme can have discrete benefits, they can also contribute to the benefit of the programme, as well as to the objectives of the portfolios, and to the strategic plan of the organisation (Burke, 2012:79-83).

Organisations manage portfolios based on their strategic plan, which may dictate a hierarchy to the portfolio, programme, or project involved. One goal of portfolio management is to maximise the value of the portfolio by the careful examination of its components. Components that contribute the least to the portfolio's strategic objectives may be excluded. In this way, an organisation's strategic plan becomes the primary factor that guides investment in projects. At the same time, projects provide feedback to programmes and portfolios by means of status reports and change requests that may impact other projects, programmes, or portfolios, as the needs of the projects, including resource needs, are rolled up and communicated back to the portfolio level, which in turn sets the direction for organisational planning (Project Management Institute, 2008:10).

At times though, a lack of planning and/or performance management to monitor and control projects were possible causes, but this placed the spotlight on the departments themselves, whereas the factors mentioned previously can easily be placed at the door of a third party, for example; the delay in supply of goods and services from external service providers impacted on project targets and/or the influence of political parties. When objectively considering the prescribed planning and budgeting processes of the departments, it became evident that the formal processes do allow for adequate discussion and consultation. Policy priorities, strategic objectives and funding options were thoroughly discussed at top management structures such as the Medium Term Expenditure Committee (MTEC) and the Standing Committees on Public Accounts (SCOPA) (South Africa. Department of the Premier, 2009:5-8).

Therefore, nothing that reflects in the departments' annual performance plans was enforced without budgetary consideration. Departments determine their own score sheets, which should consider issues such as vacancy levels, funding and availability of skills, and red tape requirements in order to monitor and control projects. The lack of project monitoring and controlling practices are evident through a number of symptoms, which include:

- Poorly documented and structured initiation and prioritising of deliverables, for example: not completing the business case and business requirement specifications leads to lack important information around the project scope and deliverables;
- Inadequate or no planning of activities that lead to the achievement of intended deliverables, for example: not completing the project initiation and planning documentation as we well not interrogating the content sufficiently;
- Poor execution of activities for example: the uncertainty of roles and responsibilities assigned are not clearly defined in project initiation documentation which leads risks and can possibly lead to project failures especially assigning task to temporary/contract staff;
- Weak monitoring and control mechanisms; for example: not having appropriate risk documentation and tools to ensure that project risk are identified and assessed and logged in order to monitor and control these factors (especially around the measurement and status) during the project life cycle; and
- Late completion of projects and little or no formal sign-off thereof; for example, project approvals and completion requires the executive management with in departments and line function impacts on turnaround times and affects the project scope, planning and subsequently impacts the standard and quality of service delivery (South Africa. Department of the Premier, 2009:15).

Truman and King (2017:5) agree with the statement above by arguing that through the use of sound project management practices, project teams can achieve its goals. Furthermore, Attarzadeh and Ow (2008:236) is of the opinion and concurs, that poor communication, lack of planning, poor management and executive support are contributing factors to project failures.

2.2.5.2 Project Management Office

A project management office (PMO) is an organisational body or entity, which is assigned various responsibilities that relate to the centralised and coordinated management of those projects under its domain. The responsibilities of PMO can range from providing project

management support functions to actually being responsible for the direct management of a project. Projects that are supported or administered by the PMO may not be related, other than being managed together. The specific form, function and structure of a PMO are dependent upon the needs of the organisation that it supports (Burke, 2012:328).

A PMO may be delegated authority to act as the integral stakeholder and a key decision maker during the beginning of each project to make recommendations, or to terminate projects or take actions, as required, and to keep the business objective consistent. In addition, the PMO may also be involved in the selection, management, and deployment of shared or dedicated project resources (Project Management Institute, 2008:11-14).
Hence, the primary function is to support project managers in a variety of ways, which may include:

- Managing shared resources across all projects;
- Identifying and developing project management methodology, best practices and standards;
- Coaching, mentoring, training and oversight;
- Monitoring compliance with project management standards, policies, procedures, templates and audits;
- Developing and managing project policies, procedures, templates; and
- Coordinating communication across projects.

In addition to the aforementioned, project managers and PMOs pursue different objectives and are driven by different requirements. However, all these efforts are aligned with the organisation's strategic needs. Differences between the role of project managers and a PMO may include the following:

- The project manager focuses on the specified objectives, while the PMO manages major programme scope changes, which may be seen as potential opportunities to better achieve business objectives; and
- The project manager controls the assigned project resources to better achieve business objectives.

The project manager manages the constraints (scope, schedule, cost and quality) of the individual projects, while the PMO manages the methodologies, standards, overall risks/opportunities and interdependencies among projects at the enterprise level (Project Management Institute, 2008:11-14).

2.2.5.3 Project Management and Operations Management

Burke (2012:203-206) maintains that operations are an organisational function that performs the ongoing execution of activities that produce the same product or provide a repetitive service. Examples of these include:

- Production operations;
- Manufacturing; and
- Accounting operations.

Although temporary in nature, projects can help to achieve organisational goals when they are aligned to organisational strategy. Organisations sometimes change their operations, products or systems by creating strategic business initiatives. Projects require project management, while operations require business process management or operations management. Projects can intersect with operations at various points during the product life cycle such as those outlined below:

- At each close out phase;
- When developing a new product, upgrading a product, or expanding outputs;
- Improvements of operations or the product development process; or
- Until the divestment of operations at the end of the product life cycle.

Furthermore, Project Management Institute (2008:12) mentions that at each point deliverables and knowledge are transferred between the project and operations for implementation of the delivered work. Hence, this occurs through a transfer of project resources to operations towards the end of the project, and through a transfer of operational resources to the project at the start of it. Hence, it should be noted that operations are permanent endeavours that produce repetitive outputs, with resources assigned to do basically the same set of tasks, according to standards that are institutionalised in a product life cycle (Burke, 2012:84-96).

Project(s) exist because of portfolios (a series/collective of programmes). Programmes bring about the business need for projects and its activities. This is to filter and simplify goals as stipulated in the organisation's strategic goals and plans.

In this study, the MSPiL project emanates from the Portfolio of E-Innovation, Programme GITO Management Services within Western Cape Government. In terms of monitoring and controlling of the MSPiL project the heads of these profiles within the organisation are responsible for the communication and reporting of the success and challenges of the project in every phase of the project life cycle. Monitoring and controlling cannot be an isolated phase

or step but should rather be considered as a key requirement within every phase, step, workgroup, deliverable. Based on the theory discussed above, the researcher is of the opinion that monitoring and controlling activities is the heartbeat of the MSPiL project.

2.2.6 Role of the Project Manager

The role of the project manager is distinct from that of a functional manager or operations manager. The functional manager focuses on providing management oversight for an administrative area, while operations managers are responsible for the organisation's core business. Depending on the organisation's structure, a project manager may report to a functional manager. The project manager works closely with the programme manager to achieve the project objectives and to ensure that the project plan aligns with the overarching programme plan (Lewis, 1998:22-26).

Lewis (1998:22-26), further mentions that there are many tools and techniques that are used to manage projects, which are specific to project management. However, understanding and applying the knowledge, tools and techniques that are recognised as good practice is not sufficient for effective project management. Therefore, effective project management requires that project managers possess the following characteristics:

a) Knowledge – what the project manager knows about project management;
b) Performance – what the project manager is able to accomplish while applying the project management knowledge; and
c) Personal – how the project manager behaves when performing the project or any related activity; hence, the ability to guide the project team while achieving project objectives and balancing project constraints.

2.2.6.1 Product versus Project life cycle relationship

The product life cycle consists of generally sequential, non-overlapping product phases that are determined by the organisation's manufacturing and control needs. The product life cycle phase for a product is generally the product's retirement. Project life cycle occurs in one or more phases of a product's life cycle. All projects have a purpose or objective, but those cases where the objective is service or result oriented, there may be a life cycle for the service or result, and not a product life cycle (Kelkar, 2011:29-31).

When the output of the project is related to a product, there are possible relationships. For instance, the development of a new product could be a project on its own. Alternatively, an existing product might benefit from a project to add new functions or features, or a project might be created to develop a new model. Each product may be distinct, but still contributes a key deliverable, which is necessary to bring the automobile to the market, for example. Overseeing all projects by a higher authority could significantly increase the likelihood of success (Kelkar, 2011:29-31).

2.2.6.2 Project Phases

Kelkar (2011:32-43) maintains that project phases are various divisions within a project, where extra control is required as means to effectively manage the completion of a major deliverable. Project phases are typically completed sequentially, but can overlap in the same project situation. The high level nature of project phases makes them an element of the project life cycle. The phase structure allows the project to be segmented into logical subsets for ease of management, planning and control. It should be noted that the number of phases, and the degree of control that is applied, would depend on the size, complexity and potential impact of the project. All phases have similar characteristics such as those outlined below.

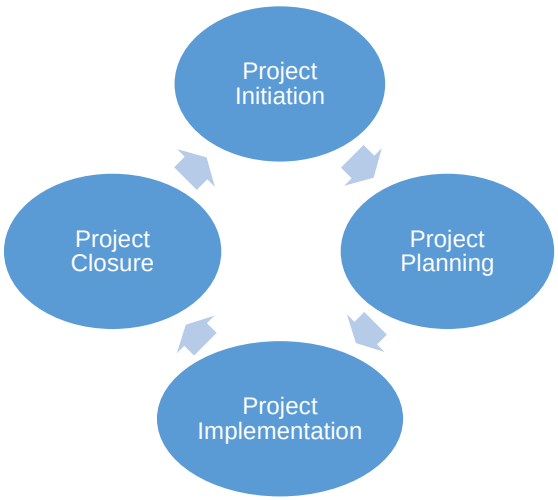
- The close of the phase ends with some form of transfer handoff of the work product, which is produced as the phase becomes deliverable. This phase end represents a natural manner in which to reassess the efforts underway and to change or terminate the project, if necessary. These points are referred to as phase exits, milestones, phase gates, decision gates, stage gates or kill points.
- The work has a distinct focus that differs from any other phase, which often involves different organisations and different skills sets.
- The primary deliverable or objective of the phase requires an extra degree of control to be successfully achieved.

The project phases are summarised as the work plan of the overall project (MSPiL project) the project manager along with the project team agrees to objectives, timelines, milestone in accordance to their plan. In the implementation phase the team will roll out the plan, monitor and control the work groups functions and activities to ensure a successful a project closure. At this point project managers and teams can review the work carried out during the life cycle. Lessons learnt during this phase makes planning for upcoming projects can be noted in the initiation and planning in the upcoming project to limit risk and loses.

2.2.7 Common Project Management Process Interaction

Management processes are presented as discrete elements with well-defined interfaces. However, in practice, they overlap and interact in ways that are completely detailed. The integrative nature of project management requires that the Monitoring and Controlling Process group interacts with other process groups (Project Insight, 2017).

Diagram 2.1: Project life cycle



Source: Project Insight (2017).

2.2.8 Project Management Integration Management

Heldman (2005:197) maintains that project integration management includes processes and activities that are required to identify, define, combine, unify, and coordinate various processes and project management activities within the project management process group. In the context of project management, integration includes characteristics of unification, consolidation, articulation, and integrative actions that are crucial to project completion, whilst successfully managing stakeholder expectations, and meeting requirements. It also entails making choices about resource allocation, making trade-offs among competing objectives and alternatives, and managing the interdependencies among various project management knowledge areas.

Table 2.2: An overview of project management processes.

Develop project charter	The process of developing a document that formally authorises a project or phase, whilst documenting initial requirements that satisfy the stakeholder's needs and expectations.
Develop project management plan	The process of documenting actions that are necessary to define, prepare, integrate and coordinate all subsidiary plans.
Direct and manage project execution	The process of performing work that is defined in the project management plan to achieve the objectives.
Monitor and control project work	The process of tracking, reviewing and regulating progress in order to meet the performance objectives that are defined in the project management plan.
Perform integrating change control	The process of reviewing all change requests, approving changes, and managing changes to deliverables, organisational process assets, project documents and the project management plan.
Close project or phase	The process of finalising all activities in project management process groups in order to formally complete the project or phase.

Source: Heldman (2005:197)

The need for Project Management Integration is evident in situations where individual processes interact. For example, a cost estimate, which is required for a contingency plan, involves integrating processes in the cost, time and risk of the knowledge areas. When additional risks that are associated with various staffing alternatives are identified, then one or more of those processes may be revisited. The project deliverables may also need to be integrated with ongoing operations of either the performing organisation or the customer's organisation, or with long term strategic planning that takes future problems and opportunities into consideration. It also includes activities, which are required to manage project documents to ensure consistency with the project management plan and product deliverables (Heldman, 2005:197).

The integrative nature of projects and project management can be understood by thinking of other types of activities that are performed while completing a project. These activities, which the project management team performs include:

- Analysing and understanding the scope. This includes the project and product requirements, criteria, assumptions, constraints, and other influences, which relate to the project, and how each is managed or addressed within a project;
- Understanding how to take the identified information and transforming it into a project management plan by using a structured approached;
- Performing activities to produce project deliverables; and
- Measuring and monitoring all aspects of the project's progress, whilst taking appropriate action to meet project objectives.

In relation to project integration the researcher is keen to determine the project integration and its influence the management of the MSPiL project and its influence on the monitoring and controlling thereof. The nature of project management requires a strong support structure of various key stakeholders to ensure the project tasks are achieved. In this instance, an agile approach in terms of monitoring and controlling would contribute to minimise risk, improve deliverables resulting in effective and efficient service delivery.

Furthermore, the researcher perceives that input from a project task team would result in better planning, decisions and governance practices if and when the need arises.

2.3 Nature of Projects and Project Management - A Multi-Disciplinary Approach

2.3.1 Characteristics of Projects

A project is any planned, temporary endeavour, which is undertaken to create a unique, high-quality product, service or other complete and definite outcome (result or deliverable) within a limited time frame and with limited resources and a limited budget (Remington & Pollack, 2007: 4-11).

It is important that "planned" is part of the definition in order to prevent any unforeseen risks such as natural events or unnatural causes. People play a key and vital role in project planning and control this to satisfy clients' needs and expectations. Temporary indicates that every project has a start and end date. Completion of each project is reached when project objectives have been met, but termination of a project can also take place for various reasons.

No project is the same, as each one differs from the other with its own singularly defined purpose, and is hence unique. This can also indicate new uncertainty and risk for a new project (Remington & Pollack, 2007: 4-11).

Each project begins with an end goal in mind. Once complete and definite outcomes are reached, results and deliverables have been met. This can either be tangible, for example, buildings, chemical plants or intangible such as reports, census or a national election campaign. Deliverables have various forms in a project and in some projects it can lead to further expanded projects that can be used for further input. Deliverables are outcomes that satisfy the needs and expectations of both stakeholders and clients (Steyn, 2013:3).

Harris (2007:1-8) maintains that projects are also defined by the limited time scale and budget, which is determined for each specific project. Clients and stakeholders' expectations of when projects should be completed are normally as soon as possible. In other projects due dates are advised upfront when projects are initiated or established.

This allows the project manager to plan costs and budgets, whilst committing themselves to a time or framework within this timeline. Pressure is placed on cost schedules and budgets in respect of not exceeding unnecessary funds.

Although projects are temporary, the long term results of a project are normally still present today or in the future, and this can be seen a type of a return on investment. The deliverables or end result of a project can still be reflected in years to come. If one considers architectural structures today that were completed years ago, it would indicate the deliverable output that was delivered by the project; hence a return on investment that is still current in today's times (Richman, 2006:12-16).

The public sector does not necessarily measure service standards in terms of its returns on investment but rather monitors and controls its returns on objective(s) which is directly linked to the legislative mandate of the public sector.

2.3.2 Project Control

Project control can be defined as a control system that measures progress versus the plan. The serves as the steering mechanism for the project (Project Manager. Com, 2017).
Planning plays an important role in project management, but the project's success and its planning should be supported by control and evaluation. Monitoring, evaluation and corrective

action commences with the project, while the responsibility of monitoring, evaluation and corrective action lie with project managers, and this can form part of their day to day activities (Burke, 2012:234-248).

Many forms of monitoring, evaluation and corrective action are displayed by reports, informal discussions with teams, and through progress meetings. Computerised systems are also a functional support system that represents the status of projects via reports (Burke, 2012:250).

2.3.2.1 The Control Process

Control is an aspect of the work that managers perform to ensure that the team adheres to the approved plan. Planning is essential for control to be in place. Control is there for people to be accountable and to take responsibility for the objectives that are set out in the project (Steyn, 2013:153-156).
Portny (2007:315) perceives that planning and control involve the same or similar steps. The following five steps are involved in the control process and the first three are vital for each project.

I. Develop a plan – objectives are set

The project manager, along with stakeholders, determines the deliverables and set objectives for the quality of the deliverables. The project schedule is also calculated and provided. Any risk events and results that should be avoided also form part of project planning (Portny, 2007:320-328).

II. Determine facts about the actual situation and take into consideration any future deviations from the plan

The actual progress, quality of deliverables and expenditure can now be measured. Some undesirable risk events can also be detected. For this to take place, work should be monitored or tracked. Collection of data and reporting information are ways in which to monitor. Examples of data sources are accounting systems, time sheets and change requests. But opinions and feedback from team members are a vital source of information as means to monitor work that has been performed (Portny, 2007:320-328).

All changes should always be managed. Resources are usually limited and deadlines are necessary for project completion, while these changes usually occur from the needs and

requirements of customers and during project execution. Project managers should discuss any changes that will impact the project and address the implications (Portny, 2007:320-328).

III. Compare the actual facts and the anticipated future situation with the objective. This is reported to stakeholders

Each project is unique and there are unknowns that exist and projects seldom materialise exactly as planned. Deviations, variations or variances are determined by comparing actual facts and expected future situations with the plans. Along with deviations that are measured and variances that are explained, forecasts must also be conducted. Forecasts should include completion date and costs that will be spent towards the completion of the project. Significant variances should be reported to all relevant stakeholders (customers or sponsors).

Quality variances are detected when actual deliverables and the quality of deliverables are compared to planned deliverables. When actual costs are compared with planned costs, variable costs are detected and when actual progress is compared to the schedule, time variances are detected (Portny, 2007:320-328)

IV. Where and if needed, plan on how to get back on track and put into action the necessary steps to be aligned to the standard objective or plan. Approval will be needed for the plan and reporting on getting back on track.

Actions must be taken to bring the future situation in line with the plan. It is the responsibility of the project manager to influence the team in order to ensure that the desirable outcomes or effects are achieved. If any deviations arise or are undesirable, corrective actions will be required to align future performance with the plan.

Should a project fall behind schedule, corrective action could involve support from team members who work overtime, whilst moving resources around to more critical areas or employing additional resources. It is essential for team members and project managers to be frank about seeking assistance in order to get back on track with the project (Portny, 2007:320-328).

V. If it is not possible to complete the project according to the plan, revise the plan and refer back to (a) and approval will be required for the revised plan.

Should the original plan prove to be unrealistic owing to any unforeseen scope changes or for any other reason, the plan should be altered in accordance and in collaboration with the

stakeholders who approved the original baselines. If the project managers and other stakeholders (customers) accept the new forecasts, then these become the new plan (Steyn, 2013:153-156).

In larger scale, projects control is performed at more than one level, the project manager controls sub-project managers, while the latter controls work package managers. In essence, project control involves anticipating the quality of deliverables, measuring progress and expenditures, and identifying any undesirable results.

Actual and anticipated outcomes are compared to the project plan during project execution and, if necessary, actions are taken to bring the project in line with the plan. All relevant stakeholders will then receive reports from the project managers on variances and corrective actions. Project control can include changing the plan in collaboration with stakeholders (Portny, 2007:320-328).

In this regard, the researcher felt it was necessary and relevant to the topic as it has an internal focus of a project within the public sector. In this case the WCG project management approach (traversal document) guides and assist the sampled department in terms of the management of the MSPiL project. The researcher seeks the knowledge to further assess the importance of the underlying factors relevant to projects, management and service delivery efficiency. This will provide the reader understanding as why the researcher found it beneficial to assess the controlling of the projects within the public sector.

2.3.3 The Need to Look Ahead

An annual report is a mechanism, which is used to control and evaluate the ongoing business of a company. But annual reports are not always current and do not necessarily provide historic information. Therefore, the best project managers anticipate problems before they actually occur and find the best possible solution to prevent any problems before they materialise.

Bear in mind that past performance should still be evaluated in order to take into consideration factors such as budget, quality, progress or any negative effects. Important and specific trends in quality, cost and progress are also determined by past performance. These analyses assist to control negative trends and ensure that projects are completed as planned (Russell, 2012:17). The author expands further on these points below.

2.3.3.1 Reporting

The project manager should report on the status, expected completion date, estimated cost at completion and the expected quality to stakeholders. This reporting reinforces the trust and confidence that the stakeholders have in the project manager's role to fulfil the project's plan.

It is a balance between formal, written reports and informal, verbal reporting. Written reports are more accurate than verbal reporting and provide a permanent record for reference purposes. A key objective to reporting is to avoid any surprises (Russell, 2012:20). Some guidelines in this regard include the following:

- Sensitive issues should always be discussed face-to-face, if possible;
- No unnecessary detail should be reported, as it could encourage interference; and
- It would be useful to have 15 minute stand up meetings on site every morning.

The need for over-optimistic reporting should be avoided and guarded; and while this type of reporting can be tempting, it should always be resisted.

2.3.3.2 Frequency of monitoring and reporting

Frequency of reporting is vital to allow corrective action before it is too late. This is to avoid any negative variance from the plan, and to correct and detect it as early as possible. The frequency should allow problems to be detected while they are still small, but it should be balanced with the requirement of minimising administrative work.

A balance must be found with providing too much data by reporting too often or to little information for control purposes (Russell, 2012:21).

Frequency of reporting is also determined by levels of the work breakdown system. At higher levels reporting frequencies are lower than at the lower supervisory level, where reporting occurs almost daily by monitoring performance.

The frequency of monitoring is determined by two factors, which relate to the person that is monitored, namely motivation and the ability to perform the work. The combination of these two factors is referred to as the maturity of the person for the specific task. A person who is consistently willing and able to perform the job would not be monitored as frequently as a person who does not have the skills set or motivation to perform the same task (Russell, 2012:21).

2.3.3.3 Need for balance during project control

To be effective during project control, project managers must find a balance among control over quality, schedule, cost and other undesirable changes or events. Emphasis must not be placed only on one aspect; and while interdependencies exist among the above factors, it should be understood (Russell, 2012:21).

2.3.3.4 Use of contingency reserves

No one project is the same and all projects are unique and face uncertainties. The critical chain scheduling method implements the building of contingency reserves, which are also referred to as buffers into the schedule. These funds should also form part of the budget (Steyn, 2013:158).

Buffers are provided only at project level to minimise the size of the contingency reserves. Realistic estimates at lower levels without contingency reserves should be provided. Aggregation of contingency reserves at project level allows the advantage that over-expenditure in one area could offset savings in another. Contingency reserves should only be used for unforeseen circumstances such as price hikes, unusual weather conditions or any other unusual events (Russell, 2012:21).

There seems to be a direct linkage in terms of the legislative framework discussed earlier in this chapter. The public sector obligations are measured in terms product and service quality. This brings the need for effective monitoring and controlling mechanisms of project. The auspices of accountability, openness and transparency of product versus project reporting remains key in this regard. Therefore, in reviewing the legislation and literature it is evident that there are various strategic structures of which departments report to in terms of progress of projects. Standing Committee of Public Accounts monitors issues on this level. Based on this, the researcher will attempt to identify the monitoring and control mechanisms exist within the MSPiL project and how it adds value to the management of the project in terms of its strategic objective(s).

2.4 Earned Value Approach

The earned value approach is easy to establish when the deliverables are discrete and the units are identical, for example, the number of bricks that are built into a wall. However, when a project requires more detailed activities with non-identical deliverables, for example, sub projects within a project (buying of equipment to be commissioned and installed), then detailed cost and time estimates are required for each task in order to develop and establish a planned value graph (Steyn, 2013:160-167).

Bearing in mind that past performance is not always a good indicator of future performance, and is not always suited to the earned value approach. It does not consider the critical path and only takes into account the value of the work that is completed. Therefore, one should not only use the earned value approach to forecast completion dates (Stratton, 2006:9-45).

2.4.1 Control – the Critical Chain way

Critical chain project management simplify schedule controls. This is monitored by the progress of the number of project buffers and feeder buffers that are consumed. Buffer consumption is normally divided into three zones of equal size; the first zone is the green zone and represents the first third of the buffer. The second zone is the yellow zone, which is more than one third but less than two thirds. The last zone is the red zone, which represents more than two thirds of the buffer.

When less than one third of the buffer has been consumed, there is no reason for concern, but as buffers are consumed and lead further into the yellow and red zones, the project should be monitored; and once buffers are fully consumed in the red zone, corrective action is required (Uher & Zantis, 2003:164).

Project managers can monitor the critical chain and buffers on project management systems where green, yellow and red icons display and indicate the different buffer status as the project progresses. It is vital that project managers should monitor the status and critical chain carefully to be aware of any warning signals that can be corrected before the time (Uher & Zantis, 2003:163).

2.4.2 Interpersonal Aspects of Control

Computerised systems and quantitative information indicate that project control is an exact and quantitative aspect, but in reality an interpersonal aspect of control plays an important role - people naturally resent and resist control.
It is vital that project control is discussed thoroughly with team members, whilst allowing and encouraging people to be actively part of the planning. This allows people to feel motivated to work towards a plan that they were part of creating and, therefore, they would be more willing to collaborate with the control process. Effective use of incentives and rewards is another motivator to remove negative factors from project control (Uher & Zantis, 2003:164).

Hard and frequent conversations or discussions with team members are important, as this allows team members to be actively heard, whilst simultaneously reflecting content and

emotions. It is important that integrity, honesty and a policy of “no surprises” is maintained as means to ensure trust and motivated work ethics amongst team members (Steyn, 2013:165).

In view if the above literature, it is evident that controls, mechanisms and/or tools are vital during the project life cycle and the management thereof. The researcher is therefore of the opinion that without this monitoring implementation/execution of the project will be challenging and will result in wasteful allocation of resources and may possibly impact on timeframes, deliverables, milestones as well as quality in this regard.

2.5 Project Monitoring and Control Explained

Oosthuizen et al (2012:171) maintain that project monitoring and control is the most important part of the execution phase. It is vital for project managers to collate information pertaining to the progress of the project at this stage.

Analysis of the information is used to determine if there will be any deviations from the initial plan of the project, which will allow any remedial steps to be implemented, where necessary. Aligned to this, updated communication on the project progress will be given to the relevant stakeholders and contingencies will be implemented to any identified risk events (Oosthuizen et al., 2012:171).

2.6 Monitoring and Control of a Project Implemented

Kerzner (2009:788) opines that one of the most recognised approaches is earned value management. This system allows project managers to monitor and control the cost and schedule performance of their projects. Earned value management compares not only the actual cost of work that is completed with the value of work that they plan to complete, but also the cost of work that is completed to date with the value of planned work.

By implementing this approach, project managers can identify a specific performance variance, but in measuring actual work completed to date and further identify if certain activities have been completed earlier than anticipated. The system can result in an earlier start of dependant activities with a potential and associated cost overrun (Kerzner, 2009:789-791).

Oosthuizen et al (2012:194) further explain that is important that earned value management is supported by top management so that it can operate and work efficiently. Project managers

should adopt this approach and take ownership of the system and make it work towards their project and, therefore, allow for flexibility.

Risk in monitoring and control of a project should be kept top of mind. Risk can be identified through implementation of appropriate measures to mitigate the impact, should a risk event occur or reduce the likelihood of a risk event taking place. Tracking of risks are imperative as means to prevent the risks from becoming risk events.

A good way to ensure that risks are kept under control is to have regular status meetings, as these provide a platform to share any issues and potential solutions. It is also a forum that is used to discuss any new risks that may have gone undetected and for necessary responses to be formulated (Oosthuizen et al., 2012:187).

Contingency plans are established in the planning stages of the project and normally identify the responsible individuals who will carry out the plan and any triggers that might give rise to the plan. The contingency plan also includes contingency reserves, which are usually money or time that is set aside to deal with any cost overruns (Brewer & Dittman, 2013:531).

Configuration management and change control is another important branch of monitoring and control within a project. Configuration management ensures that changes that affect the physical characteristics of specific critical systems are identified, controlled, approved and documented over the life of systems. Therefore, configuration management makes sure that everything is in line and maintains quality and prevents any oversights (Brewer & Dittman, 2013:532).

One of the stages of configuration management is change control. Change forms an integral part of any project and is project specific. Change requests should be reported and documented by the project manager. These change requests can be made by any of the project's stakeholders or sponsors (Brewer & Dittman, 2013:532), and can involve a number of steps, as outlined below:

- Determine all potential implications of change - budget, schedule and resource requirements;
- Accept or reject change requests;
- Update the project accordingly – schedule, budget and baseline;
- Communicate accepted changes to all relevant stakeholders;

- Allocate responsibility for the change implementation; and
- Implement accepted changes and monitor accordingly.

In the context of project management, the concept of monitoring can be defined as the constant observation and record keeping of all processes and activities within a particular project environment. Monitoring of a project can further be defined as the process of data collection regarding all facets of a project. The process of monitoring involves the cross referencing of project activities in an effort to measure progress. Monitoring of a projects also requires the person or team responsible for the monitoring to provide feedback to relevant stakeholders such as beneficiaries and donors. Through effective monitoring project teams are able to develop reports which is used for decision making and improving project performance (Community Empowerment Collective, 2011).

Steyn et al (2014:157-158) are of the opinion that the process of monitoring in project management assist with the controlling of the project outcomes as it involves frequent reporting of project activities which allows for corrective action to be taken where applicable. It should be noted that the identification of negative modification from the projected plan should be detected and corrected timeously.

Monitoring is considered to be a very important tool throughout the project life cycle. The process of monitoring allows the project team to adjust and redirect their efforts to constantly remain on course.

The process of monitoring provides important information that is crucial to the project and is used in:

- Assessing the inputs of the project and whether it was well utilised;
- Identifying potential risk and problems the project may face and finding suitable solutions; and
- Ensure that all project activities are carried out timeously by the delegated team members (Community Empowerment Collective, 2011).

It is if utmost importance to monitor project progress in order to identify challenges and possible inventions required. This will provide project managers to better control deliverables and project tasks. In addition, it will assist the project managers to meet deadlines and improve on turnaround times. If project monitoring and control ignored throughout the project life cycle and only conducted in the project closing phasing, it may result in the project team only identify project risk and short comings at a very late stage of project.

2.7 Project Risk Explained

Uncertain events can either have a positive or negative impact on a project. Positive risk can be seen as an opportunity, while negative risk can be seen as a threat. Both of these can impact a project and it is important that the project manager controls the risk and establishes a Risk Management Strategy. This strategy will ensure how risk is managed and handled in the event that it does occur within a project (Kendrick, 2015:4).

- Project execution

Project execution is the most timeous part of a project that utilises the most resources. All work that is set out in the planning phase is implemented here. It is the role of the project manager to control and direct all tasks (Kendrick, 2015:4).

According to Oosthuizen et al (2012:172), it is vital for project managers to understand how critically important monitoring and controlling is in order to ensure the success of a project.

Hence, the researcher feels that earned value management is a specific method that is used to monitor the progress and performance of a project. This method integrates scope, time and cost of a project, and allows project managers to forecast trends and identify any unforeseen or potential problems, which may occur.

2.8 Project Risk Management

Risk management in a project has two key dimensions, namely uncertainty and the impact or effect on the objective, and can be defined as follows:

Oosthuizen et al (2012:227) refer to risk as;

> *"An uncertain event or set of circumstances that, should it or they occur, would have an effect on the achievement of one or more project objectives."*

As previously stated, project risks can be both threats and opportunities. Risks can impact a project positively and provide various opportunities for a project to complete objectives more efficiently or effectively, but it can also impact a project negatively. When a risk impacts a project negatively, this can lead to it being seen as a threat to the project, which will delay any further objectives from being met (Oosthuizen et al., 2012: 187).

Van Well-Stam, Lindernaar, Van Kinderen and Van den Bunt (2003:5) contend that the project risk management cycle compromises of seven components, which are outlined below.

2.8.1 Initiation

This is the planning step and the foundation upon which to manage risk within the project, as outlined in a project risk management plan, which is forms part of the overall project plan. Each plan is specific and tailored to match the risk within a project (Van Well-Stamet al*.,* 2003:5). It is vital that the following items form part of the project:

- Confirm project objectives – identified objectives that are clarified for the exposure of risk can be assessed in terms of the effects that the risk will have on the identified objectives;
- Define risk thresholds – how much risk is acceptable against the defined objective for the project, which can be evaluated against a predetermined scale;
- Identify project risk management stakeholders and agree upon their responsibilities – stakeholders involved in the risk management process must be identified, while their roles must be clarified, especially in terms of who has authority and who determines the levels of risk exposure. This must be agreed upon, accepted and supported by all stakeholders; and
- Document and agree on project governance from a risk perspective – the risk management process must be clarified and this can be implemented by meetings, workshops, monitoring and reporting, ownership of risks, taking responsibility, escalation and ensuring that the risk profile is visible and managed.

2.8.2 Risk Identification

Identifying risk in a project can help to achieve a project's success. It is important to meticulously identify the risks involved in a project, as it can then be managed successfully (Van Well-Stam*et* et al*.*, 2003:5).

There are various sources or tools that can be used to identify risks within a project such as the ones shown below.

- Brainstorming;
- Work breakdown structure review;
- Assumptions and constraint analysis;
- Checklists; and

- Lessons learned from experiences.

To achieve clarity on project risk, it is imminent to recognise the relationship between causes, effects and risks (Van Well-Stam*et* et al*.*, 2003:5).

Each risk must have at least one cause; the cause is an existing condition with no uncertainty attached to it. A risk is an event or set of consequences that may occur in future with a direct consequence on the cause, while the risk will have an effect on at least one of the project's objectives (Van Well-Stam*et* et al., 2003:5).

Project risk must be described clearly and one of the key concepts to ensure this is project risk meta-language. This approach articulates risks in a way that explicitly follows the structure and assists in clarifying and assessing the risk (Van Well-Stam*et* et al*.*, 2003:5).

2.8.3 Risk Assessment

Risks have two main aspects, namely the element of uncertainty and the effects on an objective on a project. The assessment involves analysing individual risks (Larson & Grey, 2010:120). The process of risk assessment is to:

- inform stakeholders about possible outcomes, which have risen from uncertainty; and
- prioritise risk responses for effective risk management.

Uncertainty is represented by probability. The levels of probability would be measured against a scale of about one to five, which would be set out in the risk management plan. Effect on project objectives is represented by impact. Impact on a risk can also be measured against a predetermined scale. Together, probability and impact represent the project's exposure to the risk. Once the risk has been successfully assessed, it can be allocated to a risk owner to best manage the process further (Oosthuizen et al., 2012: 234-236).

2.8.4 Risk Response Strategy Selection

Larson and Grey (2010: 120) maintain that there are four broad strategies, which can be used effectively to respond to risk:

- Eliminate uncertainty;
- Involve others;

- Change size; and
- Take the risk.

The choice of the above strategies should be determined by the exposure of the project to the risk. Besides exposure, the correct strategy that is chosen can be affected by any of the following:

- Type and nature of the risk;
- Factors that are used to prioritise the risk;
- Strategies that are not available or suitable for a specific risk;
- Ease of implementing a specific strategy;
- Risk of the strategy or potential of the strategy to introduce a secondary risk;
- Cost of implementing a particular strategy;
- Resources and skills availability;
- Risk response and action planning; and
- Responses can be both reactive and proactive.

Reactive risk responses can be seen as contingency plans. It is planned to be implemented if and when the risk occurs. A key measure in a reactive risk response would be the response time; while the plan involves knowing what to do when the risk takes place (Hill, 2010:122-123).

Proactive risk response is more flexible and deals with how to deal with uncertain events and is implemented before the risk occurs. Influence is essential in terms of how to reduce the impact of the risk that occurs (Barkley, 2004:1-3).

To ensure that risk response and action planning are a success, tasks should be fully clarified and defined. In order for specific action tasks that are implemented in the strategic plan to be effective, the risk owner must ensure that it is planned in detail. Risk responses are as vital as any other task within a project, and should include a duration, budget, resource requirement, responsibility, completion criteria and dependencies. Risks are not meant to be eliminated, but rather reduced to an acceptable level within the project. Reduced risk is referred to as Residual Risk (Barkley, 2004:1-3).

The attention of the project team may be diverted to focus on the new risk response tasks, which could lead to being a threat to the initial project's success. Other consequences could be introduced with the extra work, which can give rise to secondary risk (Barkley, 2004:1-3).

2.8.5 Risk response execution

It is imperative that project managers should not only follow through with the project risk management process, but should also ensure that the execution is implemented successfully, as this is where many project management strategies fail (Wilson, 2014: 127).

Risk response plans must be executed and driven by the team and project manager to ensure that the effects of the actions that are taken are monitored. It is important to be able to predict the change in risk exposure, as this is expected with the results of risk responses, and for the team to be aware of any potential secondary risks that could rise from the impact of consequences with the risk response plans that were not predicted initially (Wilson, 2014: 127).

A useful way to maintain risk management as a mainstream project activity is to have it as a key item at regular status meetings. At this forum risk and their responses can be reviewed and reported in respect of all project tasks (Wilson, 2014: 127).

2.8.6 Risk monitoring control and review

Monitoring, controlling and reviewing of risk is twofold. It is important to assess that the strategies and responses were implemented, and that it is achieving what was expected when planned. The second part aims to assess the overall impact of the risk management process on the project, and to advise and implement enhancements to the process, as required by the project governance authority (Hillson, 2004: 194).

Project risk reporting is essential to the process by informing and providing evidence. With each step in the project risk management process, updated documents are required to relate to risks to which the project is exposed. Reporting and documents will vary depending on the methodology that is used (Hillson, 2004: 194).

Two important key documents, which form part of reporting, are the project risk register and the project risk management plan. The project risk register relates to the management of risk on the project, while the project risk management plan records all decisions that were taken in the initiation step of the project risk management process. Other documents also support and provide further information for the two documents, namely the project decision log, minutes of meetings, project status reports and project risk summaries (Hillson, 2004: 194).

Ongoing research continues to be conducted to support the monitoring, control and review of risk management, and is another source of information that assists project managers to be kept updated with daily issues and occurrences (Oosthuizen et al., 2012: 243-244).

Furthermore, projects can often be poorly aligned to organisational and provincial programmes and objectives, which lead to projects that have no strategic benefits being funded, and without assessment of the value that they add. In addition, deliverables are poorly defined, and this makes it difficult to:

(i) establish baselines at the beginning of the period; and
(ii) measure progress towards the achievement of those objectives.

The researcher notes that proper project planning, including risk identification and contingency planning, are, therefore, critical in project management. Risk factors can possibly be identified in the early stages or even in the initiation stage of a project. Theory indicates that these risks can be monitored and identifies the potential impacts thereof, while measures have been established to reduce these.

A large percentage of government funds are most likely to be spent in the final quarter of the financial year, causing a spike in that quarter. This could be indicative of project managers who were not able to manage their projects and budgets during the year and, therefore, have to resort to rushed spending at the end of the financial year. These expenditure trends often occur with unplanned initiatives in order to avoid underspending, and to improve chances of increased budget allocation during the next financial year. Hence, the adoption of a sound project management methodology and/or approach is vital for public sector organisations.

Based on the aforementioned literature review, the researcher understands that when authors refer to methodology, it is meant to include a collection of processes, methods and tools that they use to accomplish an objective. Methodology provides a checklist of key deliverables and activities as means to avoid missing key tasks. This consistency simplifies the process and reduces training. A project management methodology provides a roadmap that is utilized to manage projects. Therefore, project management methodologies provide guidance to project teams as collaboration means when tackling projects. Project teams who do not use a shared methodology tend to be less efficient, and this results in higher costs, longer schedules and the introduction of higher risks. While the entire delivery team is affected by the project management methodology, the project manager is the owner and typically the one who is most impacted. Managing projects and managing portfolios of projects are processes that

should be performed consistently in order to reduce the need for training in different methodologies, whilst enabling effective reporting and analysis.

2.9 The Project Management Approach of the Western Cape Government (WCG)

In WCG policy priorities, strategic objectives and funding options are discussed at structures such as the Medium Term Expenditure Committee (MTEC) and the Standing Committees on Public Accounts (SCOPA).

Being a tier of government, the WCG has a standard project management approach, which ensures that the project meets the strategic objective. The Blueprint document (13 November 2009 with specific reference to M.P.4/3) provides an in-depth explanation of the theoretical and practical aspects for projects and its activities, as well as its legal mandates (See Annexure A). The WCG contends that an effective project management approach should be implemented in the following specific areas, namely:

i) establishing project management structures within the department(s);
ii) the project management methodology and approach should be applied and established;
iii) developing and maintaining information systems to support project management functions;
iv) project management training and capacity building; and
v) ensuring that meaningful data is captured onto reporting systems.

In this study the researcher envisages to create an understanding around the current situation in the WCG as to how the projects are monitored and controlled. Reference will be made to the MSPiL project as the sample in this study in order to establish the influence of the project management approach.

2.10 Chapter Summary

This chapter provided both a legislative and theoretical overview of the problem and explained the purpose of the research. It provided various authors' views about the researcher's chosen topic and provided a theoretical overview of project management as a multi-disciplinary approach within a South African public sector context. Based on the research conducted it can be deduced that project management incorporates general management skills, which include:

- Strategic Management;
- Time Management;
- Human Resource Management;
- Planning;
- Budgeting and Costing;
- Risk Management; and
- Monitoring and control.

This chapter reiterated the importance monitoring and controlling of projects and management of portfolios. Monitoring and controlling are characteristics of project management that should be performed consistently in order to identify and reduce potential risk that may hamper the success and outcome of the project. Through the constant effective monitoring and controlling of the project, the project manager obtains a holistic overview which allows creates a platform effective reporting and communication to relevant stakeholders.

The study will now discuss the research methodology employed for the study.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides an overview of the research methodologies available to the researcher to use in order to gather the information and data required for this study. This chapter outlines information about the population and sample that was used, discusses the process involved in data collection and data analyses.

In Chapter One the researcher indicated that the study employed qualitative research. The researcher had targeted a preselected group of participants who provided data. The aim was to determine how projects are monitored and controlled in WCG with specific reference to the MSPiL project. This chapter discusses in detail how participants were selected as well as identify the data collection tool used.

3.2 Definition of research

Research can be defined as the process of conducting a methodical study in an attempt to either prove a hypothesis or to answer a research question. The goal of research is to find a definitive answer to a research problem (Explorable.com, 2017).

3.3 Research Methodology

3.3.1 Quantitative research methodology

Quantitative research can be defined as the statistical measurement or an analysis of data numerically. The numerical data gathered using quantitative research is used to generalise information across a particular population to explain a phenomenon. Quantitative research allows the researcher to make use of closed ended questions, surveys and tables to gather data (University of Southern California, 2017).

3.3.2 Qualitative research methodology

The nature of qualitative research allows the researcher to target a specific audience and its behaviour and be able to determine what their perceptions are regarding research topics. Qualitative research uses tools to conduct in-depth studies to answer research questions (Qualitative Research Consultants Association, 2017).

According to Brynard and Hannekom (2006:37), qualitative research allows the researcher to know people personally, to see them as they are, and to experience their daily struggles when confronted with real life situations. This methodology enables the researcher to interpret and describe participants' actions.

Qualitative research refers to the distance between the observer and the observed. There are two perspectives that are of utmost importance. The first is based on the notion that a short distance harms objectivity, while the second is based on the notion that a long distance causes a lack of understanding of the observed (Bryman, 1988:37-38).

As objectivity, validity and reliability are imperative in qualitative research, these concepts are the focus of the next section.

Objectivity

The idea of objectivity assumes that a truth or independent reality exists outside of any investigation or observation. The researcher's task is to uncover this reality without being biased in any way. This notion that a researcher can observe or uncover phenomena without affecting them is increasingly rejected, especially in the social sciences, as well as in the natural sciences. In qualitative research a realistic aim is for the researcher to remain impartial towards the outcome of the research, to acknowledge their own preconceptions and to operate in an as unbiased and value free-way as possible (Bryman, 1988:15).

Quantitative research generally chooses the former perspective, keeping a certain distance from the observed. When observations and interventions are conducted in a neutral manner, human errors can be made during the process of research, which should then be vetted to ensure scientific adequacy. Qualitative research sometimes addresses issues that require researchers to have direct emotional involvement or to experience sympathy such as when the researcher conducts a one-on-one survey and has to develop a cordial relationship with the study participants. In such cases observation and interventions have an effect not only on the observed, but also on the observers (Barbour, 1997:97).

When assumptions regarding objectivity cannot be held true, researchers should establish conformability by controlling the effects of observations and interventions on the process, as well as the consequences of the research. This is done by certifying that the findings and interpretations are based on raw data and by making the methods and research process transparent. In the objectivity/conformability paradigm the difference in evaluation methods

lies in recognising the neutrality of the observations and interventions. When observation or interventions are conducted neutrally, any errors that are made in the process should be controlled much like when it is not conducted neutrally (Barbour, 1997:97).

This researcher maintained objectivity by examining and declaring all underlying natures and assumptions in light of the study. The researcher also ensured that respondents were interviewed at different times and dates and/or sessions. This ensured that work place dynamics did not influence/limit respondents' willingness to participate in the study. Hence, this allowed the researcher to analyse the data and findings without contradicting the study's purpose and objectives.

Reliability

According to Welman et al (2005:144), reliability is concerned with the research study's findings and relates to the findings' credibility. It stands to reason that if a construct is measured by means of a particular instrument, comparable measurements should be obtained for the same individuals/objects, irrespective of when the instrument is administered, which particular version of it is used, and who applies it.

Brynard and Hannekom (2006:48) state that reliability pertains to the accuracy and consistency of measures. The same instruments must be able to produce the same data at a later stage and in similar conditions; for example, by means of a test-retest technique.

The term reliability is a concept that is used to test or evaluate quantitative research, and is often used in all kinds of research. The idea of testing can take the form of extracting information; hence the most important test of any qualitative study is its quality. A good qualitative study can help the researcher to understand a situation that may otherwise be confusing. Some researchers perceive that the concept of reliability is misleading in qualitative research (Golafshani, 2003).

However, validity and reliability are two factors, which any qualitative research should be concerned about when designing a study, analysing results and judging the quality of the study. In qualitative paradigms the terms credibility, neutrality or conformability, consistency or dependability and applicability or transferability are essential criteria, which measure quality. To be more specific, in qualitative research some researchers use dependability with the term reliability, as it corresponds closely to the notion of reliability in quantitative research. In order to ensure reliability in qualitative research, it is crucial to examine trustworthiness. In

order to establish qualitative studies through reliability and validity in qualitative research, a research report's trustworthiness lies at the heart of issues that are conventionally discussed as validity and reliability. Therefore, in any qualitative research the researcher should prove that reliability is a consequence of the validity of the respective study (Golafshani, 2003).

Validity

Welman et al (2005:142) contend that validity is the extent to which the research findings accurately represent what is really happening in the situation. An effect or test is valid if it demonstrates or measures what the researcher thinks or claims it does. Research errors such as faulty research procedures, poor samples and inaccurate or misleading measurement can undermine validity.

Brynard and Hannekom (2006:47) state that validity refers to the potential of a design or an instrument in order to achieve or measure what it is supposed to achieve or measure. It is concerned with the "what" of data collection procedures and measures.

In qualitative research the concept of validity is described by a wide range of terms in qualitative studies. Some qualitative researchers have argued that the term validity is not applicable to qualitative research. However, they have realised that there is a need for some kind of qualifying check or measure for qualitative research (Golafshani, 2003).

Validity is affected by the researcher's perception of validity in the study and the choice of paradigm assumption. Many researchers have developed their own perceptions of validity in the study and have often generated or adopted what they consider to be more appropriate terms such as quality, rigor and trustworthiness. In qualitative research the discussion of quality is initiated from concerns about validity and reliability in the quantitative tradition, which involves substituting new terms for words such as validity and reliability to reflect interpretive conceptions (Golafshani, 2003).

In terms of objectivity, validity and reliability in qualitative research, objectivity in qualitative research focuses on the truth and the elimination of being biased in any way. It is, therefore, of utmost importance that researchers should remain impartial to the outcome/s of the research in order to acknowledge their own perceptions and hence operate in as much of an unbiased and value freeway as possible. The qualitative research method produces data, which stems from the participant's point of view. There are various techniques that are used to review the collected data, namely by observation, interviews, questionnaires and reviewing

literature. These techniques should be tested for validity and reliability in order to ensure that relevant and accurate data is produced (Brynard & Hannekom, 2006:49).

In view of the above-mentioned discussion and as alluded to in chapter one of this study, this study will employ a qualitative research approach. The reason why the researcher chose to employ a qualitative research approach is due to the fact that the questions that were posed while conducting interviews was based on the personal feelings, opinions, or ideas of the research participants. Through the use of a qualitative approach the researcher was able to use the knowledge and skills that the participants possessed of project management and, specifically, the MSPiL project to help answer the research questions.

3.4 Data collection

Data collection can be defined as the process of collecting the relevant data that would enable the researcher to answer the specific research questions. The concept of data collection is known to all fields of study (Responsible Conduct in Data Management, n.d).

Welman et al (2005:165) state that in research there are three types of interviews, namely structured, semi structured and unstructured interviews.

3.4.1 Unstructured interviews

An unstructured interview can be defined as an interview that does not follow a specific format. In an unstructured interview the researcher generally has a set of questions that was formulated prior to the interview. Unstructured interviews allow the researcher the freedom to pose questions based on the responses of the respondents which allows the interview to proceed in a fairly informal manner (Business Dictionary, 2017).

Data collection was administered through an unstructured interview schedule. Taking into consideration the characteristics of the research environment and the limited time that was available to collect data, unstructured interviews were deemed to be the most effective method to conduct the interviews.

For this specific research project, the researcher focused on determining the project management approach with specific reference to the MSPiL project, and how projects in the public sector are monitored and controlled to enhance service delivery, with specific reference to the Western Cape Government's sample departments, as indicated in Chapter One of this study. Based on the study's literature review findings (Chapter Two), the researcher purposely

chose to approach those directly involved in the project management arena and, therefore, focused on government officials that dealt with matters of this nature on a daily basis.

To ensure that the findings of this research study remained unbiased, apart from seeking the opinions of project managers who monitor and control tasks within the WCG, the researcher also approached private sector project managers to source their knowledge, skills and experience in relation to the profession. This was also a method of identifying whether the public and private sectors are on par with project management approaches and methodology especially around achieving the WCG modernisation objective of achieving international best practice with regard to service delivery.

An unstructured interview schedule was developed using the literature review chapter of this study to collect relevant data for the study. This played a critical role in the data collection process. Furthermore, it enabled respondents to easily understand the questions and to increase willingness and ability to answer the questions, while the researcher also developed themes to ensure that questions were clear and precise. This helped to capture and categorise respondents' answers according to the themes that were created.

Interviews have various effects on both observers and the observed owing to interpersonal conduct, and in survey studies wording construction can have an effect on results. This implies that the researchers themselves could realise academic achievements by reporting the research results in a particular manner as a result, while the research sponsor may even have a direct interest in the research results (Barbour, 1997:99).

Three themes namely: project management process and governance, risk management, project environment (culture and integration) were created around project management's legislative and theoretical background to capture information, which was required to measure whether the current project management approach that is used within the sampled departments are effective as means order to monitor and control projects, as stipulated in Chapter Two of this study. The questions focused on: the project management processes involved within department(s); project objectives that are considered as being key and the level of achievement of these objectives; information on individual characteristics based on their role and responsibility of the respondent(s) as a measure to ensure reliability of their responses; and monitoring and controlling mechanisms and the integrated project management approach with projects.

3.5 Data analysis

Data analysis can be described as the systematic process that evaluates data. In qualitative research analysis should be a continuous process by which data is collected and analysed simultaneously (Responsible Conduct in Data Management, 2017).

3.5.1 Content Analysis

Content analysis may be used in both qualitative and quantitative data. Content analysis is used in research to interpret and code written material. Through the systematic evaluation of text such as written documentation researchers can convert qualitative data to into quantitative data. The researcher opted to make use of content analysis for the analysis of this research study (University of Georgia, 2017).

According to Welman et al (2005: 221), content analysis can be described as the quantitative analysis of qualitative data. For the purpose of this study it was deemed to be the most effective way to analyse the data. It should be noted that the concept was further clarified in Chapter Four.

3.6 Population

According to Bryman (2006:55), a population refers to a group that possesses specific characteristics, for example, public officials with a post-graduate degree.

Welman et al (2005:52) state that the population is the study object and consists of individuals, groups, organisations, human products and events, or conditions to which they are exposed. A research problem, therefore, relates to a specific population and the population encompasses the total collection of all units of analysis about which the researcher wishes to make specific conclusions. In this study the broader population comprised the Western Cape Government, with specific reference to Western Cape Government departments. Hence, this involved the ICT training unit and project management components that are responsible for the MSPiL project, focusing on the designations below:

- Project Administrators;
- Project Managers;
- Capacity Building Officers;
- Quality Assessors (ICT training unit and project office); and
- Directors.

3.7 Sampling

Brynard and Hannekom (2005:54) state that sampling is a technique that is employed to select a small group (sample) with a view to determining the characteristics of a large group (population).

In this study the researcher made use of purposive sampling. Welman et al (2005:61) state that probability allows you to determine the probability that any element or member of the population will be included in the sample. Due to the population representing a provincial interest, the researcher identified provincial government departments in the Western Cape Government Department(s).

As indicated earlier, the researcher purposefully selected the MSPiL project task team based on their project management skills, knowledge and institutional memory, which relate to the project and organisation.

Qualitative data analysis is an iterative approach that aims to understand how participants make meaning of the phenomenon of the study. In order to achieve this, the researcher approached data analysis by using a specific data analysis strategy (Creswell et al., 2007:103).

The unstructured interviews were conducted with ten (18) government officials in total. In Chapter One the researcher mentioned that twenty (20) interviews would be conducted, of which ten (10) participants were targeted per department. However, this did not materialise owing to the availability of the officials and time constraints as a result of unforeseen circumstances such as some of the identified participants roles and functions changing during the research study period. During the process of setting up appointments with the officials, it was established that the MSPiL project resides within the Department of the Premier and, therefore, Western Cape Education Department officials did not participate in this study. The Head of the Project (MSPiL) assisted the researcher by identifying relevant staff members who had knowledge and experience of the research topic, as it was an internal project focus rather than a traversal focus.

It is, therefore, important to note that the researcher restricted the unstructured interviews to the relevant employees of the sample departments owing to their knowledge of the research topic. Interviews were conducted with the rest of the employees of the sample departments, as the researcher opined that determining public opinion would not have specifically aided the

study, as the topic focused on project management within the WCG with specific reference to the MSPiL project.

3.8 The pilot study

The researcher conducted a pilot study by posing a few questions to two respondents who were separately drawn from the target population. Participants were requested to indicate whether the questions were ambiguous, and to indicate if the items were applicable. However, neither of the respondents confirmed any sense of ambiguity or irrelevance regarding the questions. Leedy and Ormrod (2010:111) proposed that in reality, it is advisable for a researcher to conduct a pilot study to verify certain measures in order to determine practicability and applicability.

3.9 Limitations of the study

The first constriction on the research was that the researcher was not able to obtain responses from all the identified beneficiaries. The second limitation is that this study was only focused on WCG department specifically working on the MSPiL project. Time and budget constraints were also major constraints of this study. Regardless of the above restraints and limitations, the research methodology used accomplished the objective of this study.

3.10 Elimination of bias

Wood and Ross-Kerr (2011:142) submit that bias results from collecting data in such a way, that one answer's according to the research question, is given undue favour over another. Bias in data collection phase implies that the researcher is either influenced the responses of the respondents in the same way or is selectively recording data according to conscious or unconscious predispositions (Wood & Ross-Kerr, 2011:143). The unstructured interviews were provided to the respondents without any discrimination. Participants were voluntarily requested to complete the questionnaires and hence there were no way by which the researcher could influence their response. The researcher also evaded bias in reporting the findings of this research.

3.11 Ethical considerations

Leedy and Ormrod (2010:101) advise that precaution has to be taken into consideration when the research involves humans hence the following applies:

- **Protection from Harm** – the researcher provided the participants with a participation information sheet stating that the identity or personal details of the participants may not be disclosed during or after the completion of this study (Leedy & Ormrod 2010:101).

- **Informed Consent** - the researcher provided the participants with a consent form that should be signed by participants before they partake in the study. The consent form indicated that the participants have a right to participate or not to participate in this study. Participants have a right to withdraw at any stage of this study (Leedy & Ormrod 2010:101).

- **Right to privacy and confidentiality** – the researcher informed the participants in writing that their personal details may not be disclosed (Leedy & Ormrod 2010:101).

3.12 Ethical statement

Research ethics refers to what is right or wrong when conducting research. The research should conform to the general norms and values. In management sciences, codes of conducts are usually enforced by professional societies and associations, universities and funding agencies (Brynard & Hannekom, 2006:84).

The researcher was aware that he was in a position of responsibility and trust. It is the researcher's promise that, while carrying out the research, the highest possible ethical standards were observed. The researcher maintained integrity at all times regarding data gathering and would only report information that was in the public domain and within the legislative framework. Hence, the researcher avoided plagiarism and fully acknowledged the work of others regarding content that was referred to in the research. The research findings that were applicable to this study were reported in honesty and integrity. The research study was considered to be worthy and beneficial to the sampled departments. Covert data gathering would not be a feature in the research study. While acknowledging the rights of all the research participants, the researcher also retained the right to report, providing that there was compliance with all the ethical protocols outlined here. The researcher is and was solely responsible for the research study, which was conducted with a view to improve his/her practice:

- Permission from the sampled department(s) was obtained prior to commencement of the research process;
- At no time would the research detract from the normal work of the departments;

- Strict confidentiality was adhered to. No names and personal details of the interviewees were included in the written report;
- The heads of departments that participated in the study had the democratic right to withdraw their resources from the project at any time; and
- Permission was sought from the respective department(s) to use their written transcripts for writing purposes in future.

3.13 Chapter Summary

This chapter provided the reader with more detail on the research methodology and highlighted why the researcher chose to use a qualitative research methodology approach for this study. The concepts of objectivity, reliability and validity as well as data collection methods and data analysis were discussed. The researcher defined the relevance of population and sampling and thereafter discussed the specific population and sample unique to this research study.

The following chapter 4 focus is on the analysis of the data and the research study's findings.

CHAPTER FOUR
DATA ANALYSIS

4.1 Introduction

This chapter analyses the data that was generated from the unstructured interviews and presents the study's findings.

This study employed a qualitative research methodology, while content analysis was used to analyse the data. Content analysis can be defined as a basic technique, which involves counting the frequencies and sequences of particular words, phrases or concepts in order to identify key words or themes; however, it has been proven that specific concepts or variables in qualitative texts cannot necessarily be studied in a quantitative manner only because these concepts or variables may have quite different meanings when relationships between the concepts are taken into account (Welman et al., 2005:221).

Unstructured interviews were administered to eighteen purposely selected respondents of the project management task team for the MSPiL project within the Western Cape Government with specific reference to the Department of the Premier, Directorate GITO: Education, Cultural Affairs and Sport.

4.2 Presentation of Results

4.2.1 Responses of unstructured interviews and interpretation of data

For accurate and reliable interpretational analyses, the researcher opted to develop themes in order to make it user friendly and so that all parties could understand the content of this study.

4.2.2 Respondents' Representation Overview

The researcher has provided graphic descriptions of the respondents' details based on the rank that they hold in the organisation, years of experience in the public sector, as well as their project role within the MSPiL project.

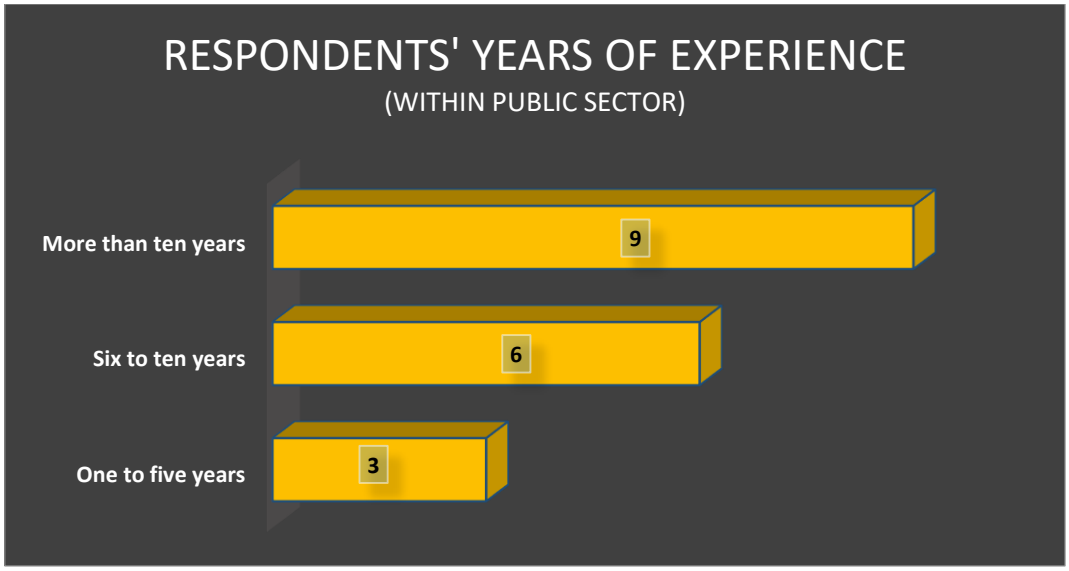
For an overview of the interview questions, please refer to Annexure B for questions, which were posed to interviewees/respondents.

4.2.3 Research themes and interpretational analysis

Graph 1:
This graph represents the respondents' rank within the organisation. The reason why the researcher included this data was for readers to understand the organisational structure and the project team's reporting lines.

Graph Two:

The graph below refers to the respondents' number of years of experience within the public sector. The researcher included this data as an indication of the public sector's operational knowledge, and hence the researcher chose purposive sampling. The public sector is measured on standards of service delivery, whereas the private sector is profit driven as a measurable output. Based on the interviews, the researcher has found that directors, project manager and administrators possess more than ten years' experience while the capacity building offices and moodle system administrators possess six to nine years' experience. The quality assessors possess one to five years' experience. The researcher was eager to determine why only the quality assessors possessed less than six years' experience. Upon enquiring the researcher determined that quality assessors were mainly employed on a contract/temporary basis.



It should be noted that the above graphs and information solely present a reflection of the MSPiL project task team in order to ensure that the project is monitored and controlled effectively, as per agreed timelines and deliverables.

4.2.3.1 Theme: Project Management Process and Governance

Based on the interviewees' responses, project is monitored and controlled in terms of the allocation of resources such as the project task team's individual roles and responsibilities within the project. The project team consists of the following:

Core Team

- 1 x Project Manager who oversees the project from start to finish;
- 1 x Moodle System Administrator who ensures system readiness for the online component of the project;
- 2 x Project Administrators who provide support to ensure that all documentation and project records are in order; and
- 3 x Capacity Building Officers who provide additional support and serve as Quality Assessors/Moderators for the project.

Extended Team

- 20 Quality Assessors who act as links between the Project Team and the Trainers, and who assist with evaluation, quality checks and support for Trainers; and

- 60 Trainers at schools that are used as training venues across the Western Cape, who train a group of 20 educators in the respective schools' computer labs over a 10-week period (2 hours per week).

Achieving its deliverables requires that deliverables should be clearly defined roles and responsibilities that minimise any grey areas so that task completion by provided deadlines or deliverable dates are achieved on time and according to budget as per the project scope. The modes of communication that are used between stakeholders that are involved in the MSPiL project include face to face engagements, email communication and online forum discussions, using Moodle.

Interpretational analysis and discussion

The responsibility of effective monitoring, controlling and other governance related matters are vested in the head project manager's duties and functions. There are factors that are deemed to be critical in order to achieve the ultimate goals and objectives, which all role players and stakeholders require in order to see the project's value. All team members observe deadlines and are accountable and contribute positively towards the project's success.

Furthermore, the effective project controls are dependent on a schedule of delivery dates, which are shared with the core and extended teams. Performance based remuneration stages, where trainers and quality assessors are required to submit evidence (within the departmental approved templates for various reporting purposes), have been established to ensure that the project stays on track.

Analysing the responses, it is evident that the role that the project team plays in the implementation of the MSPiL project is to ensure that the drafting and finalisation of interdepartmental, school/trainer and quality assessor Memorandums of Agreement (MoA) are completed timeously.

Hence, the project team is responsible for Train-the-Trainer workshops to ensure that trainers are prepared for their roles. Quality assessor workshops are held during the project implementation phase of the project life cycle. This includes managing online forum discussions, as well as providing guidance and advisory support to all role players.

The project team also visits training venues to ensure that all logistical requirements to conduct such intended training meet the minimum criteria. This serves as a project controlling measure to mitigate possible risk, which may impact the target project deliverable(s).

In Chapter Two of the study the researcher reviewed literature and provided a background to the legislative framework, which relates to project management and governance.

The Constitution of the Republic of South Africa guides the public sector with the value of using project management to implement governance responsibility is a key factor in this regard. For public sector initiatives, determination requires the drive to invest in project management and on public sector practices to establish effective governance frameworks to deliver services effectively and efficiently.

Furthermore, PMBOK (2008:6) defines project management as:

> "The application of knowledge, skills, tool, and techniques to project activities to meet the project requirements. The project team must be able to assess the situation and balance the demands in order to deliver a successful project".

Because of the potential for change, the project management plan is iterative and experiences progressive elaboration throughout the project's life cycle. Progressive elaboration involves continuously improving and detailing a plan as more-detailed and more specific information and more accurate estimates become available. Progressive elaboration allows a project management team to manage to a greater level of detail as the project evolves (Kattani & Moulin, 2015:11).

Oosthuizen et al (2012:3-10) maintain that:

> "A project is a complex, non-routine, one time temporary endeavour undertaken to create a unique product or service. It includes the application of knowledge, skills, tools and techniques in order to meet or exceed stakeholder needs and expectations within a definite starting and ending period. It is limited by time, budget, resource and performance specifications designed to meet customer needs".

The researcher opines that projects and its governance (approach and methodology) within the department (DotP) are effectively monitored and controlled to ensure efficient service delivery.

4.2.3.2 Theme: Risk management

As the researcher is aware that every project is unique, there are various challenges/risks that projects and project task teams experience during each phase of the project life cycle. Communication remains vital throughout the project (from the initiation, planning and implementation/execution).

As indicated in Chapter Two, risk management in a project has two key dimensions, namely uncertainty and the impact or effect on the objective. Hence, Oosthuizen et al (2012:227) refer to risk as:

> "An uncertain event or set of circumstances that, should it or they occur, would have an effect on the achievement of one or more project objectives."

Interpretational analysis and discussion

All respondents agreed to the fact that the project team does not have direct access to each educator, but rather communicates through respective District Offices within the Western Cape. The system downtime, referring to the Information Communication and Technology (ICT) platform, affects host schools, which sometimes experience technical challenges such as cable theft and power failures (owing to social ills).

It is and remains critical for the project task team to possess sufficient knowledge pertaining to risk management. Based on the responses from the interviewees, it is imperative that project teams are mindful of all the risks that could impact the project negatively. The current knowledge and experience of the project team around risk management is minimal.

The project team is dependent on the experience that they have acquired over the years and have allowed them to easily identify and mitigate those risks in order to minimise any potential deviation. Some project managers have attended project management courses, but not a formal or accredited risk management course.

As risk management is critical in project management, the risk management function is also vested in the Head Project Manager to firstly identify risks (be aware of when those risks are most likely to become active or threaten the project), and secondly, how to mitigate those risks so that they have little or no impact on the project timeline, quality or any additional expenses. For this specific project, tools such as risk registers/ logs have been formulated and implemented to report information on project risks, their analysis, counter measures and

status. An initial risk log is included with the Project Initiation Document. Thereafter it is used as a working document and reported on regularly. In terms of the control, it is updated with monthly report. This include details around the risks associated with the project of which it must be identified, together with the plan to manage those risks and a person assigned to manage each risk. Limited human resources and funds are not risks; they are known as constraints in this regard. A risk is a potential event that could affect the outcome of a project.

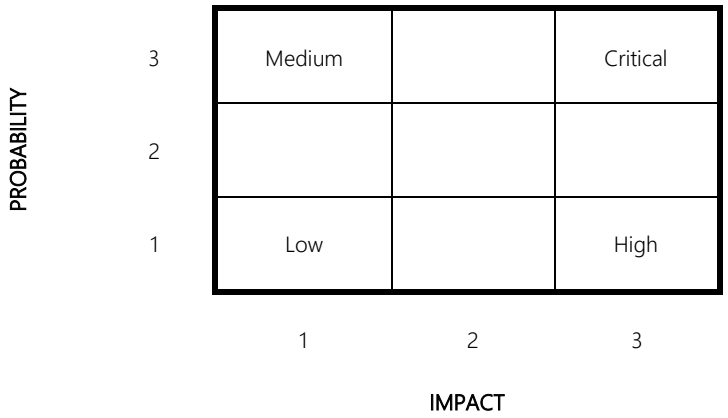
Table 4.1: Risk Register/Log Criteria

Risk Number:	A sequential number allocated to the risk as it is identified.
Risk Title:	Short name to identify the risk.
Description:	Description of the cause and effect of an event.
Category:	Indicates a category of a risk. For a comprehensive list of categories refer to the Risk Management Strategy.
Impact:	Graded from 1 to 3.
Probability:	Graded from 1 to 3.
Rating:	Multiplies the Probability and Impact rating to give an overall rating for the risk and enable prioritisation of risks.
Proximity:	Indicates if the risk affects the entire project or is relevant to a particular stage, indicated by a date e.g. Oct – Dec (this risk will most probably make an impact during October to December).
Date identified:	When the risk was identified.
Owner:	The person identified as best suited to keep an eye on the status of the risk.
Author:	The person that raised the risk.
Current Status:	Indicates the current status of the risk.
Date Last Updated:	When the risk status was last updated.
Countermeasures:	A description of the countermeasures to be taken to prevent, reduce, accept, transfer or put in place a contingency plan.
Responsible:	The person identified as best suited to keep an eye on the status of the risk.

(South Africa: Department of Premier, 2012:2-3)

Furthermore, the MSPiL project team emphasised, that risk(s) need to be quantified in two dimensions. The impact and the probability that the risk might occur, both needs to be assessed. For simplicity, rate each on a scale of 1 to 4. The larger the number, the larger the impact or probability. By using a matrix, the priority can be established.

Table 4.2: Risk Matrix



(South Africa: Department of Premier, 2012:4)

It should be noted based on the aforementioned, that if probability is high, and impact is low, it is a Medium risk. On the other hand, if impact is high, and probability low, it is High priority. A remote chance of a disturbance warrants more attention than a high chance of a hiccup. Below is an example of risk register/log used in this project.

Table 4.3: Risk Classification Chart

No	**Risk Title**					
1						
Category		**Impact**	**Probability**	**Rating**	**Proximity**	**Date Identified**
Owner			**Author**		**Current Status**	**Last Updated**
					Active	
	Counter Measures					**Responsible**
1.1						
1.2						

(South Africa: Department of Premier, 2012:2)

4.2.3.3 Theme: Project environment (culture and integration)

The department's project management approach is described as a transversal approach within the WCG. They are guided by and subscribe to the adoption and customised Project Management Book of Knowledge (PMBOK) and the Prince II methodology.

> According to Uher and Zantis (2003: 163), *"project managers can monitor the critical chain and buffers on project management systems where green, yellow and red icons display and indicate the different buffer status as the project progresses. It is vital that project managers monitor the status and critical chain carefully to be aware of any warning signals that can be corrected before the time".*

Interpretational analysis and discussion

The respondents felt that the current project management is an agile, which is best suited to an environment that has faster turnaround times with more streamlined, speedier approvals and processes, red tape reduction, as well as more direct communication channels.

Yes, the project task team supports the philosophy of adapting a multi-disciplinary approach towards project management for future projects based on the new public management paradigm.

The WCG also strives towards incorporating integrated systems for improved streamlining processes. It should be noted that current risk management systems are currently developed by the project manager, and that this serves as a generic standard criteria or framework to monitor and control these risks.

4.3 Chapter summary

The findings presented in this chapter is an analysis of the data that was gathered by using unstructured interviews and is a summary of the key findings that were sought from the respondents and interviewees.

Therefore, based on the findings, there is a clear indication that the organisational arrangements for managing, monitoring and controlling projects have been established, though possible gaps exist around risk management, which identifies a need for an integrated and multi-disciplinary approach/methodology to ensure that new and future projects are implemented effectively and efficiently in the public sector.

The researcher has noted that there is a hierarchy for the project team and that all team members has specific duties that ensures the progression and success of the project. Furthermore, the researcher noted that the project team consist of an extended team who conducts training.

The following factors can be deemed as critical for the effective monitoring and controlling of the project:

- Accountability;
- Punctuality;

- Monitoring;
- Reporting; and
- Effective stakeholder liaison.

The MSPiL project is indeed making a conservative effort to monitor and control the project by facilitating quality assessor workshops and conducting site visits and inspections to ensure the effective delivery of training.

The effective monitoring and controlling of projects remains an integral component of project management and governance. The researcher agrees with the statements of Truman and King (2017:5) by arguing that through the use of sound project management practices, project teams can achieve its goals as well as Attarzadeh and Ow (2008:236), that poor communication, lack of planning, poor management and executive support are contributing factors to project failures.

Hence the lack of project based management practices is evident through a number of symptoms, which include:

- Poorly documented and structured initiation and prioritising of deliverables;
- Inadequate or no planning of activities that lead to the achievement of intended deliverables;
- Poor execution of activities;
- Weak monitoring and control mechanisms; and
- Late completion of projects and little or no formal sign-off thereof (South Africa. Department of the Premier, 2009:15).

CHAPTER FIVE
CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter concludes the study and provides recommendations regarding the theoretical framework for monitoring of projects within selected organisations in the public sector.

The main aim or purpose of the study is of a dual nature, namely to develop a theoretical framework to monitor and control projects and practices within selected provincial government departments in the Western Cape, (with specific reference to the DotP and the WCED). Secondly to firstly, achieve an improved project management approach to monitor and control projects when implementing strategies and thirdly to enhance the capacity and the ability of project managers with in the Western Cape government in becoming more effective and efficient in service delivery.

The research objectives of the study were:

- Establish the nature of projects and project management within the public sector, in general;
- Identify possible improvements for project management approaches in respect of e-Education, which sets out a policy framework for the implementation of a strategy to expand the use of ICTs as a means to increase the effectiveness and quality of teaching and learning that will produce learners who can compete in the global knowledge economy;
- Develop an integrated project monitoring approach to enhance the standard of project management methodology and approaches in the public sector; and
- Identify possible gaps in current project planning and control systems and procedures.

The research questions for the study were:

- What are the current project management methodologies and/or approaches that are used to implement a project?
- How are projects monitored and controlled effectively within government?
- What internal control measures have been established to monitor and control the allocation of resources within projects?

5.1.1 Conclusions

Chapter One contained the researcher's proposal and introduced the research situation or problem, background of the problem, the statement of the problem, the research objectives and the research questions. It explained the use of the research methodology and the study's literature review. Unstructured interviews were conducted with eighteen (18) government officials in total, and they all reside within the studied Department.

The study provided a background of the project (MSPiL) from a national mandate perspective, while the White Paper on e-Education (2004:16) was used to signify the National Department of Education's (the DOE) approach to e-Education and the directive issued by it to integrate Information and Communication Technologies (ICT) into teaching and learning. Amongst other projects, ICT has been used as an enabler to: provide greater access to learning opportunities; redress inequalities; improve the quality of teaching and learning; and provide the impetus to accelerate the achievement of national education goals.

The Western Cape Education Department's (WCED) strategic objectives and priorities ensure that staff in the education environment needed to acquire the requisite knowledge and skills to integrate ICTs into teaching and learning.

Hence the need for the pilot MSPiL Training Project, which was launched in 2008 with twenty-six (26) training venues and approximately five hundred and twenty (520) educators; and this was regarded as a remarkable success. In 2013 the project made provision for approximately seventy (70) training venues, as well as one thousand four hundred (1400) educators for the upgrading of WCED educators' skills in respect of ICTs as per the Department's Annual performance plans (e-Government Strategy 2012-2019).

The 2010/11 financial year represented the first year of delivery against the new 2010/11 – 2014/15 Strategic Plan of the Western Cape, Department of the Premier (the DotP). In May 2009, with the advent of a new political dispensation in the Western Cape Government, the DotP took the lead by institutionalising the new strategic mandate across the province. One of the key outcomes of this process related to the development of a number of blueprints under the auspices of the Modernisation Programme.

It further delineated the research objectives and research questions associated with the study. The significance of the study was discussed and the research methodology was outlined. The data collection techniques that were employed identified the study as qualitative research

methodology and a content analysis approach was followed. Open-ended questionnaires and unstructured interviews were administered, while an investigation into the relevant literature was also undertaken.

Chapter Two made use of literature, legislation regarding the research problem and explained the purpose of the research. This chapter provided various authors' views about the research study's chosen topic and provided a theoretical and legislative overview of project management in a South African public sector context. This project (MSPiL) facilitates ICT Capacity Development interventions for WCG educators in the WCED, of which the DotP's sole responsibility was to ensure that the project is implemented.

The study further provided a theoretical and legislative overview of the problem and explained the purpose of the research. Data for this research project was collected via the primary source – qualitative design – interviews, secondary literary sources, as well as other sources, which consist of explanatory information that is relevant to the study.

This chapter provided the reader with more detail on the research methodology and highlighted why the researcher chose to use a qualitative research methodology approach for this study. The concepts of objectivity, reliability and validity as well as data collection methods and data analysis were discussed. The researcher defined the relevance of population and sampling and thereafter discussed the specific population and sample unique to this research study.

Chapter Four analysed the data that was gathered from the unstructured interviews and provided a summary of the key findings that were gathered from the respondents and interviewees. Chapter Four thus concluded that there is a clear indication that a multi-disciplinary approach in respect of project management is required, or a review of the current approach or methodology. The researcher has noted that there is a hierarchy for the project team and that all team members has specific duties that ensures the progression and success of the project. Furthermore, the researcher noted that the project team consist of an extended team who conducts training.

The following factors can be deemed as critical for the effective monitoring and controlling of the project:

- Accountability;
- Punctuality;

- Monitoring;
- Reporting; and
- Effective stakeholder liaison.

The MSPiL project is indeed making a conservative effort to monitor and control the project by facilitating quality assessor workshops and conducting site visits and inspections to ensure the effective delivery of training.

The effective monitoring and controlling of projects remains an integral component of project management and governance.

5.2 Recommendations

5.2.1 Recommendation 1

The WCG Project Management approach was implemented in November 2009. The Department of the Premier, Centre for e-Innovation's (Directorate GITO: Education, Cultural Affairs and Sport) project office should consider a possible review of the document, considering that it has already been in existence for the past seven years in order to establish and implement a standardised, integrated, multi-disciplinary approach.

5.2.2 Recommendation 2

The Department of the Premier's Centre for e-Innovation's (Directorate GITO: Education, Cultural Affairs and Sport) project office can adopt formal enterprise risk management tools, systems and mechanisms to monitor and control project activities effectively during the development of their annual performance plan in the next financial year (2017/18). This includes risk prioritisation metrics of project planning and the project life cycle.

5.2.3 Recommendation 3

The Department of the Premier, Centre for e-Innovation's (Directorate GITO: Education, Cultural Affairs and Sport) programme and project managers should ensure that a clear separation between operational/line function internal control processes and project activities should be clearly identified, especially around project/organisational decision making, financial implications, and allocation of resources as means to reduce red tape. This can be implemented within line function units immediately, which will benefit the roles and responsibilities of the project task team.

5.2.4 Recommendation 4

The Department of the Premier, Centre for e-Innovation's (Directorate GITO: Education, Cultural Affairs and Sport) project office and task team that specifically deal with the MSPiL project should clearly understand their department's requirements whilst defining, planning and managing projects to improve project management maturity, as well as constantly communicate the roadmap, benefits and progress at both project/programme, departmental and provincial level by 2019, since this is when the Western Cape Provincial Strategic Plan reaches its end. This will assist the department and its MSPiL project team to improve project tasks and activities for future projects with similar characteristics.

5.2.5 Recommendation 5

It is important that programme and project managers should measure the project scope, and monitor and control the progress to provide positive feedback and recommendations to Provincial Top Management and the department regarding its performance towards the targeted maturity levels annually. This should ensure that effective and efficient services are provided to beneficiaries, whilst projects are implemented as the need for intervention arises. It is for this reason that strategic decision making, direction and linkage can and will be provided to ensure an agile approach for the successful closure of the project life cycle by programme and project managers.

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