


**The application of project management
methodology for Municipal Infrastructure Grant
projects: The case of Ramotshere Moiloa Local
Municipality**

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ABSTRACT

The post-1994 South African Government has generally done well in developing systems, policies and aligning structures to ensure improved service delivery. South African municipalities are legally mandated to promote the social and economic development of communities. The Constitution of the Republic of South Africa, 1996 (Section 152) stipulates the objectives of local government as follows:

- provide democratic and accountable government for local communities;
- ensure the provision of services to communities in a sustainable manner;
- promote social and economic development;
- promote a safe and healthy environment; and
- encourage the participation of communities and community organisations in matters related to local government.

In operationalising these objectives, the local sphere of government has to implement required systems and processes to provide essential services. A key instrument as far as infrastructure development is concerned, is the implementation of the Municipal Infrastructure Grant (MIG) to guide and direct infrastructure projects among participating municipalities. MIG is a way to empower local government to manage its affairs and take responsibility in terms of planning and budgeting for all basic services. The government has implemented systems to ensure that municipalities utilise project management skills and applications to achieve the desired goals and deliver services to the poor. DPLG (2004a:10) highlight that “no MIG funds may be spent outside the framework of a municipality’s pre-existing Integrated Development Plan and its approved budget. The IDPs should be based on the provision of a basic package of services to the poor, appropriate service levels, financial sustainability and adequate organisational capacity”.

This study focussed on the application of project management methodology for MIG projects at Ramotshere Moiloa Local Municipality. The study adopted a qualitative research design to analyse project management methodologies, project management best practice

and processes, international and national trends, and the perceptions of project management unit officials at the selected municipality. Recommendations for the adjustment of existing project praxis is provided to streamline infrastructure development in local municipalities in South Africa.

Key words:

Projects

Project management

Project management methodology

Municipal Infrastructure Grant

Ramotshere Moiloa Local Municipality

DECLARATION

I, the undersigned, hereby declare that the content contained in this dissertation is my own work and it has not been submitted at any University and sources used or quoted in this dissertation have been duly acknowledged.



SIGNATURE STUDENT

D.M. MOKGETHI

11 FEBRUARY 2021

DATE

DEDICATION

This study is dedicated to my late grandfather, Bathoeng Tsele († March 1983), who encouraged me to attend school after recovering from polio. I will forever be thankful for your advice and guidance.

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“Your Word is a lamp to my feet and a light for my path” - Psalm 119:105 (Bible, 2020)

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LIST OF ACRONYMS

CFO	Chief Financial Officer
CMM	Capability Maturity Model
COGTA	Cooperative governance and traditional affairs
DPLG	Department of Provincial and Local Government
DPSA	Department of Public Service and Administration
IDP	Integrated Development Plan
KPA	Key Performance Area
MEC	Member of Executive council
MFMA	Municipal Finance Management Act
MIG	Municipal Infrastructure Grant
MIIF	Municipal infrastructure Investment Framework
MIS	Municipal Information Systems
MITT	Municipal infrastructure Task Team
MIT3	Municipal infrastructure Technical Task Team
MMC	Member of Municipal Council
MPAC	Municipal Public Accounts Committee
MSA	Municipal Systems Act
OPM3	Organisational Project Management on Level 3
PFMA	Public Finance Management Act
PMBOK®	Project Management Body of Knowledge
PMMM	Project Management Maturity Methodology
PMI	Project Management Institute
PMISA	Project Management Institute of South Africa
PMO	Project Management Organisation
PMU	Project Management Unit
PPP	Public Private Partnership
PPPFA	Public Private Partnership Finance Act
RMLM	Ramotshere Moiloa Local Municipality
RSA	Republic of South Africa
SALGA	South African Local Government Association

SCM

Supply Chain Management

SDBIP

Service Delivery and Budget Implementation Plan

WBS

Work Breakdown Structure

CHAPTER 1

ORIENTATION AND PROBLEM STATEMENT

1.1 INTRODUCTION

Municipalities in South Africa progressively utilise project management as an instrument to render services on time, within budget, and according to quality and performance specifications. Van der Waldt (2014:853) states that projects typically emanate from a municipality's Integrated Development Plan (henceforth IDP) and the top-layer Service Delivery Budget and Implementation Plan (henceforth SDBIP). Each municipal department is then required to and responsible to design and execute projects aligned with these plans. The infrastructure directorate should ensure that the Municipal Infrastructure Grant (henceforth MIG) is implemented to render particular infrastructure-related services. Van der Waldt (2014:845) posits that the process of applying project management is generally frustrated by the fact that IDPs and SDBIPs are not operationalised successfully due to the lack of an adequate project-based approach in municipalities. Furthermore, the general lack of competencies and skills among municipal officials and relatively low organisational capacity levels of municipalities result in partial completion of projects and not according to quality specifications, time, and budget parameters. In this regard, Tshishonga and Mafema (2010:564) hold that adequate project-based skills and organisational capacity are essential for infrastructure development and maintenance.

The South African Cabinet approved the establishment of the National Conditional Grant which evolved into the Municipal Infrastructure Grant (MIG) on the 5 March 2003 (DPLG 2004:1). The MIG programme is executed through projects, which are generally infrastructure development in nature and include the construction of roads, storm water pipes, water purification and reticulation, construction of reservoirs, dams, installation of high-mast lighting, and housing. The Department of Provincial and Local Government's (DPLG) MIG Booklet (2004:6), outlines the MIG as "a municipal infrastructure funding arrangement which combines the existing capital grants for municipal infrastructure into a

single consolidated grant”. The MIIG design with the following provisions is outlined below (DPLG, 2004:12, MIG, 2005:6):

- “The MIG programme is aimed at providing only basic infrastructure.
- The programme is aimed at providing services to the poor and funds will therefore be targeted to reach them.
- The programme will be managed to ensure that the local economic spin-offs through providing infrastructure are maximised. This includes employment creation and the development of enterprises.
- The mechanism for distributing funds must provide for equitable access to such funds by the poor in order to make uniform progress in closing the infrastructure gap
- Decisions relating to the prioritisation of municipal infrastructure spending, such as the identification, selection and approval of projects, are best undertaken at municipal level, with the following provisions.
- Funding must be used to provide the greatest possible improvement in access to basic services at the lowest possible cost.
- Funds should be provided to individual municipalities on a three-year basis, consistent with medium term budgeting practice, with minimal in-year changes and with year to year changes based only on clearly defined conditions. It is also essential for municipalities and other stakeholders to easily understand how the funds are distributed”.

MIG is a conditional grant. Therefore, municipalities must conform to the conditions prescribed by the Municipal Infrastructure Task Team (MITT) as administered by the Department of Co-operative Governance and Traditional Affairs (CoGTA) through the national MIG Unit. Three types of conditions apply to MIG: Division of Revenue Act conditions; cross-cutting conditions; and sector conditions. The purpose of these conditions is to ensure that municipalities address the objectives outlined in the MIG policy. The DPLG booklet (2004-2007:12) highlights the key objectives of the MIG as follows:

- “To fully subsidise the capital costs of providing basic services to poor households. This means that priority must be given to meeting the basic infrastructure needs of poor households, through the provision of appropriate bulk, connector and internal infrastructure in municipal services.
- To distribute funding for municipal infrastructure in an equitable, transparent and efficient manner which supports a co-ordinated approach to local development and maximises developmental outcomes. To assist in enhancing the developmental capacity of municipalities, through supporting multi-year planning and budgeting systems.”

According to DPLG (2006:14), “MIG complements the Equitable Share Grant for local government and is allocated to specific municipalities on the basis of a formula. The MIG programme aims to provide only basic infrastructure services such as, water, electricity, roads and houses” (DPLG MIG, 2006:3). Government intends to build municipal capacity in designing and executing capital projects through the MIG programme. To this end, Project Management Units (PMUs) are established in municipalities which participate in MIG (Van der Waldt, 2014:852). DPLG (2007:26) outlines the role and responsibilities of PMUs as follows:

- “PMU must be able to co-ordinate all projects serviced by the PMU. They are not responsible for identifying projects in the IDP planning process, but must liaise closely with municipal planning departments.
- It should conduct environmental impact assessments and feasibility studies of infrastructure projects and design project business plans.
- It is responsible for establishing and approving contracts with contractors and consultants for each project.
- It should ensure that the project meet planning objectives, specifications and targets”.

According to Klastorin (2004:1), the origin of project management can be traced back as far as the construction of the Egyptian pyramids. Cleland (2004:9) defines a project as any

undertaking that has a defined objective, a cost parameter and time element for its development. Cleland (2004:9) further defines a project as a cluster of activities that are pulled together to deliver something of value to a customer or beneficiary. Meredith and Mantel (2013:8) contribute to this definition and assert that a project can be regarded as a temporary endeavour undertaken to create a unique product or service. Meredith and Mantel's (2013:8) assertion is further supported by Kerzner (2004:1) who defines a project as an endeavour that has a definable objective, consumes resources and operates under time, cost, and quality constraints. Knutzen and Blitz (1991:2) and Kerzner (2003:9), as quoted by Van der Waldt (2014:854), argue that "a project can be defined by focusing on its managerial dimensions, namely: optimal utilisation of resources to ensure that the project output is adhered to in terms of time, budget and quality constraints". Based on the above definitions of a project, it can be inferred that any project requires thorough planning and effective management.

According to the Guide to the Project Management Body of Knowledge (PMBOK), published by the Project Management Institute (PMI) (2013:5), project management can be defined as the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. This definition is supported by Nel (2001:606) who defines project management as "a technique that can be applied to ensure the achievement of developmental programmes by using resources optimally".

Heldman (2003:18) states that applying sound project management processes, techniques and skills prevent loss of time and resources. Kerzner (2004:13) supports this statement and postulates that project management is like total quality management; both are management systems which require extensive education and training.

According to Van der Waldt (2007:249), "project management is recognised internationally as a profession. In South Africa a professional body, the Project Management Institute of South Africa (PMISA), was established in 1997 to ensure quality project management practices. One of the key contributions and products of PMI is the Project Management Body of Knowledge (PMBOK) guide". In the 5th PMBOK (Dec 2014 edition), stakeholder management was added as the tenth knowledge area of project management. The other

nine knowledge areas include: quality management, human resource management, cost management, communication management, procurement management, scope management, integration management, risk management, and time management.

The PMI provides the fundamentals of project management as an international recognised standard (IEEE STD 1490 – 2003). It further recognises five process groups or life-cycle phases (PMBOK Guide, 2012). The PMBOK Guide (2000:192) defines a project life-cycle as “a collection of generally sequential project phases which are determined by the control needs of the organisation involved in the project”. Lock (2007:3), in turn, defines the life-cycle of a project as “the period that begins with the authorisation of work on the project or signing of a customer-contractor contract and ends with the handover of the desired product to the customer”. According to Heldman (2003:18), the five project phases or project management process groups include:

- Initiation
- Planning
- Executing
- Controlling
- Closing

Heldman (2003:18-19) further explains the purpose of each phase and posits that the initiation stage is the beginning of the project and it determines which activities must be undertaken first. It is followed by the planning phase which provides directives in terms of processes to be followed to execute the activities of the project. The executing phase comprises the actual production of work where the project team utilises resources, finances and implementation procedures to execute the tasks. During the controlling phase performance is measured concerning work progress. Lastly, the closing phase is the final handover of the completed project and involves an evaluation of whether the project specifications have been met and the customer is satisfied with the final deliverables.

The Constitution of the Republic of South Africa, 1996 (Section 40), defines local government as “an independent sphere of government”. It demarcates government into three spheres which is national, provincial, and local government. South Africa has 9 provinces and comprises of 278 municipalities (The Local Government Handbook, 2014: online). The Local Government: Municipal Structures Act 117 of 1998 provides for the following categories of municipalities:

- “Category A: known as Metropolitan Municipalities, municipality with exclusive municipal executive and legislative powers in its area;
- Category B: known as District Municipalities, municipalities that shares exclusive municipal executive and legislative authority in its area;
- Category C: known as Local Municipalities, municipalities that have municipal executive and legislative authority in its area that includes more than one municipality” (Van der Waldt, 2007:50).

Ramotshere Moiloa Local Municipality (RMLM), the selected case study of this research, is a Category C municipality and participates in the MIG programme. RMLM is located in the North West Province and is part of the Ngaka Modiri Molema District Municipality. The vast majority of the population lives in a rural or peri-urban environment, which for most part, is poorly serviced (RMLM IDP 2014/2015:10).

Service delivery protests erupted on 12 March 2015 at RMLM in various villages which is generally indicative of the fact that the municipality is not addressing its infrastructure backlogs adequately. One of the most pertinent issues raised by local communities was inadequate access roads to their respective residential areas. According to Naidoo (2010:2013), the RMLM experiences, *inter alia*, similar problems due to the general lack of management and leadership capacity, skills and experience, and personal conflict. Furthermore, according to the RMLM IDP (2014:21), the tarring, paving and maintenance of roads were raised as both a priority and a challenge in almost all wards.

The RMLM received a sum of R61 199 811 from all the funding sources (i.e. grants) for the 2014/2015 financial year. A sum of R157 517 000 was received from MIG. The budget for construction of roads was R30 million per Key Performance Area (KPA) for the 2014/2015 financial year (i.e. infrastructure projects) at –

- Mosweu village (1,5km);
- Mokgola village (1,5km);
- Sikwane (2km);
- Ikageleng township (2km); and
- Mogopa village (2km).

The problem that faces the RMLM is the general lack of appropriate project management methodology to address backlogs in terms of the construction of new roads. The PMU should play a key role in this regard. The study addressed how project management methodology can be applied by RMLM PMU to execute MIG projects successfully (i.e. roads construction) by utilising the ten project management knowledge areas (PMBOK). The 2014/2015 Council Annual Report revealed that MIG projects for the financial year 2014/2015 were incomplete and run concurrently with the 2015/2016 MIG projects. RMLM Council Annual Report 2014/2015 further highlighted the following key challenges facing its PMU:

- There is inadequate planning, execution, controlling and monitoring of MIG projects. This is exacerbated by the general lack of project management skills, experience and methodology applied in the PMU. These challenges have contributed towards contractors not to adhere to the project specifications provided for in tender documents.
- Contractors do not complete MIG projects (i.e. construction of roads) by the stipulated time. Moreover, the projects are of poor quality and workmanship (RMLM Report 2014/2015). The Auditor-General (2014-15:31) report revealed that the contractors performance was not monitored on a monthly basis, and there was a

general lack of or inadequate contract performance measures and monitoring in the municipality. The Auditor-General (2014-15:108) further highlighted the following challenges related to infrastructure projects:

- inadequate financial controls leading to disclaimers or qualified audits;
- lack of monitoring mechanisms for the implementation of MIG projects;
- lack of strong and effective project governance (i.e. PMU) structures; and
- officials appointed do not meet the minimum competency requirements and project skills for their positions.

In view of the above assertions the study intended to address the following problem: Which project management methodologies can be suggested to RMLM PMU to improve MIG project implementation?

1.2 RESEARCH OBJECTIVES

The primary objective of this study was to analyse the application of project management methodology in the implementation of MIG projects with specific reference to construction of new roads by RMLM PMU.

The primary objective will be achieved by addressing the following secondary objectives:

- To explore project management principles, life cycle methodology and international best practice through extensive review of literature;
- To outline the origin, nature and scope of the Municipal Infrastructure Grant (MIG);
- To analyse the statutory and regulatory framework governing MIG in municipalities in South Africa;
- To disclose the challenges associated with project management life cycle methodology applications in MIG projects within the RMLM; and
- To provide recommendations to vanquish the challenges associated with project applications in MIG projects.

1.3 RESEARCH QUESTIONS

The following research questions were posed:

- What are the principles, life cycle methodology and international best practice associated with project management?
- Which legislative statutory and regulatory framework underpins Municipal Infrastructure Grant?
- How is project management life cycle implemented in practice?
- What are the challenges associated with project management life cycle methodology applications in MIG projects within the RMLM?
- Which conclusion and recommendations can be provided to address challenges associated with project applications in MIG projects?

1.4 CENTRAL THEORETICAL STATEMENTS

In terms of Section 152 of the Constitution of the Republic of South Africa, 1996 (RSA, 1996) municipalities are obligated to “ensure that municipal services, as provided for in Part B of Schedule 4 and Part B of Schedule 5, are delivered in a sustainable way”. The White Paper on Local Government (RSA, 1998) also recommends that “municipalities establish innovative ways to provide and accelerate the delivery of municipal services”. According to Van der Waldt (2014:850), “further impetus to the establishment of a framework for infrastructure projects was provided by the White Paper on Municipal Service Partnerships (2004), which established municipal service partnerships as a core mechanism to render basic municipal services. The MSP aims to provide a framework within which to optimally utilise limited resources of municipalities”.

Project management as an application is utilised progressively in South Africa by municipalities to render services on time, within budget and according to quality and performance specifications (Van der Waldt, 2014:844). According to DPLG (2004-2007), infrastructure grants in South Africa prior to the establishment of the MIG “were managed

by various sector departments, and these were uncoordinated and fragmented. The municipalities failed to take full responsibility in terms of planning, budgeting and management of basic infrastructure projects”.

The approach of the MIG is that “all basic infrastructure grants are integrated into one, with infrastructure planning conducted by the municipalities and play a central role in coordinating development activities and funding allocations linked to the IDP” (DPLG, 2007; Modipane & Sebola, 2012:398). The municipalities must establish PMUs to take responsibility and manage projects (DPLG 2004-2007:26).

The MIG is a grant to municipalities. Consequently, the management of the grant at municipal sphere must occur within the planning, budgeting, financial management and operational arrangements on this sphere. Effective management and utilisation of capital funding is the responsibility of the municipal manager (DPLG 2004-2007:31). Once a project has been approved, the PMU is responsible for overseeing the process to ensure that the project is delivered successfully. This implies that the PMU must take responsibility for the overall management of the project through the project life-cycle.

1.5 RESEARCH METHODOLOGY

Social Sciences in general has two main research paradigms, namely: qualitative and quantitative. According to De Vos *et al.* (2011:63), these two methodological paradigms differ incisively from each other. Auriacombe and Webb (2006:591) assert that there has been an increase in the use of the mixed-method approach as a combination of the two research approaches. Auriacombe and Webb (2006:591) define qualitative research method as “an approach to the study of the world which seeks to describe and analyse the behaviour of humans from the point of view of those being studied”. Leedy and Ormrod (2001:147) postulate that the qualitative research approach has two things in common; first, they focus on phenomena that occur in natural settings that is, in real world, and secondly, they involve studying those phenomena in all their complexity. Boeije (2010:32) describes qualitative methodology as that which provides the participants an opportunity to express their views, express words of experience and describe events and emotions.

Based on the above clarification of the different research paradigms, a qualitative research design was adopted for this study to operationalise the above-mentioned research objectives. The qualitative research design enabled access to get first-hand information from the targeted participants and selected organisation (case).

1.5.1 Literature review

A literature review can be considered a systematic, explicit, and reproducible method for identifying, evaluating, and synthesising the existing body of completed and recorded work produced by researchers, scholars and practitioners (Fink, 2014:3). Leedy and Ormrod (2014:51) support this statement and assert that a literature review considers what others have researched areas that are similar and relevant. A literature review of the context of project management applications in local government was conducted to explore the utilisation of project management methodology in the implementation of MIG projects at RMLM. To achieve this, the study consulted both national and international sources to explore project management principles and life-cycle methodology.

The scholarly books, theses/dissertations, and accredited journal articles were consulted by using the following databases:

- Nexus;
- SA Thesis;
- SA ePublication;
- Sabinet at North–West University’s Ferdinand Postma Library; and
- Ramotshere Local Municipality Community Library.

1.5.2 Empirical investigation

Yin (2014:28) highlights that empirical research has an implicit research design, whereas Auriacombe and Webb (2006:589) argue that a research design consists of a plan, a “roadmap”, that allows the researcher to test the validity of the hypothesis or answers to

questions taking into consideration factors that might affect the relationship between the dependent and independent variables. Yin (2014:28) further defines research design as a logical sequence that connects the empirical data to a study's initial questions and, ultimately, to its conclusions. Yin's (2014:28) assertions is supported by Auriacombe and Webb (2006:589) who further argue that a research design is the way the researcher proposes to go about testing the hypothesis or answering the research question.

1.5.2.1 Case study instrumentation

Babbie (20014:318) defines a case study research design as “an in-depth study of an event or social phenomenon which is bounded by time, place and an environment”. Yin (2014:16) postulates further that a case study is an empirical inquiry which investigates a contemporary phenomenon in-depth and within its real-world context, especially when the boundaries between the phenomenon and context are not clearly evident. Based on the above definitions, a case study research design was selected. The administration of projects at RMLM (case study) was explored through semi-structured interviews.

1.5.2.2 Data collection methods

Data collection is a recording of information both digitally and on paper (Creswell, 2013:145). This study employed semi-structured interviews and an interview schedule was utilised to gather data. The interviews revealed the participants perceptions, ideas and impressions to draw an informed conclusion.

Creswell (2013:165) suggests that the interview questions should be refined through pilot testing. The interview schedule was piloted to a sample of participants.

1.5.3 Sampling

Sampling in social research can be considered as the process of selecting observations (Babbie, 2014:197). Bryman (2012:187) defines sampling as a subset of the population that

may be selected. Maree (2012:172) highlights that there are two major classes to which sampling methods belong, namely: probability and non-probability methods. Maree (2012:172) holds that probability methods are based on the principles of randomness whereas non-probability methods are not.

There are various forms of non-probability sampling methods which include: convenience sampling, quota sampling, snowball sampling and purposive sampling (Maree, 2012:176). According to Creswell (2013:147), purposive sampling is used in a special situation with a specific purpose in mind, to acquire relevant information from participants who are knowledgeable about the phenomenon.

Based on the above clarification, this study adopted a non-probability purposive sampling method because it focused on the relevant population who responded to the identified research questions. Purposive sampling means that “participants are selected because of some defining characteristics that make them holders of the data required for the study” (Maree, 2012:79). To acquire rich and reliable information, the following PMU personnel were sampled purposively:

- Director: Infrastructure;
- PMU manager;
- PMU staff members, specifically technicians; and
- MMC for Infrastructure.

1.6 LIMITATIONS OF THE STUDY

According to Mouton *et al.* (2006:579) limitations of a study are conditions that restrict the research. This study was specific to RMLM and concentrated on the application of project management methodologies in the implementation of MIG projects. The findings of the study were limited to RMLM and therefore no generalisation to the total population (i.e. all local municipalities in South Africa) is possible.

1.7 ETHICAL CONSIDERATIONS

De Vos *et al.* (2013:115) and Bless *et al.* (2013:32) highlight a number of typical ethical issues of concern when conducting research, namely: harm to experimental subjects or respondents, deception of subjects or respondents, violation of privacy, and informed consent. Gray (2014:75) defines informed consent as a means to provide participants with adequate and accessible information about the research so that they can make informed decisions of whether to participate or not. It is the responsibility of a researcher to protect participants against these ethical aspects.

For the purposes of this study, the sampled participants were informed about the purpose of the study and were requested to sign a consent form. They were also advised that the information they provide would be treated as confidential. Furthermore, they were requested not to be biased when responding to questions. The participants were thoroughly briefed of the purpose, aims and nature of the research and they have the right to withdraw at any stage. Approval was obtained from the Office of the Municipal Manager (i.e. gatekeeper) to interview the participants during office hours as per appointment. The stipulations of the Protection of Personal Information Act 4 of 2013 regarding informed consent and protection of personal information was also considered when conducting this research.

1.8 CHAPTER OUTLINE

CHAPTER 1: Introduction

This chapter discussed the background and orientation of the research and provided a clear delineation of the research problem. Key concepts were also conceptualised and the research question, aims, motivation and methodologies were introduced and clarified.

CHAPTER 2: Project Management life cycle methodology

This chapter explored project management principles, processes, and life cycle methodology. Furthermore, the main phases, namely: initiation, planning, execution, controlling and closing was discussed. This chapter served to determine the theoretical underpinnings and corpus of knowledge of project management against which existing MIG project praxis could be gauged.

CHAPTER 3: Statutory and regulatory framework guiding Municipal Infrastructure Grant projects

This chapter examined the statutory and regulatory framework of the MIG with specific reference to the following:

- Constitution of the Republic of South Africa, 1996
- Municipal Finance Management Act 56 of 2003
- Supply Chain Regulations
- MIG policy
- Treasury regulations
- CoGTA and SALGA guidelines

This chapter also provided a data set for purposes of triangulation to confirm whether existing MIG project practices conform to statutory and regulatory prescripts.

CHAPTER 4: Project management methodology application at RMLM: Empirical findings

This chapter presented the empirical data acquired through semi-structured interviews. The discrepancies and gaps between theoretical best practices and statutory and regulatory prescripts on the one hand, and current MIG practices in local government on the other were assessed. The perceptions and opinions of key role-players and stakeholders of the design and implementation of MIG projects by RMLM was gathered from the interviews.

CHAPTER 5: Conclusions and recommendations

The final chapter provided key conclusions and presented recommendations of how RMLM could implement MIG projects effectively through project management principles and the life cycle methodology. These recommendations aim to address the identified research problem.

CHAPTER 2

PROJECT MANAGEMENT: LIFE CYCLE, METHODOLOGY AND APPLICATIONS

2.1 INTRODUCTION

Good governance is an emerging theme that has been associated in the public sector with a real political need to demonstrate accountability and transparency while effectively implementing public policy. Various initiatives relating to governance are generated by a need to enhance organisational performance and ability to implement and adapt to change. This is generally facilitated through projects and programmes.

South Africa is commonly considered a developing country with significant infrastructure development backlogs. In demonstrating accountability and transparency in the implementation of legislation associated with infrastructure development, it is essential that government institutions, including municipalities, develop the necessary capacity to design and implement infrastructure development projects. The purpose of this chapter is to explore the principles, life cycle, methodologies and applications of project management in local government settings. This exploration would enable one to compare and contrast existing project management applications in local government with international best practice. Furthermore, potential performance gaps could be revealed to address governance challenges associated with the application of project management for municipal infrastructure projects.

The chapter commences with the conceptualisation of key constructs namely: projects, project management, and project life cycles. Furthermore, the concept project management is explored including its origin, professional bodies associated therewith, life cycle methodologies (i.e. PMBOK®, PRINCE2, Waterfall, MPMM, Maturity models), and the utilisation of project management principles and processes. This chapter also reviews literature extensively relating to international project management best practice and identify

potential ways in which it can be applied in the South African context, specifically the local government sphere.

2.2 CONTEXTUALISING AND CONCEPTUALISING PROJECTS AND PROJECT MANAGEMENT

A literature study revealed that the early origins of project management can be traced to early civilisations activities. Cleland (2004:43) and Klastorin (2004:1) postulate that the principles of project management can be traced to construction of major artefacts such as the Great Wall of China, pyramids of Egypt, Cathedrals of Europe, Suez and Panama Canal, Pennsylvania Turnpike and St. Lawrence Seaway. According to Van der Walldt (2008:729), Project Management as a body of knowledge or management discipline, with its own techniques, tools and vocabulary, only emerged during the late 1960s. This body of knowledge currently guides industry, companies and governmental institutions to operationalise their strategic objectives and solve business and operational challenges and problems. Project management generally supports the achievement of institutional goals, as well as provide greater assurance to stakeholders that resources are managed effectively. Srivannaboon and Milosevic (2006:495) accentuate that “applying a formalised project management framework or methodology to projects can help with the clarification of, and agreement to goals, identify required resources, ensure accountability for results and performance, and focus on achieving final benefits”. Project classification and differentiation in this respect are important aspects to enhance project management by ensuring that the right tools and techniques are applied to each project.

2.2.1 The concept ‘project’

Kerzner (2004:1) defines a project as an endeavour that has a definable objective, consumes resources and operates under time, cost, and quality constraints. Kerzner’s (2004:1) assertion is further supported by Clements and Gido (2006:4) and Mahmoud-Jouini *et al.* (2016:145), who define a project as “an endeavour to accomplish a specific objective through a unique set of interrelated tasks and the effective utilisation of resources”. Jacobs and Chase (2011:373) assert that a project can be regarded as a

sequence of associated tasks typically focused on some key output or deliverable which demand substantial time to complete, whereas the PMI (2008:5) defines a project as “a temporary endeavour undertaken to create a unique product, service or result and it indicates a definite beginning and end”. Clements and Gido (2006:4) further outline the following key attributes of a project:

- a project is defined in terms of its scope, schedule and cost;
- it is carried out through a series of interdependent tasks;
- different resources are used to carry out the tasks, these resources include, people, organisations, equipment, tools, and machinery;
- it has a specific time frame and customers; and
- a plan is prepared based on assumptions and estimates.

2.2.2 The concept ‘project management’ (PM)

Scholars define project management differently and focus on its diverse applications, resource utilisation and managerial dimensions, or its inherent principles. Milosevic and Srivannaboon (2006:99), for example, focus on the managerial dimensions and define project management as a specialised form of management endeavour that is used to accomplish a series of organisational goals, strategies, and work tasks within a well-defined schedule and budget. Jacobs and Chase (2011:373) and Mahmoud-Jouini *et al.* (2016:145), underscore the innate principles of project management and define it as a means of planning, guiding, and governing resources to meet the technical, cost and time constraints of the project. The Guide to the Project Management Body of Knowledge (PMBOK®), published by the Project Management Institute (PMI) (2013:5) expands the definition of project management as the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. The essence of project management is to support the execution of an organisation’s competitive strategy to deliver a desired outcome.

2.3 PROJECT MANAGEMENT PRINCIPLES AND PROCESSES

Generic project management processes assist managers to identify and inhibit risks by ensuring that the work is easier with less effort. The main purpose of project management is to deliver a desired outcomes of a project to a client not necessarily completing the scope of a project. However, the project manager and the team is expected to deliver a project using skills, tools and techniques. The project manager must consider motivation, team building, career growth, and financial control (Reiss 1992:16). According to Mintzer (2002:6), project management standardised processes represent a series of actions which should be performed to facilitate project success. The standard process approaches to planning and controlling of projects includes:

- estimation, including estimating the duration the starting and completion dates;
- resource allocation, ensuring that all resources are available including human resource;
- scheduling and planning, ensuring that the project manager and team identify all activities and sequence them in a logical order;
- budgeting, meaning that the necessary financial resources are available to fund all activities; and
- monitoring and control to put systems in place to oversee and evaluate the entire project.

Mintzer (2002:6) also accentuates that project management implies organising, running and bringing a project to its conclusion, and includes the following:

- defining the goal of the project;
- determining the results expected to be accomplished;
- working within the given budget;
- setting out the schedule and making sure that resources are available;
- selecting a team, maintain team morale and individual roles;
- regularly monitoring plans and stages;

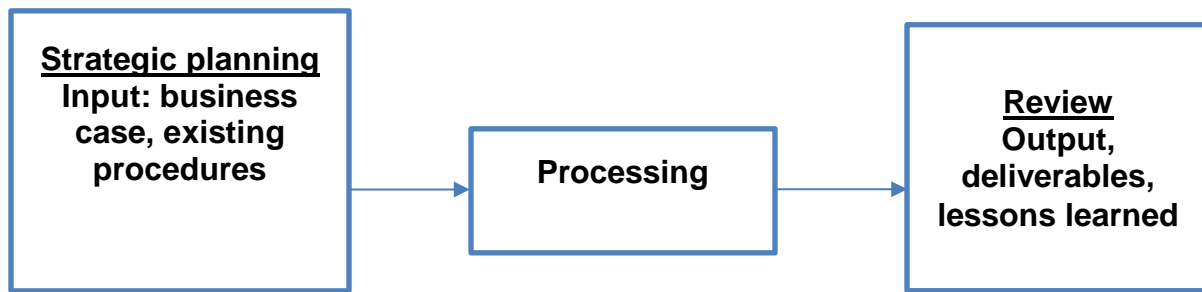
- solving any problems that may arise;
- informing the stakeholders about the progress on site; and
- completing the project; and evaluating the successes and failures.

Cleland (2004:43) argues that project management processes can be considered a system of operations that guides a project from its inception to completion. Cleland (2004:42) also underscores that project management processes are the foundational elements of organisational activities. Organisations generally rely on standardised and disciplined processes to implement projects, thus avoiding haphazard procedures which generally result in poor service and product quality. Cleland (2004:43) further postulates that “there are many different applications of the components of project processes depending on the industry, project size, project complexity, and project duration”. Hence organisations modify these processes to meet their needs to deliver products and services to clients. Kerzner (2007:129) confirms that project management processes should include all stages of the project management life cycle to define how inputs are converted into desired customer outputs. Kerzner (2007:129) further reveals that within the life cycle, there are generally two stages that are usually outside the responsibility of the project team. Figure 2.1 below illustrates the two stages as follows:

- Strategic planning, which is done at tactical/managerial level by developing the business case; and
- Review, which is where the lesson learned are used to update the organisation’s corporate and project management procedures.

The two stages are connected through processes activities.

Figure 2.1 Project management process



Source: Kerzner (2007:129)

Kerzner (2007:129) accentuates that regardless of the type of project, the project management method must be capable of addressing these two stages to ensure that projects achieve objectives defined in the business case. Kerzner (2007:130) asserts that there are many methods available in this regard and defines these methods as a set of management processes each with clearly defined resources and activities, which transform inputs into outputs. According to Kerzner (2007:130), the following three methods are commonly applied in the public sector domain:

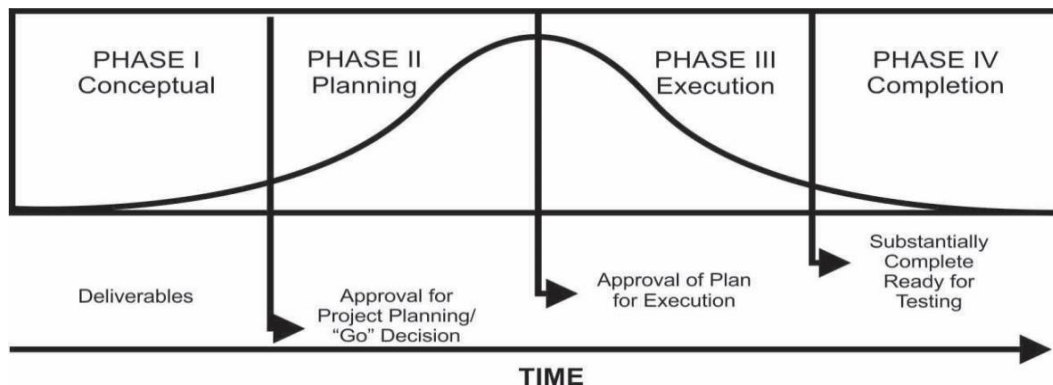
- BS 6079: A Guide to Project Management (PMBOK);
- PRINCE 2: Managing successful projects; and
- ISO 10006: Guidelines to quality in project management.

Based on the above theoretical background of project management processes and principles, the study expounded on its application during the respective phases of project life cycle. The life cycle model thus acts as framework to explore the respective processes and principles in real-life projects. Zandhuis and Stellingwerf (2013:15) postulate that project management life cycle models illustrate the integration of the different processes during the respective phases of a project.

2.4 PROJECT LIFE CYCLES

Projects require structure in the form of a life cycle to support an organisation's endeavours properly to design and implement projects successfully (Cleland 2004:43). According to Turner (2007:527), projects progress through a number of phases or stages from their initial conception as project idea through to their eventual completion and termination. Besner and Hobbs (2006:39) define a project life cycle as a sequence of major phases through which projects evolve from beginning to the end, and it is the sequence in which each phase is separated by decision or approval "gates". Turner (2007:529) refers to these "gates" as endpoints of the five phases of a life cycle. These are the stages through which typical projects progress from initiation, planning, implementation, control, to closure. Turner (2007:529) maintains that "the conclusion of a project phase or milestone is generally marked by a review of both key deliverables and project performance to determine whether the project should continue to its next phase, and detect as well as correct errors cost-effectively". Besner and Hobbs (2006:39) further argue that the practice of managing by phases occupies a prominent position in project management literature and practice. Van der Waldt (2011:66) concurs and adds that the prominence of life cycles in literature is primarily due to its generic application value to all types of projects. Figure 2.2 below, extracted from Cleland (2004:73), illustrates the generic life cycle of projects.

Figure 2.2 A typical project life cycle model



Source: Cleland (2004:73)

The respective phases of the project life cycle is discussed briefly below.

Phase I: Initiation

The first phase, namely initiation, is the stage during which the senior management of the project host-organisation conceives a project, evaluates it with respect to other possible projects and commits to proceeding therewith. This includes the appointment of a project manager who in turn marks the deliverable of the phase and entry into the planning phase of the project. Cleland (2004:73) argues that this is a stage where a feasibility study is conducted and the project is justified. It may also include community participation, environmental impact assessments, needs analyses, and the prioritisation of projects. The team determines possible ways of completing the project and how to accomplish its set objectives and deliverables.

Phase II: Planning

The planning phase primarily “involves the development of a detailed project plan by the project management team, stakeholders, and experts. Formal acceptance and approval of the plan by the project’s sponsor or owner marks the transition to Phase III and initiation of physical work to accomplish the project” (Cleland 2004:73). Fox and Van der Waldt (2007:09) concur that “planning involves defining the work necessary to complete the project, identifying the resources required to complete the project, developing a schedule and devising a budget for the project”.

Phase III: Execution

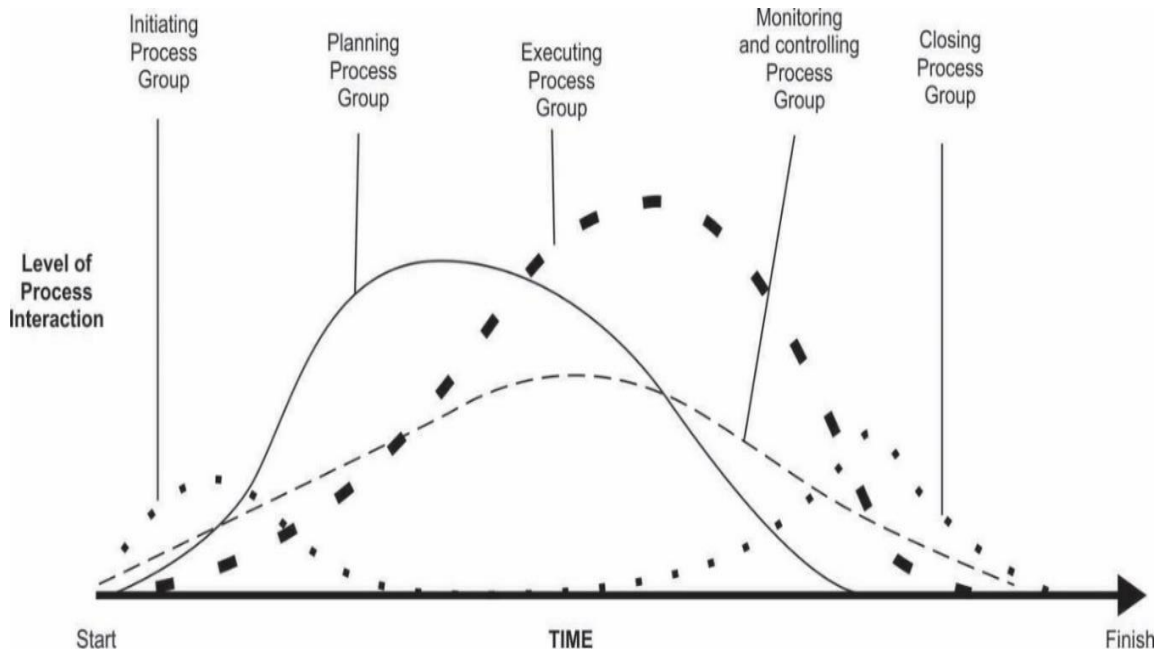
The execution or implementation phase may, according to Cleland (2004:73), “involve subcontractors, construction workers, programmes, medical personnel, or other skilled personnel necessary for accomplishing the work of the particular project”. According to Van der Waldt (2019:19), this is the stage where the actual work is produced, namely the execution of the planning document as outlined in the work breakdown structure (WBS), budget, and Gantt chart (work schedule). It is important to note that the team must monitor and control the project and submit progress and status reports regularly to the project

governance structures, for example, steering committee, project sponsor, or project management office. In the case of local government, political oversight over municipal projects is essential to hold the administration accountable for the budget and other resources allocated to the project. In the case of South African municipalities, standing or portfolio committees of council as well as other oversight mechanisms such as Internal Audit, Municipal Public Accounts Committees, and the Audit Risk Committee must monitor and evaluate the execution of all municipal projects regularly (Van der Waldt, 2019:19).

Phase IV: Completion

The transition to the completion phase occurs when the deliverable(s) of the project is ready for handover to the client (Cleland 2004:73). This is a final stage during which the project is brought to an orderly end, including the conclusion of contractual agreements, acquisition of administrative closure, completed reports are submitted, and in the case of infrastructure projects, a certificate of completion is handed out to all sub-contractors. Apart from the generic life cycle model (Figure 2.3 above), the PMI (20013:51) also developed a model illustrating the integration and interaction of the project management processes with the life cycle. This model is specifically designed to incorporate the five process groups defined in the PMBOK® Guide (PMI 2013:51), namely: “initiating, planning, executing, controlling and closing”, with the aim to demonstrate and highlight the most complex interaction process as the project progresses. Figure 2.3 below illustrates the process group interaction.

Figure 2.3 Process group interaction in the project life cycle



Source: The PMI (20013:51)

The PMBOK® Guide (PMI 2013) introduces the concept of process groups. These process groups are repeated during each life cycle phase of a project. The PMBOK® Guide (PMI 2013:51) groups project management processes into five process groups, which have the same meaning and application to project phases outlined by Cleland (2004:44).

2.4.1 Life cycle methodologies

Since the emergence of Project Management as a body of knowledge applicable to all industries, various attempts have been made to design a comprehensive methodology for the repeated successful application of project life cycle processes in all settings and applications. This section briefly outlines some of the most commonly utilised methodologies applicable to both the public and private sector settings. Since projects differ significantly as far as its application, context, role-players, deliverables and resource constraints is concerned, it is often necessary to utilise only certain aspects of a generic methodology. For example, municipalities may be required to design their own unique methodology for infrastructure development projects based on combined best practices extracted from various methodologies.

2.4.1.1 The PMBOK®

The Project Management Body of Knowledge's (PMBOK®) life cycle methodology is the *de facto* leader globally to outline best practice associated with each life cycle phase. PMBOK is "the sum of knowledge within the profession of project management. The knowledge and practices described are applicable to most projects, most of the time and there is widespread consensus about its value and usefulness. Moreover, it outlines the correct application of skills, tools and techniques to be used to manage a project towards success" (PMBOK® 2013:3).

2.4.1.2 Maturity models

Fox and Van der Waldt (2007:16) describe a model as "an instrument to identify, monitor, measure and benchmark a progression of steps or methodology in a project cycle". Fox and Van der Waldt (2007:17) further accentuate that a model could "lead to an ability of an organisation to implement strategies and programmes through effective, efficient and consistent steps". Fox and Van der Waldt (2007:16) define the concept "maturity" as the capabilities that must be grown over time to produce constant and repeatable success in organisational projects. Fox and Van der Waldt (2007:16) further combine the two concept as "maturity models" which can be defined as an assessment tools that are used to identify organisational strengths, weaknesses and as well as providing benchmarking information. Turner (2007:188) gives a similar definition of a "maturity model" and regards it as a "structured collection of elements that describe characteristics of effective process". Khalema *et al.* (2015:14), add that maturity models' guide project host-institutions to reach the most advanced levels of performance as far as project applications are concerned.

According to Yazici (2010:1), Project Management Maturity Methodology (PMMM) is an important element of strategic planning because it provides a methodology, and a road map to determine and compress the gaps in resources and quality. It provides a systematic means to perform benchmarking and add considerable value to contemporary

organisations. The maturity models provide an assessment framework which enables an organisation to compare its project delivery with best practice or against competitors, ultimately defining a structured route for improvement.

A specific model designed in this regard is the Capability Maturity Model (CMM). Zhang and Yao (2007:864) contend that CMM is widely utilised in the IT industry. It is primarily the result of the processes associated with software development.

Turner (2007:188) provides similar background information concerning maturity models and defines these as the structured collection of elements which describes the characteristics of effective process, whereas Kerzner (2006:56) and Van der Waldt (2019:29) define maturity in project management as the implementation of a standard methodology and accompanying process when projects cease. There must be a debriefing to senior managers to discuss how well the methodology was utilised and recommend changes. Khalema *et al.* (2015:14), argue that maturity models originate from the field of total quality management, and these help organisations to improve their processes and systems continually towards future goals. Mullaly (2006:64) and Köster (2009:49) outline the following five levels of maturity:

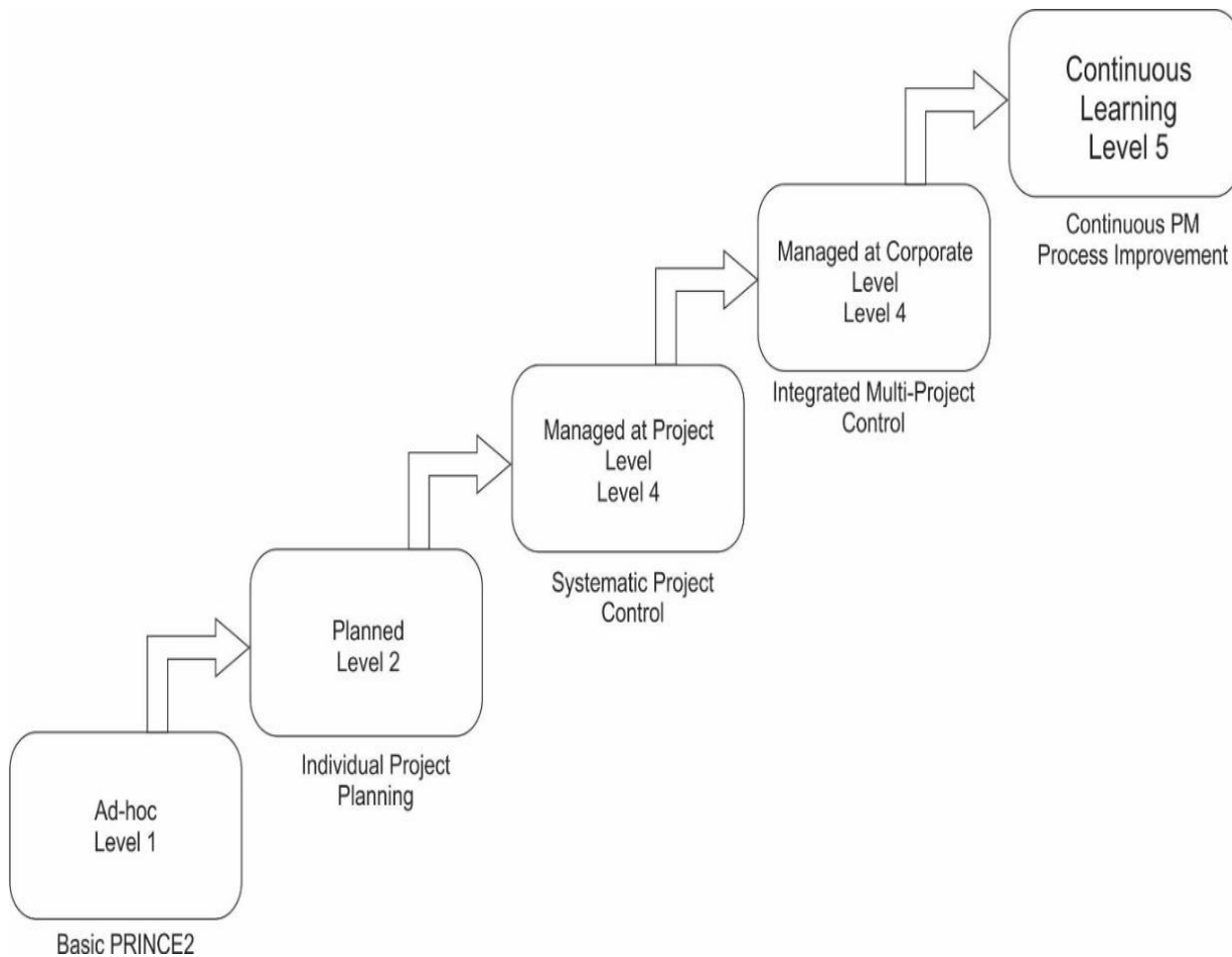
- “Level 5: Optimising process: a fully mature project organisation with processes consistently applied throughout the organisation as parts of the overall management process. Processes are implemented to enhance project performance, measure project effectiveness and efficiency, and management focuses on continuous improvement.
- Level 4: Managed process: A mature project management process applied consistently to all projects, with project management recognised as a formal management discipline. Processes are integrated with corporate processes, management uses data to make decisions, and there is a solid analysis of project performance.

- Level 3: Organisational standards and institutionalised process: An organisation with a refined and integrated project management process that is consistently applied to each project. All processes are standard and repeatable for all projects.
- Level 2: Structure process and standards: Some project management capabilities are defined but not consistently applied.
- Level 1: Initial process: A fully *ad-hoc* project management capability with no consistent or repeatable processes”.

2.4.1.3 PRINCE2

Turner (2007:135) describes PRINCE2 as a methodology covering the organisation, management and control of projects. It was developed in 1989 as a UK Government standard for IT project management. Chan *et al.* (2015:16), add that PRINCE2 describes three processes namely: “product-based planning”, “quality review” and “change control”. PRINCE2 is project life cycle based with 45 sub-processes supporting all life cycle phases from start to completion. According to Chan *et al.* (2015:16), Projects IN Controlled Environments (PRINCE2) was developed by Office of Government Commerce and it is one of the most important process-oriented project management methodologies. PRINCE2 describes three techniques namely: “Product Based Planning”, “Quality Review” and “Change Control”. The PRINCE2 Based Project Management Maturity Model (Figure 2.4 below) is developed by integrating previous maturity models which measures various companies and industries PM levels. The model becomes the bases to evaluate and position an organisation’s current PM maturity level. It illustrates a series of steps to help an organisation incrementally improve its overall PM effectiveness.

Figure 2.4 PRINCE2 Project Management Maturity Model



Source: Chan *et al.* (2015:16)

2.4.1.4 Waterfall

Eberlein and Li (2006:101) describe the Waterfall methodology as a generic instrument to manage projects. According to Fox and Van der Waladt (2007:23), the Waterfall methodology is “widely utilised by novice project managers since it is relatively simple to apply and it provides a basic outline that can be used on any type of project”. Fox and Van der Waladt (2007:23) further accentuate that it outlines the development of a project plan as flowing or cascading incrementally downwards through the respective phases of a project. Progress flows from the top to the bottom, like a waterfall, and proceeds from one phase to the next in a purely sequential manner.

2.4.1.5 OPM3

Turner (2007:190) defines OPM3 as “the application of knowledge, skills, tools, and techniques to achieve the strategic objectives of an organisation through projects”. Van der Waldt (2009c:39) holds that OPM3 refers to “Organisational Project Management on 3 Levels, namely portfolio (strategic), programme (tactical) and project (operational) levels”. According to Van der Waldt (2009c:39), projects are typically “implemented on operational level and often project managers are on lower management level than functional heads from whom they must obtain resources”. Turner (2007:190) describes OPM3 as the most known and comprehensive generic maturity model to analyse the maturity of permanent organisations that has been developed in the last decade. Khalema *et al.* (2015:14), concur with Turner (2007:190) and posit that in 2004, the concept project maturity was integrated into the OPM3 model by the PMI.

This concludes a brief outline of the respective life cycle methodologies. Cleland (2004:78) further reveals how the project life cycle methodologies interact with aspects of the ten project management knowledge areas. The respective knowledge areas or domains of Project Management as a field of study is briefly outlined in the next section.

2.5 PROJECT MANAGEMENT KNOWLEDGE AREAS

Project life cycle phases are effective when integrated with the ten Project Management knowledge areas or domains (PMI PMBOK 2014). These knowledge areas comprise the collective body of knowledge of Project Management as management discipline and the project management processes are closely aligned and integrated with these knowledge areas. Each of the knowledge areas has several processes which belong to one of the process groups. There is thus a strong matrix structure which includes process groups, and project management knowledge areas. These knowledge areas are discussed briefly below.

2.5.1 Project Integration management

Integration includes all activities needed to identify, define, combine, unify and coordinate the various processes and project management activities within the project processes groups to ensure that project objectives are achieved. PMI (2008:71) provides the following processes to be followed to effectively integrate a project:

- “develop a project charter: it is important to develop a document that formally authorises a project or a phase and documenting initial requirements that satisfy the stake holders needs and expectations;
- develop project management plan: all the plans are defined, prepared, integrated and coordinated;
- direct and manage project execution: performing the work defined in the project management plan and to ensure that the project objectives are achieved;
- monitor and control project work: continuously reviewing progress to meet the performance objectives;
- perform integrated change control: reviewing changes and approving changes to the deliverables; and
- close the project: finalising all activities across all of the project management groups”.

2.5.2 Project scope management

This knowledge domain refers to the processes required to ensure that all the work specified in the plan is executed. It is aimed at controlling what is and is not included in the project’s scope. Scope management processes aim to control scope in a project and to prevent so-called “scope creeping” (PMI 2008:105). PMI (2008:105) outlines the following scope management processes:

- “collect requirements: documenting stakeholders’ needs to meet project objectives;

- define the scope: provide detailed description of the project and product;
- create a work breakdown structure (WBS): sub-dividing items into smaller and more manageable components;
- verify the scope: formalising acceptance of the completed project deliverables; and
- control the scope: monitoring the scope of a project and managing changes to the scope baseline”.

2.5.3 Project time management

Project time management refers to the project processes required to ensure timely completion of project deliverables during its life cycle. PMI (2008:129) identifies the following processes which should be adhered to manage time in a project effectively:

- “define activities: identifying the specific actions to be performed to produce the project deliverables;
- sequence activities: to sequence activities and documenting relationships amongst the project activities;
- estimating activity durations: to estimate the number of work periods to complete individual activities and resources;
- develop a schedule: process analysing activities, durations, resources required and schedule constraints to create project schedule; and
- control the schedule: process of monitoring schedule and updating the project progress”.

2.5.4 Project cost management

Project cost management entails the project processes required for proper planning, estimating and managing the cost of the project to ensure that it is completed within the budget allocated. PMI (2008:165) provides for the following processes which must be followed:

- “estimates costs: estimation of monetary resources needed to complete project activities;
- determine the budget: determining estimated budget for each and every project activity; and
- control the costs: the process of monitoring the status of the project budget and update the project budget and managing changes to the cost baseline”.

2.5.5 Project quality management

Quality management as an area of knowledge refers to the project processes required for the organisation to determine quality policies, objectives and responsibilities so that the project meets the needs for which it was undertaken. PMI (2008:189) outlines the following processes which should be followed to manage quality in a project:

- “plan quality: identifying standards requirements of the project and how the project will meet the compliance;
- perform quality assurance: auditing quality requirements and the results from quality control measurements to ensure quality standards are used; and
- perform quality control: monitoring and recording results from activities executed, assess performance and recommend possible changes”.

2.5.6 Project human resource management

The successful completion of a project is dependent on the competencies, capabilities and motivation of team members. Project human resource management as an area of knowledge thus refers to the processes required to organise, manage and lead the project team. The project team comprises of the people with assigned roles and responsibilities to complete the project. PMI (2008:215) lists the following processes which should be adhered to in this respect:

- “develop a human resource plan: creating staff management plan, identifying and documenting project roles, responsibilities, skills required, and reporting relationships;
- acquire the project team: confirming human resource availability and obtaining the team necessary to complete project assignments;
- develop the project team: improving the competency, team interaction and improving the overall team environment to enhance project performance; and
- manage the project team: tracking team member performance, providing feedback, resolving issues, and managing change to optimise project performance”.

2.5.7 Project communication management

This knowledge area is required to ensure timely and appropriate generation, collection, distribution, storage, retrieval and ultimate disposition of project information. PMI (2008:243) highlights the following processes in this regard:

- “identifying stakeholders: process of identifying all people or organisations impacted by the project and documenting relevant information regarding their interests, involvement, and impact on project success;
- plan communication: determining communication approach to project stakeholders;
- distribute information: making available relevant information to project stakeholders;
- manage stakeholder’s expectations: working with stake holders to meet their needs and addressing issues as they occur; and
- report performance: the process of collecting and distributing performance information including status reports, progress measurements and forecasts”.

2.5.8 Project risk management

Project risk management specifies all the processes to be followed to design appropriate contingency plans and mitigation strategies to respond to all potential risks. To successfully manage risk, PMI (2008:273) proposes that the following generic activities should be followed:

- “plan risk management: the process of defining how to conduct risk management activities for a project;
- identifying risks: the process of determining which risks may affect the project and documenting their characteristics;
- perform quality risk analysis: prioritising risks and combining their probability of occurrence and impact;
- perform quantitative risk analysis: numerically analysing the effect of identified risks on overall projects objectives;
- plan risk responses: taking actions to enhance opportunities and to reduce threats to project objectives; and
- monitor and control risks: implementing risk response plans”.

2.5.9 Project procurement management

Project procurement management refers to processes that should be followed in order to acquire all the necessary resources, products, or services to perform the work. PMI (2008:215) proposes that the following processes should be followed in this regard:

- “plan procurements: documenting project purchasing decisions, specifying the approach and identifying potential sellers;
- conduct procurements: the process of obtaining seller responses, selecting a seller and awarding contract;

- administer procurement: the process of managing procurement relationships, monitoring contract performance and making changes and corrections as needed; and
- close procurements: the process of completing each procurement”.

2.5.10 Project stakeholder management

The last of the ten knowledge areas, namely: project stakeholder management, refers to the processes associated with the identification of individuals, groups, or organisations which could affect or be effected by a decision, activity or outcome of a project. According to Burke (2013:68), project stakeholder management is a new knowledge area which includes the process and activities that enable the project manager to ensure that the needs and expectations of the project stakeholders and interested parties is addressed. Eskerod *et al.* (2015:6), highlight that stakeholder management helps to avoid potential counter action by people. It is crucial that the team understands the interests and concerns of all project stakeholders. Project managers play a pivotal role in this regard, that is, to update stakeholders about the project design and progress. Burke (2013:69) further outlines the following main steps in project stakeholder management:

- “identifying stakeholders: it includes a number of methods, research, interviews, brainstorming, checklists and closeout lessons learned;
- asses their interest and influence: classified according to their potential impact on the project;
- develop communication plans: lines of communication need to be established with the key stakeholders to address what information is required, when is it is required and how it should be communicated; and
- engage and influence stakeholders: it includes communicating and working with stakeholders to meet their needs/expectations, addressing issues as they occur and fostering appropriate stakeholder’s engagement in project decisions and activities”.

This concludes a brief overview of the ten knowledge areas of project management. It is, however, important to reflect on the integration of the respective knowledge areas with the ten knowledge areas highlighted in section 2.4. Table 2.1 below outlines the alignment of life cycle process groups and the ten knowledge areas.

Knowledge areas	Project management process group (life cycle phases)				
	Initiating	Planning	Executing	Monitoring	Closing
Project Integration management	Develop project charter	Develop project management plan	Direct and manage project work	Monitor and control project work; perform integrated change control	Close the project
Project scope management		Plan scope Collect requirements Define scope Create WBS		Validate scope Control Scope	
Project time management		Plan schedule management Define activities Sequence activities Estimates activity resources Estimate activity durations Develop schedule		Control schedule	
Project cost management		Plan cost management Estimates cost Determine budget		Control costs	
Project quality management		Plan quality management	Perform quality assurance	Control quality	
Project human resource management		Plan human resource management	Acquire team Develop project team Manage project team		
Project communication management		Plan communications management	Manage communications	Control communications	
Project risk management		Plan risk management Identify risks Perform qualitative risk analysis Perform qualitative risk analysis Plan risk responses		Control risks	

Project procurement management		Plan procurement management	Conduct procurements	Control procurements	Close procurements
Project stakeholder management	Identify stake-holders	Plan stakeholder management	Manage stakeholder engagement	Control stakeholder engagement	

Table 2.1: Project management processes

Source: PMI (20013:61)

Table 2.1 above illustrates each of the required project management processes are embedded in process groups within which most of project activities take place. According to PMI (2004:67), the “project management process groups are linked by the objectives they produce, that is, the output of one process generally becomes an input to another process or is a deliverable of the project. For example, the planning process group provides for the executing process group, a documented project management plan and project scope statement and often updates the project management plan as the project progresses”.

Based on the project management principles and processes above the reviewed literature reveals that the successful application of these principles and processes requires qualified, competent and skilled project managers. It is thus important to briefly reflect on the professionalisation of project management to ensure that institutions such as municipalities appoint the right person. Project management as a profession is highlighted in the next section.

2.6 PROJECT MANAGEMENT AS A PROFESSION

The rapidly changing environment and the increasing complexity of contemporary projects makes it more likely that project activities will have an uncertain duration, budget expenditure, client expectations, and quality parameters. Hu *et al.* (2014:1460), conclude that the demand for skilled project managers would grow significantly. Besner and Hobbs (2006:37) and Morris and Pinto (2007:3) describe the project manager's job as to control the project such that the short and long-term project goals are achieved. Hence, it is the responsibility of a project manager to define the requirements of a project because in the process the scope of work may change or be affected. Therefore, the project manager must stay in the process to effect the changes and to develop new scope of work. Morris and Pinto (2010:349) further highlight that the change in the project may come in many forms for example:

- “design changes;
- scope changes;
- late receipt of important technical information;
- excessive delays in design review and approval;
- diversion of key management and technical resources;
- unplanned site conditions;
- inadequate defined specifications or design ‘base line’;
- changes in standards and regulations;
- late or inadequate subcontract performance;
- schedule changes or acceleration; and
- technology advances”.

Public and private sector institutions require project managers with relevant qualifications, appropriate experience and competencies, as well as the personal traits to lead a team to success. The professionalisation of project management is thus a progressive global imperative. PMI (2013:2) lists the following internationally-recognised qualifications and accreditation in Project Management as field of study:

- “Certified Associate in Project Management (CAPM);
- Project Management Professional (PMP);
- Program Management Professional (PgMP);
- PMI Agile Certified Practitioner (PMI-ACP);
- PMI Risk Management Professional (PMI-RMP); and
- PMI Scheduling Professional (PMI-SP)”.

The above certification and accreditation indicates that project management as a profession requires professional expertise. In this respect, PMI (2008:13) highlights general management proficiencies required for projects, namely:

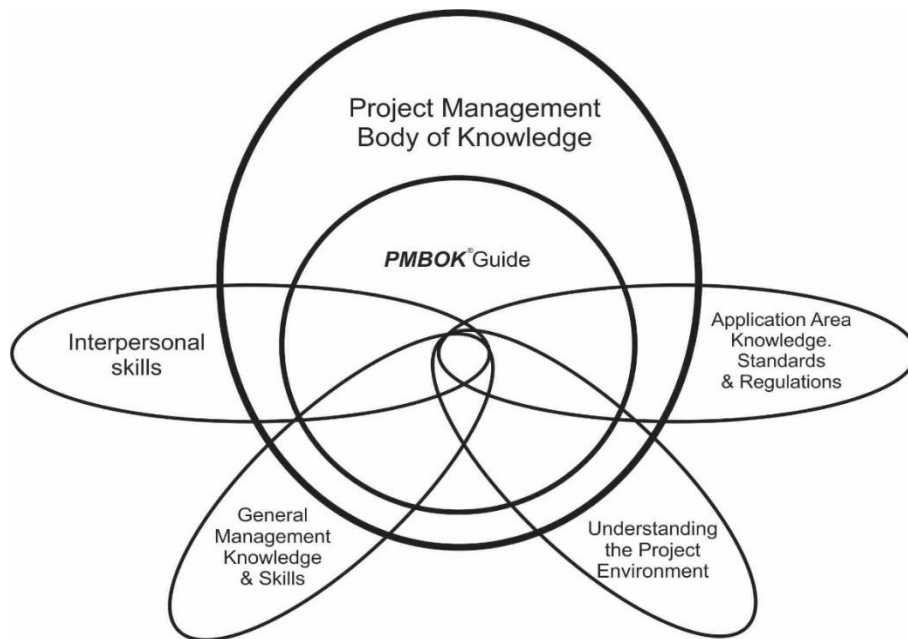
- “knowledge about project management;
- performance of project managers; in other words, what they are able to accomplish while applying project management knowledge; and
- personal traits of project managers referring to how they behave when performing project-related activities”.

PMI (2004:12) suggests that “understanding and applying the knowledge, skills, tools and techniques, which are generally recognised as project good practice, but inadequate for effective project management”. Therefore, effective management requires the project management team understand and utilise the following knowledge and skills areas of expertise:

- “the project management body of knowledge;
- application area knowledge, standards and regulations;
- understanding the project environment;
- general management knowledge and skills; and
- interpersonal skills”.

Figure 2.5 below illustrates the common areas of expertise required by project managers and their teams.

Figure 2.5 Project management areas of expertise



Source: PMI (2004:13)

Over and above the specific skills and project management proficiency required from the project manager, Burke (2006:12) summarises the generic project manager's attributes as follows:

- “ability to select and develop an operational team from a standing start;
- leadership and management abilities;
- ability to anticipate and solve problems;
- ability to integrate the project stakeholder with project design;
- operational flexibility;
- ability to plan, monitor, apply control and expedite project activities;
- ability to negotiate and persuade;
- understand the environment within which the project is managed;

- ability to administer contracts, the scope of work and scope management changes;
- ability to manage constant change; and
- ability to keep the client happy”.

Liu *et al.* (2011:84), argue that project managers with clear goals have greater readiness to conceive more and superior strategies to execute the goals. Liu *et al.* (2016:99), support the statement that people with clear goals can develop realistic action plans to explicate the requirements to achieve their goals. According to PMI (2013:2), the “acceptance of project management as a profession indicates that the application of knowledge, processes, skills, tools, and techniques can have a significant impact on project success”.

2.7 ROLE OF PROJECT MANAGEMENT OFFICES

According to the PMI (2004:17), a project management office (PMO) can be regarded as an organisational unit to centralise and coordinate the management of projects under its domain. Van der Waldt (2009b:258) supports this clarification and adds that “a PMO provides the administrative and management support to projects within policy programmes. Its primary function is to coordinate all projects with the institutions strategic plan. As such, the PMO is the champion for project success, but must be updated continuously as new projects emerge in the institution. Project managers need to work with the PMO to ensure that proper governance arrangements are implemented”. It should assist senior management with the prioritisation of projects, focus projects on strategic objectives, and assist in institutional resource allocation.

Köster (2010:45) concurs with the above statements by Van der Waldt (2009b:258) and describes PMOs as a systematic coordinated handling of key projects. Köster (2010:45) further underscores that a PMO provides the infrastructure and the input to centrally support the work of the project portfolio and programme management teams. The primary aim is to develop and deploy predictable, reusable project management methodology and processes which is based on the project model including tools and techniques. PMI (2013:10) concurs and further explains that a PMO is typically a centralised unit or

management structure that implements project management procedures and provides support for the application of various project tools and techniques.

Van der Waldt (2009b:259) and Köster (2010:45) postulate that it is important to set up a central project management service group staffed with people who are capable of taking on daily chores of project administration. Lock (2013:171) identifies the following typical positions in a PMO:

- “Contracts Administrator, responsible to keep records of the claims made for payments and to prepare invoices;
- Planning Engineer, responsible for project coordination including reducing problems on site, conduct schedule control and ensure effective resource allocations;
- Cost Engineer, responsible for costing the project and check and verify whether the project budget falls within the budget of the client and report regularly to the project manager;
- Change Coordinator, responsible to administer project change;
- Progress Clerk, responsible to distribute work lists and then following up on a day to day basis to check progress and to report back to the project manager;
- Project Clerk, responsible to generate project documents and deal with all correspondence and recordkeeping; and
- IT Support Technician, responsible for software applications and system interfaces with the host organisations”.

2.8 CONCLUSION

The purpose of this chapter was to outline and explore project management principles, life cycle methodology and international best practice through an extensive literature review. Furthermore, the chapter highlighted project management methodology and the ten project management knowledge areas (PMBOK), which can be applied by RMLM PMU for successful execution of MIG projects. It is essential that the PMU takes responsibility and account for all MIG projects. The latter includes ensuring that they perform their

responsibilities and obligations, that all staff perform their designated duties, and control mechanisms and lines of communication are maintained during the design and execution of projects. Project managers assigned to MIG projects should capacitate the PMU to apply appropriate project management methodology to address backlogs in terms of infrastructure development. A project manager should be responsible, accountable for all activities for execution from the initial stage of the project till its termination. By applying generic management functions and project-specific activities, project managers can inhibit the common reasons for project failure.

The next chapter will document and analyse the statutory and regulatory framework governing MIG in municipalities in South Africa and explore the role of municipalities pertaining to project management.

CHAPTER 3

STATUTORY AND REGULATORY FRAMEWORK GUIDING MUNICIPAL INFRASTRUCTURE GRANT PROJECTS

3.1 INTRODUCTION

The South African Government is mandated by the Constitution of the Republic of South Africa, 1996 to establish a comprehensive statutory and regulatory framework to guide all aspects of society. Such a framework, which comprises of legislation and various policies, are directed at specific goals aimed to promote the general welfare of society (Manyaka, 2014:127). This also applies to the local sphere of government. In terms of the Constitution, municipalities are obligated to firstly structure and manage their administration and budgetary and planning processes so as to prioritise the basic needs of the community, and secondly, promote socio-economic development of their local communities. Local government is further mandated to render services to communities and to ensure that such services are adequate and sustainable.

In line with participatory thinking and approaches to development, the South African national government has empowered the local sphere to plan and implement various programmes aimed at providing basic services such as water, waste management, electricity reticulation, sanitation, roads, and storm-water drainage. As far as physical infrastructure development in support of the delivery of these essential services is concerned, the Municipal Infrastructure Grant (MIG) established a comprehensive framework to guide project management applications in local government.

This chapter examines the statutory and regulatory framework guiding the application of projects in local government in general and MIG-projects in particular. The analysis of national legislation as well as regulatory prescripts emanating from National Treasury regulations, Department of Co-operative Governance and Traditional Affairs (CoGTA) as well as the South African Local Government Association (SALGA) is essential to outline the nature and scope of municipal project applications. An analysis of this framework is

further imperative to improve strategic, tactical and operational service delivery functions at all levels of municipal administrations. Furthermore, the statutory and regulatory framework informs the nature of collaboration between national, provincial and local government spheres in order to align national policy objectives with provincial and local government programmes and projects.

3.2 STATUTORY FRAMEWORK FOR SERVICE DELIVERY PROJECTS BY LOCAL GOVERNMENT

Chapter 2 presented an overview of relevant literature related to project management life cycle, methodology and applications. However, it is imperative to explore statutory framework for service delivery projects in local government. According to Van der Waldt (2007a:249), the national and provincial government must support and strengthen the ability of municipalities to manage their own affairs, exercise powers and perform their functions through legislative and other measures. “The Constitution of the Republic of South Africa, Municipal Structures Act, Municipal Systems Act and Municipal Finance Management Act are legislative measures taken by national government to enable municipalities to perform their powers and functions, including other measures namely: Municipal Infrastructure Grants and Funds from the Department of Mineral and Energy Affairs to eradicate the backlogs in infrastructure for roads, water, sanitation and electricity” (Van der Waldt, 2007a:249).

3.2.1 Constitution of the Republic of South Africa, 1996

At the most fundamental level as far as the administration and management of the public domain is concerned, section 195(1) of the Constitution 1996 provides that the “public administration and management in all the three spheres of government should be efficient and effective regarding the use of resources, economically viable and demand a high level of accountability”. Furthermore, section 152 of the Constitution outlines the objectives of local government as follows:

- “provide democratic and accountable government for local communities;

- ensure the provision of services to communities in a sustainable manner;
- promote social and economic development;
- promote a safe and healthy environment; and
- encourage the involvement of communities and community organisations in the matters of local government”.

These objectives can be regarded as the philosophical underpinnings of all municipal operations, including the design and implementation of various service delivery projects. Furthermore, a municipality is required in terms of section 153 of the Constitution, to structure and manage its administration, and budgeting and planning processes to prioritise the basic needs of the community, and to promote the social and economic development of the community. Part B of Section 4 and 5 of the Constitution, 1996 further outlines the following services that municipalities must offer to local communities:

- “water;
- electricity;
- town and city planning;
- road and storm water drainage;
- waste management;
- emergency services; and
- economic planning”.

These services are generally provided by means of specifically-designed projects. As far as supply chain procedures are concerned, the Constitution clearly stipulates that “each municipality or municipal entity must structure and manage its administration and budget planning processes to prioritise the basic needs of the community, and promote the social and economic development of the community. It must also participate in national and provincial development programmes” (SA Constitution, 1996). According to Section 217 of the Constitution, “When an organ of state in the national, provincial or local sphere of Government or any other institute identified in national legislation contracts for goods and

services, it must do so in accordance with a system which is fair, equitable, transparent, competitive and cost effective” (Mnguni, 2012:31; Maleka, 2016:37).

According to Maleka (2016:37), the “provincial and national governments have to support and strengthen the capacity of municipalities to manage their own affairs, exercise powers and perform functions. It is mandatory for municipalities to achieve unqualified audits constantly”. The audit results should be a testimony to the processes adhered to in the implementation of the set goals. Section 216 (1) of Chapter 13 of the Constitution stipulates “the basis for the National Treasury to prescribe measures to ensure transparency and expenditure control in each sphere of government by introducing generally recognised accounting practices, a uniform expenditure classification and uniform treasury norms and standards” (Maleka, 2016:37). According to Section 217 of the Constitution, the municipal supply chain management policy or such entity must be fair, equitable, transparent, competitive and cost-effective and comply with a prescribed regulatory framework for municipal supply chain management, which must include at least the following:

- “the range of supply chain management processes that municipalities and municipal entities may use, including tenders, quotations, auctions and other types of competitive bidding;
- procedures for when a municipality or municipal entity may or must use a particular type of process;
- procedures and mechanisms for each type of process;
- procedures and mechanisms for more flexible processes where the value of a contract is below a prescribed amount;
- open and transparent pre-qualification processes for tenders or other bids;
- competitive bidding processes in which only pre-qualified persons may participate;
- bid documentation, advertising of and invitations for contracts;
- procedures and mechanisms for the opening, registering and recording of bids in the presence of interested persons; the evaluation of bids to ensure best value for money; negotiating the final terms of contracts; and the approval of bids;

- screening processes and security clearances for prospective contractors on tenders or other bids above a prescribed value;
- compulsory disclosure of any conflicts of interest prospective contractors may have in specific tenders and the exclusion of such prospective contractors from those tenders or bids;
- participation in the supply chain management system of persons who are not officials of the municipality or municipal entity, subject to section 117;
- the barring of persons from participating in tendering or other bidding processes, including person, who were convicted for fraud or corruption during the past five years; who wilfully neglected, reneged on or failed to comply with a government contract during the past five years; or whose tax matters are not cleared by South African Revenue Service;
- measures for combating fraud, corruption, favouritism and unfair and irregular practices in municipal supply chain management; and promoting ethics of officials and other role players involved in municipal supply chain management;
- the invalidation of recommendations or decisions that were unlawfully or improperly made, taken or influenced, including recommendations or decisions that were made, taken or in any way influenced by councillors in contravention of item 5 or 6 of the Code of Conduct for Councillors set out in Schedule 1 to the Municipal Systems Act; or municipal officials in contravention of item 4 or 5 of the Code of Conduct for Municipal Staff Members set out in Schedule 2 to that Act;
- the procurement of goods and services by municipalities or municipal entities through contracts procured by other organs of state;
- contract management and dispute settling procedures; and
- the delegation of municipal supply chain management powers and duties, including to officials” (RSA 1996).

A municipal administration may not proceed to issue procurement documentation unless it has acquired written National Treasury approval as well as subsequent acceptance of the procurement documentation, including at least the main terms of the proposed agreement.

A Public-Private Partnership (PPP) agreement must be procured in accordance with applicable procurement legislation. The procurement procedure must include –

- “an open and transparent pre-qualification process;
- a competitive bidding process in which only pre-qualified organisations may participate; and
- criteria for the evaluation of bids to identify the bid that represents the best value for money” (Maleka, 2016:37).

3.2.2 Local Government: Municipal Finance Management Act

The Local Government: Municipal Finance Management Act 56 of 2003 (hereinafter referred to as MFMA), is aimed to secure sound and sustainable management of the fiscal and financial affairs of municipalities and municipal entities by establishing norms and standards and other requirements for:

- “ensuring transparency, accountability and appropriate lines of responsibility in the fiscal and financial affairs of municipalities and municipal entities;
- the management of their revenues, expenditures, assets and liabilities and the handling of their financial dealings;
- budgetary and financial planning processes and the co-ordination of those processes with the processes of organs of state in other spheres of government;
- borrowing;
- the handling of financial problems in municipalities;
- supply chain management; and
- other financial matters” (MFMA 2003:22).

The MFMA (2003:38) further stipulates that “a municipality may spend money on a capital project only if applicable thereto, excluding the cost of feasibility studies conducted by or on behalf of the municipality, has been appropriated in the capital budget referred to in

section 17(2) of the Act”. The MFMA, in section 19(1) further stipulates that projects can only be funded if:

- “the project, including the total cost, has been approved by the council;
- section 33 has been complied with, to the extent that that section may be applicable to the project; and
- the sources of funding have been considered, are available and have not been committed for other purposes, (MFMA,2003:28). MFMA, (2003:22) stress the that before approving a capital project in terms of subsection (1)(b), the council of a municipality must consider (a)the projected cost covering all financial years until the project is operational; and (b) the future operational costs and revenue on the project, including municipal tax and tariff implications”.

A municipal council may in terms of subsection (1)(b) approve capital projects below a prescribed value either individually or as part of a consolidated capital programme. The MFMA, section 21, further stipulates that during the preparation of the annual budget, the mayor of a municipality must -

- “take into account the municipality’s integrated development plan;
- take all reasonable steps to ensure that the municipality revises the integrated development plan in terms of section 34 of the Municipal Systems Act, taking into account realistic revenue and expenditure projections for future years; and
- take into account the national budget, the relevant provincial budget, the national government’s fiscal and macro-economic policy, the annual Division of Revenue Act and any agreements reached in the Budget Forum”.

The MFMA, as a further extension of the Public Finance Management Act 1 of 1999, aims to assist municipalities to maximise their capacity to provide services as planned. Furthermore, it clearly outlines measures to inhibit fraud, corruption, favouritism and unfair and irregular practices, and seeks to promote ethical behaviour among officials and other

role players involved in supply chain management (SCM). Municipalities must adhere to the legislative requirements incorporated in SCM (Maleka, 2016:37).

Maleka (2016:40) further underscores that “all municipalities have supply chain policies governed by regulations such as Public-Private Partnership Finance Act 5 of 2000 (PPPFA) and the Constitution. Therefore, each municipality and municipal entity must establish an SCM unit to implement its SCM policy. A joint SCM unit may be established between a municipal entity and its parent municipality. Where possible, the SCM unit must operate under the direct supervision of the chief financial officer (SCM Regulation 7)”. Subsequent to the legislation, non-compliance can be easily dealt with, because the municipalities have set policies. It is also important for supply chain managers to have a broad knowledge of and expertise related to SCM (Maleka, 2016:40).

3.2.3 Local Government: Municipal Structures Act

Local Government: Municipal Structures Act 117 of 1998 was formulated to:

- “provide for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality;
- establish criteria for determining the category of municipality to be established in an area;
- define the types of municipality that may be established within each category; to provide for an appropriate division of functions and powers between categories of municipality; and
- regulate the internal systems, structures and office-bearers of municipalities; to provide for appropriate electoral systems”.

Van der Waldt (2007b:41) posits that “Local Government: Municipal Structures Act 117 of 1998 was formulated to regulate the municipal internal systems, structures and office bearers as well as provide appropriate electoral systems”. Section 19.2(d) and (e) further stipulates that a municipal council must review its organisational delivery mechanism

annually to meet the needs of the community and its overall performance to achieve the objectives of local government as stipulated in Section 152 of the Constitution.

The Local Government: Municipal Structures Act 117 of 1998 (Section 44.2) stipulates the functions of the executive committee. These functions include the identification of the needs of the municipality, as well as review and evaluate these in order of priority. Thereafter, the executive committee must recommend to the municipal council strategies, programmes and services to address prioritised needs through the integrated development plan and estimates of revenue and expenditure. The committee should also consider “any applicable national and provincial development plans, and recommend or determine the best methods, including partnership and other approaches, to deliver the strategies, programmes and services to the maximum benefit of the community” (MSA, Section 44.2).

3.2.4 Local Government: Municipal Systems Act

Local Government: Municipal Systems Act 32 of 2000 was formulated to establish a framework for planning, performance management systems, effective utilisation of resources and organisational change, provision of core principles, mechanisms and processes required to work in partnership with the community (Van der Waldt, 2007b:41). Chapter 4, section 16(1a) of the Act stipulates that municipality must develop the culture of municipal governance that complements formal representative government with a system of participatory governance. For this purpose, councils should encourage and create conditions for the local community to participate in the affairs of the municipality. This includes engagement during the preparation, implementation and review of its integrated development plan in terms of Chapter 5 of the Act, review its performance management system in terms of Chapter 6, as well as allow community participation in preparation of its budget.

Section 41(c), Chapter 6 of the Municipal Systems Act requires “all municipalities to monitor, measure, and review their performance at least once a year”. Instances in which they fail to deliver or to meet their targets against set indicators and where the priorities and targets set are not met, Section 41(d) requires all municipalities to take steps to improve

performance with regard to the development priorities and objectives where performance targets are not met. Section 41(e) makes provision for a process of regular reporting to the council, other political structures, political office bearers and municipal staff. The reports should also be extended to the public and appropriate organs of state. Furthermore, Section 46.1(a) requires a municipality to prepare for each financial year an annual report, consisting of a performance report reflecting –

- “the municipality’s, and any service provider’s, performance during that financial year, also in comparison with targets of and with performance in the previous financial year;
- the development and service delivery priorities and the performance targets set by the municipality for the following financial year; and
- measures that were or are to be taken to improve performance”.

This concludes a brief exposition of certain significant stipulations as far as statutory obligations are concerned. These obligations set a comprehensive legal framework within which MIG projects should be designed and executed. In the next section, the focus shifts to the most significant guidelines which emanate from regulatory documents.

3.3 REGULATORY FRAMEWORK GUIDING PROJECT APPLICATIONS IN LOCAL GOVERNMENT

The Government of South Africa established an extensive regulatory framework to guide project applications in government settings. This regulatory framework extends to projects in local government. It is imperative to explore this regulatory framework guiding project applications in local government with specific reference to the MIG projects. This framework includes the establishment of mechanisms for the monitoring, oversight, capacity-building and control of municipal infrastructure projects.

3.3.1 MIG Programme Guidelines

Government took initiative to establish a framework for infrastructure projects which is the Municipal Infrastructure Grant (MIG). The South African Cabinet approved the establishment of the MIG on the 5 March 2003. MIG is a municipal infrastructure funding arrangement. It replaced all existing capital grants for municipal infrastructure and incorporates seven infrastructure programmes, namely:

- “Water Services Projects;
- Community Based Public Works Programme;
- Local Economic Development Fund;
- Building for Sports and Recreation Programme;
- Integrated National Electrification Programme to local government and the Integrated National Electrification Programme implemented by Eskom;
- Urban Transport Fund; and
- Consolidated Municipal Infrastructure Programme”.

The role of national government in terms of MIG is to formulate policy, undertake macro-planning, provide support, monitor policy outcomes and regulate municipal infrastructure investments. MIG is provided on a conditional basis and allocated to specific municipalities on a formula basis. The MIG programme aims to provide only basic infrastructure services (DPLG MIG, 2006:3). DPLG MIG (2006:14) describes MIG as “a conditional grant to municipalities and it complements the equitable share grant for local government”.

The MIG programme is about planning and delivering municipal infrastructure basic services. It is an integral part of the municipal infrastructure development function. Since MIG is a conditional grant, municipalities must conform to the conditions laid down by the Municipal Infrastructure Task Team (MITT) which are administered by CoGTA through the MIG Unit. The Municipal Infrastructure Task Team (MITT) is responsible to:

- “review municipal infrastructure policy to ensure efficiency, effectiveness and consistency in the delivery of infrastructure by municipalities;
- monitor progress and unblock any challenges that may emerge in the delivery of services;
- make policy decisions and decisions related to ensuring the delivery of services; and
- MITT is supported by a technical task team called the Municipal Infrastructure Technical Task Team” (MIT3).

In the context of the above principles, the key objectives of the MIG is to subsidise the capital costs of basic services to poor households. This implies, according to MIG (2004:16), that “priority must be given to meeting the basic infrastructure needs of poor households through the provision of appropriate bulk, connector and internal infrastructure in municipal services through:

- distributing funding for municipal infrastructure in an equitable, transparent and efficient manner which supports a co-ordinated approach to local development and maximises developmental outcomes;
- assisting in enhancing the developmental capacity of municipalities, through supporting multi-year planning and budgeting systems; and
- providing a mechanism for the co-ordinated pursuit of national policy priorities with regard to basic municipal infrastructure programmes, while avoiding the duplication and inefficiency associated with sectorally-fragmented grants” (MIG 2004 – 2007:16).

Van der Waldt (2014:845) concurs with the above and posits that the national government should assist municipalities to develop the required capacity for the successful design and execution of their capital projects. In this regard, MIG provides for the establishment of project management units (PMUs) within municipalities. It also makes provision for the MIG Management Unit to play a supportive and capacity-building role by assisting municipalities to establish PMUs as well as effective project management competencies. The national

MIG Management Unit (MIG MU) is located within the Department of Co-operative Governance and Traditional Affairs (CoGTA), and is responsible for:

- “implementing policy relating to infrastructure delivery;
- setting up the MIG national fund administration system;
- ensuring the establishment of project management and monitoring capacity within municipalities;
- monitoring the use of MIG funds;
- operating the national MIG information system;
- auditing the local programmes to ensure compliance;
- ensuring that evaluation of local programmes takes place; and
- preparing reports to MITT and to provincial and national government departments” (DPLG MIG 2006:16).

3.3.2 National Treasury Regulations

The National Treasury Regulations took effect from 9 April 2001, and is governed by the Public Finance Management Act 1 of 1999. The National Treasury Regulations apply to the following:

- all departments;
- all constitutional institutions;
- all public entities;
- all public entities; and
- the South African Revenue Service.

All government institutions must appoint chief financial officers who serve on the senior management team. This also applies to municipalities where chief financial officers (CFOs) are directly accountable to the accounting officer (i.e. Municipal Manager), without limiting the right of the latter officer to assign specific responsibilities. The general responsibility of the CFO is to assist the accounting officer to discharge the duties prescribed in Part 2 of

Chapter 5 of the Act and the Annual Division of Revenue Act. These duties relate to effective municipal financial management; exercise sound budgeting and its control practices; operation of internal controls; and timely production of financial reports (RSA 2001:7).

The above statement accentuates the need to consider the regulatory obligations and political office-bearers responsibilities, Section 57 managers, as well as various mechanisms which should be implemented in municipalities for oversight, monitoring, and control of municipal projects. These positions and mechanisms, which are explored in the following subsections, are responsible for overall sound developmental local governance.

3.3.2.1 Executive Mayor

The position of Executive Mayor is critical in reviewing municipal performance in general and municipal project praxis in particular. In this regard, the Local Government: Municipal Structures Act 117 of 199, section 56, stipulates the powers and functions of the Executive Mayor as follows:

- “to identify the needs of the municipality;
- to review and evaluate those needs in order of priority;
- to recommend to the municipal council strategies, programmes and services to address priority needs through the integrated development plan, and the estimates of revenue and expenditure, taking into account any applicable national and provincial development plans; and
- to recommend or determine the best way, including partnership and other approaches, to deliver those strategies, programmes and services to the maximum benefit of the community”.

The Municipal Structures Act 117, section 56, also stipulates the following additional duties of the Executive Mayor:

- “identify and develop criteria in terms of which progress in the implementation of the strategies, programmes and services referred to in subsection (2) (c) can be evaluated, including key performance indicators which are specific to the municipality and common to local government in general;
- evaluate progress against the key performance indicators;
- review the performance of the municipality in order to improve; the economy, efficiency and effectiveness of the municipality; the efficiency of credit control and revenue and debt collection services; and the implementation of the municipality's by-laws;
- monitor the management of the municipality's administration in accordance with the directions of the municipal council;
- oversee the provision of services to communities in the municipality in a sustainable manner;
- perform a ceremonial role as the municipal council may determine; and
- report to the municipal council on all decisions taken by the Executive Mayor”.

The municipal Deputy Executive Mayor exercises powers and performs the duties of the executive mayor should the latter be absent, unavailable or if the office of the EM is vacant (RSA, 1999:25). The Municipal Finance Management Act 56 of 2003 further describes the Executive Mayor (EM) as the political head and must, therefore, provide general political guidance over the municipal fiscal and financial affairs. This includes financing infrastructure projects. In providing such general political guidance, the EM should monitor and oversee the responsibilities assigned to other senior managers.

Section 54 stipulates the EM's following responsibilities: budgetary control, early identification of financial problems, and receipt of a statement or report submitted by the municipal accounting officer in terms of section 71 or 72. Furthermore, the accounting officer must –

- “consider the statement or report;
- check whether the municipality's approved budget is implemented in accordance with the service delivery and budget implementation plan;

- consider and, if necessary, make any revisions to the service delivery and budget implementation plan, provided that revisions to the service delivery targets and performance indicators in the plan may only be made with the approval of the council following approval of an adjustments budget;
- issue any appropriate instructions to the accounting officer to ensure; that the budget is implemented in accordance with the service delivery and budget implementation plan; and that spending of funds and revenue collection proceed in accordance with the budget;
- identify any financial problems facing the municipality, including any emerging or impending financial problems; and
- in the case of a section 72 report, submit the report to the council by 31 January of each year”.

If the municipality faces any serious financial problems, the EM must respond promptly to and initiate any remedial or corrective steps proposed by the accounting officer. These steps may include the reduction of project spending when revenue is anticipated to be less than projected in the municipality’s approved budget. The EM must also ensure that any revisions of the service delivery and budget implementation plan is based on progress and expenditure of municipal projects.

3.3.2.2 Municipal Manager

As far as the performance of municipal administrations, including the PMUs in infrastructure departments, is concerned, the Local Government: Municipal Finance Management Act 56 of 2003, Section 60, considers the Municipal Manager to be the Accounting Officer. As Accounting Officer, the Municipal Manager must exercise the functions and powers assigned to him or her and provide guidance, as well as advice on compliance with the Municipal Finance Management Act 56 of 2003. Municipal Managers must report regularly to the political structures, political office-bearers and municipal officials, as well as municipal entities (RSA 2003). Therefore, the municipal accounting officer must –

- “act with fidelity, honesty, integrity and in the best interests of the municipality in managing its financial affairs; and
- disclose to the municipal council and the Mayor all material facts which are available to the Accounting Officer or reasonably discoverable, and which in any way might influence the decisions or actions of the Council or the Mayor; and (c) seek to prevent any prejudice to the financial interests of the municipality”.

As far as municipal projects are concerned, Municipal Managers must exercise all reasonable care to inhibit any unauthorised, irregular, fruitless and wasteful expenditure. To exercise financial control over municipal project expenditure, Municipal Managers should institute sufficient processes of monitoring, oversight, and reporting (RSA 1999). In this regard, the Municipal Manager must ensure that –

- “When an official of a municipality discovers unauthorised, irregular or fruitless and wasteful expenditure, that official must immediately report such expenditure to the accounting officer, such expenditure must also be reported in the monthly report, as required by section 40(4)(b) of the Act. Where irregular expenditure occurred in contravention of tender procedures, the relevant tender board must also be notified.
- When an Accounting Officer determines the appropriateness of disciplinary steps against an official in terms of section 38(1)(g) of the Act, the Accounting Officer must take into account; the circumstances of the transgression; the extent of the expenditure involved; and the nature and seriousness of the transgression.
- The recovery of losses or damages resulting from unauthorised, irregular or fruitless and wasteful expenditure must be dealt with in accordance with regulation 12.
- The amount of the unauthorised, irregular, fruitless and wasteful expenditure must be disclosed as a note to the annual financial statements of the institution” (RSA 2001:24).

In terms of the Local Government: Municipal Finance Management Act 56 of 2003, section 62(1), Municipal Managers must take reasonable steps to ensure that –

- “the resources of the municipality are used effectively, efficiently and economically;
- full and proper records of the financial affairs of the municipality are kept in accordance with any prescribed norms and standards;
- the municipality has and maintains effective, efficient and transparent systems, of financial and risk management and internal control; and, of internal audit operating in accordance with any prescribed norms and standards;
- unauthorised, irregular or fruitless and wasteful expenditure and other losses are prevented;
- disciplinary or, when appropriate, criminal proceedings are instituted against any official of the municipality who has allegedly committed an act of financial misconduct or an offence in terms of Chapter 15; and
- the municipality has and implements a tariff policy referred to in section 74 of the Municipal Systems Act as well as a rates policy as may be required in terms of any applicable national legislation”.

From this brief overview, it is evident that Accounting Officers are responsible for the frugal utilisation of municipal resources as well as the allocation to and spending of finances on municipal projects.

3.3.2.3 The Director: Infrastructure and the Project Management Unit

The Director: Infrastructure of municipalities is the senior manager responsible for the planning and implementation of municipal infrastructure projects. Municipalities which participate in the MIG programme, the PMUs is typically situated within infrastructure departments. As such, the Director: Infrastructure is also responsible for managerial

oversight and directives of infrastructure projects. The Director is usually responsible for the establishment of healthy working relations with constructors and consultants in the infrastructure development domain. Staffing a PMU is subject to the National MIG Unit (DPLG, 2004-2007:26) and their responsibilities are largely determined by the Unit's guidelines and specifications. However, the typical PMU project management functions as far as MIG projects is concerned, includes the following:

- “Managing MIG funding: This includes managing MIG funding within the municipal accounting system, for infrastructure projects using MIG funds.
- Co-ordination of all projects serviced by the PMU. The PMU is not responsible for identifying projects in the IDP planning process, but should liaise closely with municipal planning departments and the PIMSS centre.
- Project feasibility studies and business plans: This includes commissioning and managing project feasibility studies and the development of project business plans. Where appropriate the PMU should facilitate the involvement of other municipal departments in these processes.
- Contract management: The PMU is responsible for managing contracts with contractors and consultants for each project, including contracts for feasibility studies.
- Project management: This includes all activities to ensure that projects meet planning objectives and targets.
- Project-related capacity building: The PMU is responsible for ensuring that capacity building and development objectives are met. Where economies of scale can be achieved through initiatives across a range of projects, the PMU should facilitate a programmatic approach.
- Monitoring and reporting: This includes management of a monitoring database and preparation of all necessary reports to both the Council and to Municipal Infrastructure Grant Management Unit (MIG MU).
- Evaluation: This includes the assessment of the impact of the MIG programme” (DPLG, 2004-2007:26).

3.3.2.3 Internal Audit

Section 165 of the MFMA requires each municipality to establish an internal audit unit. Since Municipal Managers serve as municipal accounting officers, Internal Audit is generally situated in the Office of the Municipal Manager (SALGA, 2012:9). Internal Audit is generally responsible for the following project-related oversight functions:

- “prepare a risk-based audit plan and an internal audit program for each financial year and monitor its implementation during the execution of projects;
- advise the accounting officer and report to the audit committee on the implementation of the internal audit plan and matters relating to, internal audit; internal controls; accounting procedures and practices, risk and risk management; performance management; loss control; and compliance with the MFMA, the annual Division of Revenue Act and any other applicable legislation; and
- perform such other duties as may be assigned to it by the accounting officer” (SALGA, 2012:9).

The annual audit plan and internal audit programme is submitted to the municipal council for approval. The Internal Audit unit manager must report to the audit committee on the implementation of its plan and programme. In addition to the statutory requirements set out above, Internal Audit should also ensure that the stipulations of the King III and IV reports on Good Corporate Governance is implemented adequately in the municipality. In this regard, SALGA (2012:9) insists that the actual implementation of good governance principles and practices is a cross-cutting responsibility in the administration, but the implementation plan and monitoring thereof must rest with Internal Audit. Internal Audit is thus responsible to institute internal controls, risk management, as well as performance management processes and practices.

3.3.2.4 Audit and Risk Committees

Section 77(a)(i) of the PFMA allows municipalities to appoint members to serve on audit and risk committees. These members should be external experts who possess appropriate experience and are remunerated in accordance with the Act and the tariffs determined by the South African Institute of Chartered Accountants in consultation with the Auditor-General. According to the PFMA (RSA, 2001:8), the audit and risk committee should perform the following functions and duties:

- “establish an audit charter to guide the audit approach, as well as its operating procedures, which must spell out the rules that govern the audit relationship;
- report and make recommendations to the accounting officer who retains responsibility for implementing such recommendations;
- in the annual report of the institution, comment on the effectiveness of internal controls, the quality of in-year management and monthly reports submitted, and evaluate the annual financial statements;
- promptly report to the relevant executive authority in cases where financial reports implicate officials in cases of fraud, corruption or gross negligence; and
- communicate any concerns it deems necessary to the executive authority, the relevant treasury and the Auditor-General”.

The internal audit functions must be executed in accordance with the standards set by the Institute of Internal Auditors. These standards prescribe that Internal Audit must prepare the following plans:

- “a rolling three-year strategic internal audit plan based on its assessment of key areas of risk for the institution, having regard to its current operations, those proposed in its strategic plan and its risk management strategy;

- an annual internal audit plan for the first year of the rolling three-year strategic internal audit plan;
- plans indicating the proposed scope of each audit in the annual internal audit plan;
- operating procedures, with management inputs, to guide the audit relationship; and
- a quarterly report to the audit committee detailing its performance against the annual internal audit plan, to allow effective monitoring and possible intervention” (RSA 2001:9).

3.3.2.5 Municipal Public Accounts Committees

The Municipal Public Accounts Committee (MPAC) must be established in terms of the Municipal Finance Management Act (MFMA) and Circular 32 (2006) published by the Department of Cooperative Governance and Traditional Affairs. MPACs do not work in silos. Circular 32 (CoGTA 2006) prescribes that MPACs must function in close conjunction with Finance Oversight Committees. Jointly, these two mechanisms examine losses, wasteful and fruitless expenditure, unauthorised and irregular expenditure on all municipal projects. According to Khalo (2013:586), MPACs play an important role in good local governance by ensuring integrity in municipal councils. They also facilitate accountability and ethical conduct in municipal administrations as well as play a critical role in ensuring that resources are utilised optimally and service delivery goals are set and met. The principal role of MPACs is to examine the Auditor-General reports and inform Parliament of the financial status of municipalities (Khalo, 2013:586).

The general function of the MPACs is to assist the council to hold the executive and municipal administration accountable and ensure effective and efficient utilisation of municipal resources (Khalo, 2013:590). The following can be considered key functions of MPACs:

- “MPACs must ensure that the money allocated to municipalities and their entities has been spent according the scope of the demand.
- In case of mismanagement of funds, the MPACs must call upon the member of the Mayoral Committee or Executive Committee and or heads of departments concerned to explain what action, disciplinary action has been taken to prevent the aforementioned case.
- The MPACs should review statement of accounts showing the income and expenditure of the municipality and its entities; exercise financial oversight on behalf of Council; refer and receive matters from other committees; ask and receive advise from the internal audit committee; and ask and receive reports from the Mayoral Committee and administrative departments” (Khalo, 2013:590).

Khalo (2013:590) further accentuates that MPACs should review statements of accounts to reveal the municipalities and its entities income and expenditure. They should also exercise financial oversight on municipal projects.

3.3.2.6 Provincial Standing Committee on Public Accounts (SCOPA)

The role of the provincial Standing Committee on Public Accounts (SCOPA) is primarily to exercise oversight over provincial and local government on behalf of the Provincial Legislature to ensure accountable utilisation of resources and prudent financial management. This role is complemented by the Auditor-General whose mandate is to conduct provincial government departments, municipalities and other public sector bodies audits. The Auditor-General must also submit reports to the legislature, as per the requirements of the Public Audit Act 25 of 2004 and the Constitution.

3.3.2.7 South African Local Government Association guidelines

The South African Local Government Association (SALGA) mandate is derived from the Constitution. The role of SALGA is generally to:

- develop capacity within municipalities;
- represent, promote and protect the interests of local government;
- transform local government to enable it to fulfil its developmental role; and
- ensure full participation of women in local government.

SALGA has representatives in the Municipal Infrastructure Technical Task Team (MIT3) (MIG, 2004-2007:20). MIT3 reports directly to the MITT and has the responsibility to:

- “facilitate and co-ordinate implementation of MIG policy and the overall programme;
- promote financial, technical, social and environmental sustainability of municipal services through infrastructure programmes;
- monitor MIG implementation and progress of departments in implementing the MITT decisions;
- facilitate the establishment of the MIG Management Unit;
- recommend policy changes, draft policy amendments and provide expert advice to the MITT;
- coordinate impact studies on the MIG and review and correct blockages in process;
- determine sector priorities and ensure proper co-ordination between sector departments; and
- review reports from municipalities and review sector reports” (MIG 2004-2007:20).

3.3.2.8 Department of Co-operative Governance and Traditional Affairs (CoGTA) guidelines

The role of CoGTA is to ensure proper coordination of all municipal infrastructure programmes and sector departments at provincial level. Furthermore, CoGTA must monitor municipal performance inclusive of infrastructure project progress. In this regard, CoGTA

must oversee the effective functioning of Project Management Units (PMUs), and provide technical support through all phases of infrastructure projects. Furthermore, Kopung and Meyer (2016:117) outline the following responsibilities:

- “co-ordinate MIG policy on behalf of all departments;
- establish MIG management and administrative structures;
- administer the transfer of funds to municipalities according to the Division of Revenue Act schedule;
- provide support to municipalities; and
- monitor performance of the overall MIG programme”.

The national MIG Management Unit (MIG MU), which is located within CoGTA, is responsible for:

- “implementing policy relating to infrastructure delivery;
- setting up the MIG national fund administration system;
- ensuring the establishment of project management and monitoring capacity within municipalities;
- monitoring the use of MIG funds;
- operating the national MIG information system;
- auditing the local programmes to ensure compliance;
- ensuring that evaluation of local programmes takes place; and
- preparing reports to MITT and to provincial and national government” (Kopung and Meyer, 2016:117).

3.4 MIG-RELATED PROJECT APPLICATIONS IN LOCAL GOVERNMENT

Van der Waldt (2009a) provides a brief explanation of the introduction and evolution of project management in the South African Public Service in general, and asserts that its application is relatively new. Van der Waldt (2009a) further postulates that the “Project Management Institute, the global professional body for Project Management, first identified

the need for a government extension to the Project Management Body of Knowledge (PMBOK) in October 1998, which led to publishing the first edition in March 2002 and a second edition in February 2006". Van der Waldt (2014:845) also accentuates that in South Africa, municipalities utilise project management as "a management application to render services on time, within budget and according to quality and performance specifications". Van der Waldt (2014:845) further outlines that the application of project management should square with the environmental, socio-political, economical and institutional realities of a particular municipality.

As outlined in Chapter 1, South Africa faces severe infrastructure service delivery backlogs. This state of affairs is primarily due to historical realities, the current socio-economic and political situation, and existing capacity challenges in local government. Bond (1998:45) holds that the newly-elected government in South Africa established the Municipal Infrastructure Investment Framework (MIIF) as the first national strategic plan to outline the nature and extent of basic infrastructure backlogs. This plan also incorporated various strategic options, which may serve as guidelines for the provision of basic services to communities. Bond (1998:45) also highlighted that challenges are attached to this strategic plan which posed serious weaknesses and shortcomings. This ultimately forced the country to review the strategic plan and adjustments, especially the interaction between all spheres of government in the provision of basic services. This adjusted plan was the precursor of the MIG programme in local government. "Through the MIG programme, the government helps municipalities to develop their capital project management capacity, which is facilitated primarily through establishing project management units (PMUs) within municipalities" (DPLG MIG, 2006:16). The PMUs are accountable to the council and municipal management structure (DPLG MIG, 2006:16). Van der Waldt (2014:845) clarifies the role of national MIG and provincial programme management units to fulfil a supportive role function to PMUs. The MIG programme further promotes the devolution of the project management function, which implies the establishment of a project management function within a municipality. The Municipal Infrastructure Investment Framework (MIIF), for example, covers the maintenance of roads (DPLG MIG, 2005:4). This framework for the delivery of municipal infrastructure is based on Chapter 3, section 41(i) of the Constitution (1996).

3.5 INTERFACE BETWEEN INTEGRATED DEVELOPMENT PLANNING, SERVICE DELIVERY BUDGET IMPLEMENTATION PLANS, AND MIG PROJECTS

The Municipal System Act, 2000 stipulates that integrated development planning is the core function which municipalities must pursue to assert their developmental orientation on matters of local government. The IDP can be considered as a process by which municipalities prepare 5 year strategic plans which are reviewed annually in consultation with communities and stakeholders (Van der Waldt, 2014:853). This plan seeks to promote the integration of various dimensions of local governance by balancing socio-economic and ecological pillars of sustainability as well as by coordinating actions across sectors and spheres of government. The IDP must, however, be congruent with the institutional capacity required for its successful implementation. In this respect, Maserumule (2008:438) states that the IDP is used as a “local pathway” to achieve sustainable development. The IDP integrates and co-ordinates plans and takes into account proposals for the development in the municipality.

Municipalities in South Africa are legally required in terms of the Municipal Systems Act to formulate IDPs for their area of jurisdiction. These plans should reflect the process and methodology to be utilised, the responsibilities of all stakeholders, time frames and milestones, as well as cost parameters. Once the IDP is completed, all municipal planning and projects should be designed and executed in line with the IDP (RSA, 2001). Phase 3 of the IDP process makes specific provision for the design and content of projects. Clear details for each project have to be provided inclusive of its specifications, target beneficiaries, budget, completion date, and management control aspects. Clear targets must also be set and performance indicators need to be designed to measure progress and quality issues on projects (Van der Waldt, 2014:849).

Service Delivery and Budget Implementation Plans (SDBIP) interpret a municipality’s five-year IDP into a 12-month service delivery agreement between the municipal administration, council and community. The SDBIP must outline the goals and objectives set by the council as quantifiable outcomes to be implemented by the administration (Van der Waldt, 2007c:20). Furthermore, the SDBIP should reflect the responsibilities and outputs for each

senior manager, the inputs required to implement service delivery projects, and the timelines for each project deliverable. The SDBIP thus provides an overarching perspective in terms of service delivery areas, budget allocations, and monitoring and evaluation mechanisms (Van der Waldt 2007c:24).

Van der Waldt (2014:853) further highlights that “national and provincial frameworks and structures must inform municipal project planning for infrastructure development through related mechanisms, for example, Integrated Waste Management Plan, the Environmental Management Framework, and its top-layer Service Delivery and Budget Implementation Plans (SDBIPs)”. Van der Waldt (2014:853) also asserts that in terms of Section 55(1)(a) of the Municipal Systems Act 32 of 2000, municipalities must provide services in a sustainable and equitable manner. To adhere to this mandate, the Director: Infrastructure should work in close collaboration with Project Management Units (PMUs) to support the design and execution of infrastructure projects. Furthermore, the municipal IDP must contain a Capital Investment Programme within the parameters set by the Local Spatial Development Framework (MSA, Section 26(e)). In terms of section 153(b) of the Constitution, municipalities are duty-bound to participate in national and provincial development programmes. Municipalities primarily utilise IDPs and coordination mechanisms, for example, MuniMECS (committee for municipalities and the respective members of the Executive Council of provinces) to fulfil these constitutional obligations.

As eluded to earlier, the IDP comprises of a number of phases: “Analysis; Strategies; Projects; Integration; and Approval”. During the Analysis phase, the municipality and key stakeholders should identify the communities needs and priorities. The gaps in infrastructure required for the provision of basic services are identified during this phase. From a MIG perspective, it is important that from the outset of the IDP process, basic infrastructure needs and plans are addressed properly (MIG 2004-2007:35). In order to comply with MIG conditions, the following information must be addressed in the IDP for basic infrastructure development projects:

- “a five-year infrastructure capital plan which illustrates the total amount of capital grant funds including the MIG fund allocation in terms of the Division of Revenue Act;
- the rate at which the overall infrastructure backlog is to be reduced;
- list of the projects to be funded by MIG;
- details of the level of service that will be provided by the infrastructure;
- an assessment of the operating expenditure of all infrastructure under the control of the municipality; and
- an assessment of the operating revenue which will be raised to cover operating expenditure” (MIG 2004-2007:35).

The five-year Infrastructure Capital Plan which emanates from this information should offer the community opportunities and other interested parties to provide input regarding the prioritisation of infrastructure projects. Once the IDP is finalised, the Plan must be aligned carefully with its infrastructure priorities. The budget allocation to infrastructure projects must also be congruent with the IDP and SDBIP. The successful implementation of the Infrastructure Capital Plan, as well as associated infrastructure projects requires participation by all municipal departments. Infrastructure project managers also require municipal auxiliary support functions, for example, human resources, finances, and information technology. Project management thus plays a vital role in the execution of IDP and SDBIP as well as enables the municipalities’ service delivery and community participation obligations. Van der Waldt (2007c:19) asserts that the IDP contributes towards effective project management in the following ways:

- identify essential projects and prioritising projects for implementation;
- define development needs and expected outcomes;
- define key elements and deliverables for each project;
- integrate these elements into project proposals for council consideration and approval; and
- submit regular progress reports and check against IDP and SDBIP content.

From a project management perspective, the top-layer and departmental SDBIPs provide a sound basis for councillors to monitor the implementation of service delivery projects, inclusive of infrastructure development projects. The quality and performance scorecard contained in the top-layer SDBIP in particular enables councillors to perform their oversight function in this regard.

3.6 CONCLUSION

Municipalities in South Africa must adhere to their obligations and Constitutional mandate within the parameters of an extensive statutory and regulatory framework. The provision of municipal services is in most instances dependent on adequate infrastructure. Part of planning municipal services is, therefore, planning for infrastructure. The MIG programme is an integral part of the regulatory framework governing the provisioning of municipal services through infrastructure projects. The MIG programme should be considered an overarching framework to support all municipal services. The entire approach of MIG is focused on improving the capacity, efficiency, effectiveness, sustainability and accountability of local government. Whilst national and provincial government is responsible for creating an enabling policy, financial and institutional (support) environment for MIG, municipalities are responsible for planning its infrastructure and utilise MIG to deliver the infrastructure. Executive mayors, municipal managers, councillors, and senior officials are mandated to play an important role in the allocation and management of municipal resources, inclusive of sound financial management practices. In terms of the statutory framework governing the IDP and the SDBIP, the municipal budget must be transparent and requires community participation. It is imperative that budget allocations to MIG projects as well as its monitoring and control of progress is performed adequately by various oversight structures.

In the next chapter, the empirical data is acquired through semi-structured interviews pertaining to the perceptions and opinions of key role-players and stakeholders regarding the design and implementation of MIG projects by RMLM.

CHAPTER 4

PROJECT MANAGEMENT METHODOLOGY APPLICATION AT RMLM: EMPIRICAL FINDINGS

4.1 INTRODUCTION

In the previous chapter, the statutory and regulatory framework guiding municipal infrastructure grant projects related to the implementation of project management methodology highlighted in the problem statement was explored. Together with the theoretical exposition provided in Chapter 2, Chapters 3 and 4 established a set of data which was utilised to determine the gaps between project best practice and statutory and regulatory prescripts on the one hand and existing practices in municipalities on the other. This gaps analysis was conducted by means of a case study, namely: Ramotshere Moiloa Local Municipality (RMLM). This chapter presents the empirical data gathered from semi-structured interviews pertaining to the perceptions and opinions of key role-players and stakeholders regarding the design and implementation of MIG projects by RMLM. Application of the project management methodology for Municipal Infrastructure Grant (MIG) projects is focused upon.

4.2 CASE STUDY: THE PMU OF RAMOTSHERE MOILOA LOCAL MUNICIPALITY

The primary focus of this empirical investigation is to address the research problem identified in Chapter 1. For this purpose, a case study approach was adopted. Auriacombe and Webb (2006:599) define a case study research method as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used”. Auriacombe and Webb (2006:599) further postulate that case studies enable detailed contextual analysis of a limited number of events or conditions as well as their underlying relationships. Yin (2012:4) asserts that a case study can be considered as an empirical inquiry about a contemporary phenomenon (e.g. a “case”), set within its real-world context. Yin (2012:49) further posits that a case study can “offer rich and revealing

insights into the social world of a particular case”. The assertions by Auriacombe and Webb (2006:599) and Yin (2012:4) are further supported by Leavy (2014:2) who defines a case study as “an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy institution or system in a real life context”. Leavy (2014:2) further describes a case study as a “common parlance”, that documents a particular situation or event in detail in a specific socio-political context. Corbin and Strauss (2015:12) highlight that descriptive case studies reveal contextual and underlying dynamics of an event or happening.

As mentioned in Chapter 1, the study utilised a case study research design, because it is important that participants involved in the unit of analysis, namely, the PMU directorate at RMLM, share their experiences, concerns and frustrations. It was imperative to understand, interpret and analyse the natural work setting of the officials attached to this directorate in order to draw conclusions and make recommendations regarding the application of appropriate project management methodology. It is argued that such recommendations may contribute significantly towards enhancing the ability of the municipality to address infrastructure backlogs. Using semi-structured interviews as an instrument to gather data enabled the researcher to comprehend the status of infrastructure projects and detect current gaps related to a sound project management methodology.

Chapter 2 revealed that PMI (2013:10) outlines the functions of PMOs as units which should implement project management procedures and provide support in the application of various project tools and techniques. PMI’s Guide to the Project Management Body of Knowledge (PMBOK®, 2004:369) defines a PMO as “an organisational body or entity assigned various responsibilities related to the centralised and coordinated management of those projects under its domain”. The responsibilities of the PMO can range from providing project management support functions to actually being responsible for the direct management of a project. The functions of typical PMOs are encapsulated in the South African local government context as PMUs. PMUs as a prerequisite for MIG project implementation are virtually synonymous with PMOs.

In the previous chapter the statutory and regulatory framework guides the PMU to align infrastructure projects with the IDP and the top-layer SDBIP was established. Furthermore, in the same chapter of this study, Lock (2013:171) expounded upon the typical functioning of PMOs while Chan *et al.* (2015:17), posited that these functions ensure that projects are managed on strategic, tactical and operational levels of host organisations. The conventional functions of PMOs serve as a further valuable guide to assess potential gaps in the way the PMU of RMLM design and execute infrastructure projects.

4.3 RESEARCH METHODOLOGY

According to Bogan and Taylor (1996:1), the term methodology refers to the way in which problems are approached to seek responses. In the social sciences, the term applies to how research is conducted.

Bogan and Taylor (1996:7) further define qualitative research as that which produces “descriptive data”. In essence, it depicts people’s own written or spoken words and observable behaviour. Qualitative research also guides the researcher to conceptualise and contextualise key constructs and concepts as well as to gain insight from patterns that emerge from data. Leavy (2014:2) adds that a qualitative research design is a constructive means “to learn about social reality”. Qualitative research is utilised across various disciplines to explore, describe or explain certain social phenomenon. Furthermore, qualitative research is useful to unpack the meaning people ascribe to activities, situations, events or artefacts. As such, this type of design is fully suitable to operationalise the research objectives and to respond to the identified research questions.

4.3.1 Research approach and design

As outlined in Chapter 1, a qualitative research approach was adopted to examine the knowledge, experience, and understanding of the PMU personnel regarding the application of project management methodology for MIG projects at RMLM. Qualitative research methods utilised in social research includes observations, in-depth interviews, focus groups and the analysis of personal documents. These methods are designed to help researchers

understand the meanings people assign to social phenomena and to elucidate the mental processes underlying behaviours. “In the qualitative paradigm, the researcher becomes the instrument of data collection, and results may vary greatly depending upon who conducts the research” (Auriacombe and Webb 2006:592).

According to Auriacombe and Webb (2006:589), a research design comprises of a plan, a roadmap which allows the researcher to test the validity of the hypothesis. It can be considered the way the researcher proposes to go about testing the hypothesis or responding to the research questions. A qualitative research paradigm provides the researcher with an “insider’s view of the target audience through immersion in their culture or situation” (Corbin and Strauss, 2015:4).

The advantage of using qualitative methods is that they generate rich, detailed data that retains the participants’ perspectives and provides a context to understand behaviour (Auriacombe and Webb, 2006:592). A disadvantage is that data collection and analysis may be labour intensive and time-consuming (Auriacombe and Webb, 2006:592).

With regard to the primary objective of this study, a descriptive case study design was preferred because one could explore how projects are managed at RMLM. An exploratory case-study research design provides a clear understanding of a situation or phenomenon through respondents’ interpretations of the situation in its natural setting.

4.3.2 Target population and sampling

According to Lewis and Ritchie (2003:78), qualitative research typically utilises non-probability sampling to select the population for study. In a non-probability sample, units are selected deliberately to reflect particular features of or groups within the sampled population. The sample is not intended to be statistically representative. The chances of selection for each element is unknown but, the characteristics of the population is utilised as the basis of the selection. It is this feature that makes them well-suited to small-scale, in-depth studies such as this particular study. Lewis and Richie (2003:78) add that the selection of participants, settings or other sampling units is criterion based. Purposive

sampling is conducted looking at socio-demographic characteristics, or specific experiences, behaviours, and roles. Lewis and Ritchie (2003:79) further outline that members of a sample are selected with a 'purpose' to represent a location or type in relation to a key criterion and this has two principal aims:

- ensure that all the key constituencies of relevance to the subject matter are covered; and
- secondly, within each of the key criteria, some diversity is included so that the impact of the characteristic concerned can be explored.

Based on this explanation, this study utilised purposive sampling to select the full cohort of the unit of analysis, namely: PMU staff at RMLM. The case study was conducted at RMLM in Zeerust (North West Province) and the PMU comprised of:

- the Director: Infrastructure;
- the PMU Manager;
- the PMU Technician; and
- the MMC for Infrastructure, as a political head.

A total sample of 4 participants was utilised representing 100% of the target population. The empirical research and findings of the participants' response in this study enabled a gap analysis by identifying the current practices and challenges which confront RMLM. The particular focus of the interviews was to determine the extent to which the PMU utilise internationally-recognised project management methodologies to address infrastructure backlogs. The aim was to isolate key recommendations which could assist the PMU in adopting more appropriate praxis to design and execute MIG projects such as the construction of new roads.

4.3.3 Data collection

Yin (2012:175) asserts that in a case studies, data collection and analysis is likely to occur in an “intermingled fashion” because newly collected field evidence may pose immediate challenges to any tentative interpretations made on the basis of earlier evidence. Throughout data collection, the case study evaluator must act like a “detective” to evaluate the adequacy and meaning of evidence as it is being collected (Yin, 2012:176).

In this study, data was collected from PMU officials including the MMC for Infrastructure through semi-structured interviews.

4.3.3.1 Interview as data collection method

In many instances, data is collected through posing questions and recording responses from the participants. The data is then analysed to check similarities and differences among the participants (De Vos *et al.*, 2011:342). According to Bryman (2016:467), semi-structured interviews provides the researcher rich detailed responses. The interview process is flexible which implies that questions may not be posed exactly in the way outlined on the interview schedule. Silverman (2011:145) concurs by confirming that semi-structured interview produces accounts which offer researchers a means of examining “intertwined sets of findings”.

For purposes of this study, an interview schedule was designed based on the data sets emanating from Chapters two and three. This schedule was piloted (pre-tested) with one participant to confirm whether the questions are well-formulated and unambiguous. Permission was acquired to conduct the interviews during office hours at the participants offices. Furthermore, appointments were scheduled to confirm the date and time of the interviews.

The purpose of the study was explained and information which may influence the ethical considerations for the studies of this nature was explained. The participants were asked to

sign a consent form and it was ensured that their responses would be treated as confidential. All the interviews were conducted in an atmosphere of mutual trust and rich, detailed information was gathered. The research findings are outlined in the next section.

4.4 RESEARCH RESULTS AND ANALYSES OF FINDINGS

The main objective of this section is to explore and determine whether the PMU at RMLM personnel understand and properly apply project management principles, life cycle methodologies including the statutory and regulatory framework governing MIG in municipalities in the implementation of MIG projects. This section reflects the research results which emanated from interviews conducted at RMLM and is divided into two sections: Section A comprises of the biographical profile of the participants, while Section B detailed verbatim responses provided by the participants to questions posed. The section provides a detailed exposition of the results analysed against the background of the content of the two theoretical chapters. This is followed by an analysis of the findings and recommendations thereof.

4.4.1 Section A: Biographical profile of participants

This subsection reports on the biographical information. All the participants were requested to respond to the following:

- current position;
- number of years in this position;
- total number of years' experience in the local government; and
- project management experience and expertise.

Regarding the biographical profile, it is evident that every participant has varying years of experience in project management in general and MIG in particular. Interviewee 1 has 1 year of service; interviewee 2 has 2 years of experience; interviewee 3 has 26 years; and interviewee 4 has 3 years of service.

Figure 4.1 below illustrates the biographical profile of PMU staff.

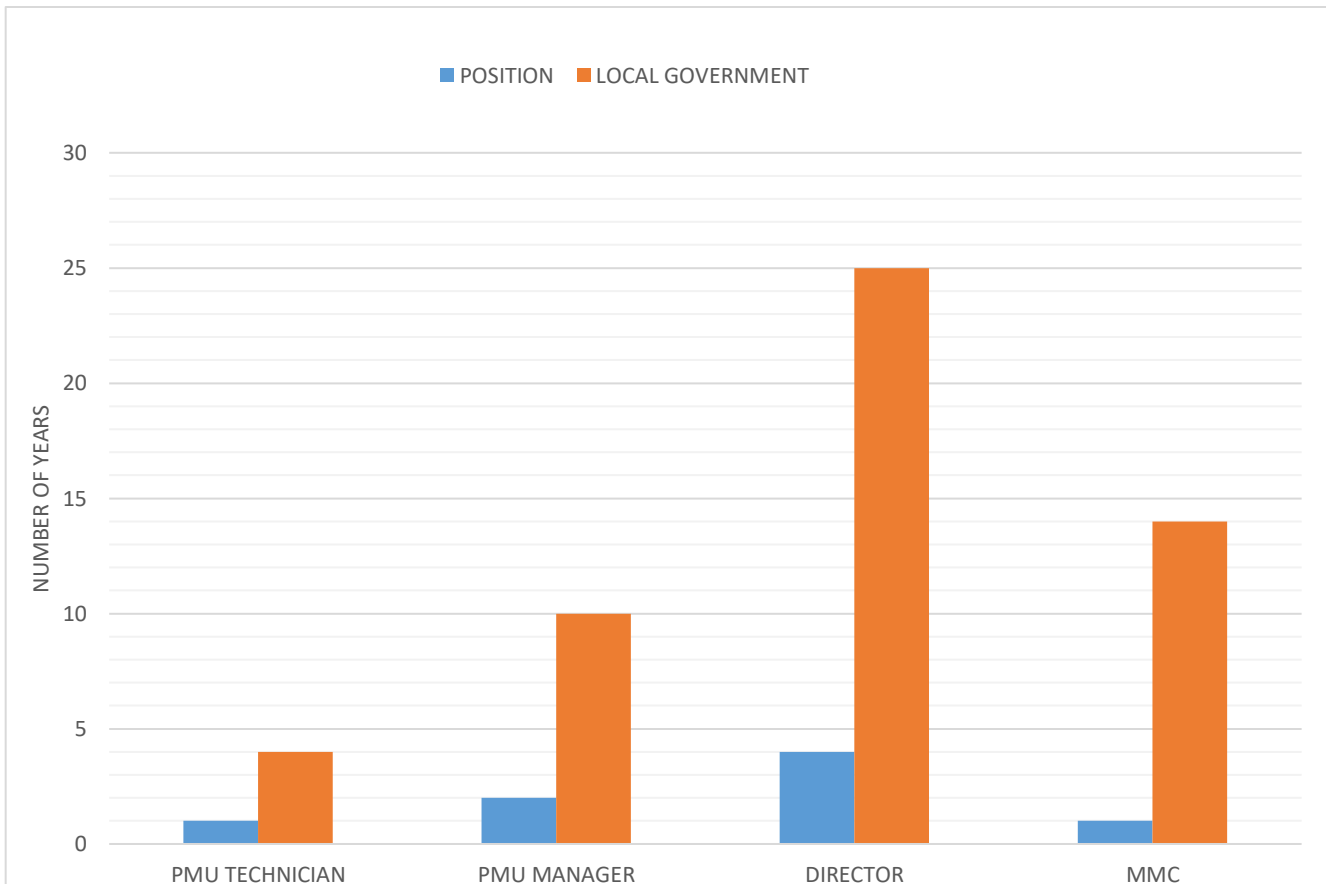


Figure 4.1 Biographical profile of PMU staff

It is evident that the staff, except for the Director, has very limited experience in project management in general and MIG projects in particular. Their overall experience in local government is, however, more or less on par with the profile of general employees of the municipality.

4.4.2 Section B: Interview questions and responses

This section reports on the responses gathered from the participants per question was posed. Certain deductions and interpretations follow.

Q1. To what extent does the MIG programme link to the municipality's IDP process?

Response: Interviewee 1

“The MIG programme is directly aligned with IDP processes because all the projects that we implement are from the IDP. We do not implement anything which is outside IDP project allocations”.

Response: Interviewee 2

“The MIG is the grant which is meant to alleviate poverty. The MIG thus only caters for projects which are approved in the IDP. So, all the projects that are implemented by municipality are those identified as a priority need in the community. Only identified and approved projects within the IDP can be funded by MIG”.

Response: Interviewee 3

“Yes, projects are closely aligned with the IDP because it is where our planning as municipality starting from, and it is being influenced politically as you know. Our IDP is a five-year plan. Council will consider infrastructure projects from the Technical site. There are other projects that will come into the IDP, but the Technical site will prioritise certain projects that will be implemented in a particular financial year. The PMU is responsible for the implementation of prioritised MIG projects”.

Response: Interviewee 4

“According to my understanding the MIG projects are linked to the municipal IDP process”.

Deductions and interpretations

All the participants confirmed that the MIG programme is aligned with the municipal IDP process. The literature review reveals that MIG projects should be identified, prioritised and

approved by means of the IDP process before the PMU becomes involved in the implementation thereof. The exposition of the statutory and regulatory framework in Chapter 3 revealed that the IDP process comprises of various phases. The analysis phase is applicable here since it is the phase where the municipality and key stakeholders identify the needs and priorities of the community (see MIG 2004-2007:35). Furthermore, Chapter 3, section 3.5, outlined the link between the IDP, the top-layer SDBIP and the MIG. In this regard, MIG (2004-2007:35) stipulates the most important information that must be collected during the IDP process to inform PMU project planning. Also, sections 55(1)(a) of the Municipal Systems Act 32 of 2000, 26(e) of the Local Spatial Development Framework, and section 153(b) of the Constitution are applicable in this regard.

Q2. What is your expert opinion regarding whether the municipality possesses an adequate monitoring, evaluation and performance oversight system to control MIG projects?

Response: Interviewee 1

“The municipality is capable of controlling MIG projects because in our municipality we have a PMU Technician who is responsible for all site management. He visits all project construction sites to check progress. He must also report on all activities on site. So, we have adequate ways and means off evaluating projects. We also have the PMU Manager who is responsible to coordinate everything and to make sure reports are regularly submitted to the Provincial MIG Office and the National MIG Office. Performance of contractors is checked on a monthly basis. We got our own consultants who have resident engineers on site. They are there to supervise and check daily activities on site and after that they have meetings with the PMU. The PMU then come and do inspections and checking of the work done. There is thus coordination between consultants and PMU Technicians to make sure that projects are on time and on schedule”.

Response: Interviewee 2

“The PMU within the municipality was established in order to manage MIG infrastructure projects. However, the capacity within the municipality is not adequate to manage these projects. There is insufficient monitoring of projects and little resources that we have within the PMU. We therefore have to involve consultants from private companies to assist with monitoring. We do oversight with the consultants; thus jointly monitor and evaluate MIG projects. The PMU must manage performance and evaluate progress of all service providers by means of the GCC (General Conditions of Contract) and other guidelines”.

Response: Interviewee 3

“We have good expertise. We have a manager specifically for MIG projects who is experienced in project management. He also has the required skills to implement and monitor infrastructure projects. We also have Technicians as well as Interns to implement the projects. There are also consultants to monitor and evaluate projects”.

Response: Interviewee 4

“I think the monitoring system is always there because we got the councillors who do monitoring every day. If it comes to the push, we have MPAC who are vanguards of the municipality’s money and they assist us. Apart from the councillors, we have the Municipal Manager, the Technical Director and administrators to make sure that everything is monitored accordingly”.

Deductions and interpretations

The responses reveal that there are adequate monitoring and evaluation mechanisms in place for MIG projects. However, it is clear that the particular project monitoring, evaluation and oversight methodology is established inadequately. Therefore, although there are monitoring, evaluation and oversight mechanisms, the standardised processes and procedures that should be followed by these mechanisms are outlined inadequately. Participant 2 accentuated the lack of capacity in the municipality as far as monitoring, evaluation and oversight is concerned. The reviewed literature in Chapters 2 and 3

accentuated the need for standardised project management methodology to ensure that projects are completed in accordance with specifications. Van der Waldt (2011:74) also underscored the significance of ensuring that the duties, roles and responsibilities of all role-players and stakeholders is clarified. Monitoring, evaluation and oversight responsibilities, as well as the particular ways and means that should be utilised to perform these responsibilities should thus be clear. Furthermore, CoGTA (2007) revealed that it is the responsibility of national government to ensure that municipalities have the required capacity to successfully monitor and evaluate MIG projects. In this respect, PMUs should have the required expertise, systems and processes to guide this process.

Q3. Kindly elaborate on the role and responsibilities of the PMU to oversee MIG projects

Response: Interviewee 1

“The responsibilities of the PMU include evaluation and monitoring of projects. We have to check whether there is progress on site; make sure that the quality of work is on point; check the labourers on site; check that their contractual obligations are met; and make sure that people are paid on time. We also have to make sure that suppliers are paid on time, and there is no stopping of the projects without knowing and also to make sure we report on a monthly basis to the MIG Office nationally and provincially. There are registration and filling systems as well as up to 10 forms for each and every project. We thus follow the life cycle of projects from the beginning to the end”.

Response: Interviewee 2

“Once the project is identified, we look in terms of what expertise do we need for them, be it electrical or civil expertise. For example, if we have a road project we need Civil Engineers in order to do the design and monitoring of the project. Once the service provider is evaluated, he must submit all the reports. Providers are given the project and the scope of work. For example, if we are doing the road at Driefontein, we give the scope of work to the service provider to do scoping reports and everything. Reports are also given to us by

consultants. We simply do the monitoring because the PMU Manager himself must be an engineer in order to monitor all engineering work. He must thus be able to analyse all the technical and progress reports that are given to him. This ensures that the consultants do not provide us with false information. If there is any ambiguity within the reports, we refer it back to the consultants to say that we don't agree with him, so that the report can be rectified. PMU basically analyse all reports that comes in the office to confirm whether it complies with the standards of the project scoping reports. We analyse all information given to us. We are also responsible for project approvals”.

Response: Interviewee 3

“There are project managers within the municipality that have engineering and project management expertise. They monitor and evaluate projects. Their main function is to make sure that funding that comes from MIG, is spent correctly. They must also monitor expected targets, implementation of projects, reporting, monitoring and evaluation to the funder and council”.

Response: Interviewee 4

“The PMU is there to make sure that all the projects adhere to specifications. The PMU must also make sure that all the necessary documents are completed. PMU staff cannot be biased. We have a PMU Manager who is always monitoring everything”.

Deductions and interpretations

On the basis of the reviewed literature documented in Chapter 3, section 3.3.2.3, it is evident that the PMU has extensive responsibilities as far as project oversight is concerned. It should be noted that the participants only highlighted three PMU responsibilities and functions. This may be due to the way the question was formulated, but can also imply that the participants are not fully aware of the extent of PMU responsibilities as outlined by DPLG (2004:26-38).

Q4. What systems and mechanisms do the PMU utilise to manage all projects serviced by the PMU directorate?

Response: Interviewee 1

“There is a system that we call MIGMIS, which is the Municipal Infrastructure Grant Municipal Information System. By means of this System, we have all the information of all projects. This include project registration documentation, consultant registration, contractor registration and also for the monthly payment whereby we report everything on the system from month to month”.

Response: Interviewee 2

“Firstly, we have a nationalised system called the Municipal Information System. All projects need to be registered on the MIS. The MIS enables national and provincial government to ensure that all projects comply within certain specifications before it can be funded. Secondly, once the project is implemented we do have a system within the municipality whereby we conduct site visits, report, and have site meetings. We conduct site meetings as per project phase. Every month we go to a site meeting and technical meeting of the project. All these meeting minutes are then loaded onto the MIS and go to the province and national government. The main mechanism that we use as PMU to manage projects is site visits. Site meetings and technical meetings for all projects are necessary to monitor progress of projects and to control the quality of projects”.

Response: Interviewee 3

“We have reporting mechanisms. Most of the systems that we use are from the department, which come from the funders. We also have certain reporting systems. The MIS is used to file all project information. Also, during monthly reporting, they put information in the MIS. They always go to workshops, and are being trained when the system is being updated. We also have a general project management system that we used to manage projects from initiation up to closure of the project”.

Response: Interviewee 4

“We have two committees; one is chaired by the PMU Manager and the other by the CFO. These committees check all project documents. The CFO oversees the committee of directors”.

Deductions and interpretations

This question was significant to establish the particular methods and methodology utilised by the PMU to manage projects. Participants 3 and 4 could not clarify the system utilised by municipalities to administer MIG project, while respondents 1 and 2 outlined the systems and mechanisms employed to administer MIG project. Reference can be made to the Municipal Infrastructure Grant MIS user manual for the MIG management information system (2006:2) which clearly outlines the main contributions of MIS, which serves as an overall control mechanism in terms of the allocation and disbursement of MIG funding to municipalities, monitoring the actual municipal expenditure and recording the assets resulting from the spending of MIG funds. Furthermore, municipalities are in control of the planning and implementation of infrastructure development in their areas of jurisdiction by providing the practical means through which MIG funding can be tied to the approved municipal Integrated Development Plan (through integration with the IDP Nerve Centre). Lastly, also serve as a dual purpose by providing municipalities with a tool to control their own programmes while simultaneously issue consolidated financial reports, progress and performance indicators on a provincial and national scale.

Q5. Does the PMU diligently follow the prescribed policies and supply chain process when appointing consultants and contractors for each project?

Response: Interviewee 1

“Yes we do follow all the processes starting from what we call the specification committee. PMU members are part of this committee to assist with project adjudication and evaluation.

We also have to follow all the policies and processes of supply chain. The Supply Chain directorate controls all appointments”.

Response: Interviewee 2

“Yes. The supply chain unit within the municipality deals with all supply chain processes. It is an independent unit that does all the procurement processes of the municipality. We as the PMU are not involved in that but is only responsible for the implementation of projects. So, the processes of procurement are followed through the supply chain offices as they are responsible for that particular aspect. It is their responsibility to make sure that all service providers are appointed as per the prescribed policies of supply chain management”.

Response: Interviewee 3

“We follow municipal supply chain policies, including the MFMA. All prescripts from MFMA and supply chain policies are followed when appointing consultants and contractors”.

Response: Interviewee 4

“Yes, everything is done according to the supply chain policy. There no way that they can do things without supply chain management. The PMU Manager only controls the policy and all documents”.

Deductions and interpretations

It is evident from the above responses that the participants confirm that supply chain policies and procedures are adhered to. The Supply Chain directorate is responsible for actual procurement of resources and the appointment of service providers. The PMU is at the receiving end of this process and simply complies with approved processes.

Q6. In your opinion, to what extent does the PMU take responsibility for the overall management of projects? Substantiate your response?

Response: Interviewee 1

“The PMU takes full responsibility for all aspects of infrastructure projects. The PMU is part of all the internal meetings and site inspections with consultants. We also go out to communities when there is crisis to make sure we solve it and consult with communities. This is mainly done through councillors and the *Kgosi* (Tribal Chief, traditional leader). The PMU also engage communities by means of the CLO (community liaison officer) and project steering committees. So, we always interact with the communities from the beginning to the end of the project”.

Response: Interviewee 2

“It is the responsibility of the PMU to make sure that all projects are managed successfully. The PMU was developed entirely by government to make sure that MIG funds are managed properly. Based on their expertise and qualifications, the PMU must have engineers and technicians to properly manage infrastructure projects”.

Response: Interviewee 3

“Hundred percent from the start of projects. Once the project is identified in the IDP process, we become involved. PMU is part of the prioritisation of projects before we receive funding. We then align our priorities with the funders because they are the ones who dictate how much allocations to give”.

Response: Interviewee 4

“The PMU takes full responsibility once all the necessary documents passed all committees. The important committee is the PMU committee, that is chaired by the PMU Manager. The decisions of this committee is checked by the Municipal Manager and from there the PMU Manager must make sure that the contractor is on the construction site”.

Deductions and interpretations

DPLG (2007:26) and Van der Waldt (2014:852) outlined the roles and responsibilities of PMU. It is evident from the responses that the PMU only complies with certain responsibilities. It does not, for example, conduct environmental impact assessments and feasibility studies of infrastructure projects.

Q.7. Kindly elaborate on the particular project life-cycle methodology that RMLM follows to implement MIG projects

Response: Interviewee 1

“First we start to visit the site with the MIG provincial team whereby we do site verification. After site verification the project is approved and recorded on the MIG MIS. After it is approved, we register the project, the contractor, and the consultants. Once all these people are registered, we can start implementing. Once the project is implemented, we pay consultants for supervision and monitoring on a monthly basis up to the last point where the project is complete. We then release the retention of the project after one year when there are no effected liabilities”.

Response: Interviewee 2

“The project must first be identified by the community to say this is a need. Then it must go to the IDP for approval and then it comes to the PMU for analysis. We do the study for the project, like I have indicated to you, in project management we have a system that we use to identify the project. The project will run in terms of the process of MIS. Once it is done, it will go to the design phase in consultation with the community. Then we do the scoping report to see whether the project is feasible or not. After the design stage there will be an advertisement and we will follow the procurement processes. Then we get to the construction stage where the supply chain directorate appoints a contractor. From there you get the project hand over. So, basically that is our project management methodology - the stages that are been followed in terms of the life cycle of the project”.

Response: Interviewee 3

“There is planning; then there will be design documentation, supervision, and then closure of the project. That is the overall life cycle we follow”.

Response: Interviewee 4

“The PMU Manager must make sure that if the road has started, the policy must direct PMU manager until the road is finished, when the road is finished the road must be handed over by the same PMU manager, and must come back to the Director, and tell municipal manager that the road is finished and must be handed over to the community”.

Deductions and interpretations

The question was aimed at the particular project life cycle methodology that RMLM follows to implement MIG projects. The significance of a standardised project management methodology for project success was established in Chapter 2. Scholars such as Cleland (2004) and Turner (2007) confirmed that life-cycle methodologies such as PMBOK and PRINCE2 are essential to ensure that adequate control and monitoring systems and management processes are implemented to manage every phase of the life cycle effectively. From the responses it is, however, evident that such a globally-recognised methodology is not in place. Instead, rather *ad hoc* processes are followed and there is limited knowledge of existing methodologies and understanding for the necessity to adopt such methodologies for success in the PMU. These results further confirm the main research problem. On a positive note, it appears that the MIG MIS does make provision for a particular construction-specific methodology.

Q.8. What is your assessment of this methodology? Is it effective? What are the limitations?

Response: Interviewee 1

“The methodology is effective especially when all the processes are followed from the beginning which is like project registration and project approval. Once the project registration is approved, it is easy for you to monitor using the MIS system because everything must be in the system. If the project is not approved by provincial or national MIG, it becomes a problem. So, if everything is done on time as planned and the project get registered before implementation, then the system is easy to use and everything is perfect”.

Response: Interviewee 2

“The methodology is effective. The only problem is that, honestly, the project is identified by the community during the IDP process, but you will find that when you get to the feasibility study, the project does not fit what the community say they need. This may be due to the geographical situation. It might not be feasible for the project. In my opinion, if we would do the feasibility study before the project goes to the IDP the project will run smoothly. However, with my experience in the municipality on all the projects, the only thing that we have to change within the PMU is to do feasibility studies before the project is goes to the IDP to check whether the identified project can indeed be implemented”.

Response: Interviewee 3

“For now, yes. I will say the methodology is effective. We are coming up with innovative issues - other innovative cycles or stages as we go along. There might be some specific challenges in a specific project that we need to implement. With regard to limitations there is political interference challenges that sometimes derail us from those life cycles”.

Response: Interviewee 4

“The methodology is effective because the committee that has been established when the road starts they make sure that everything is according to the book”.

Deductions and interpretations

The responses further confirm the deductions drawn to the previous question. Existing methodology is not standardised project management methodology (e.g. PMBOK or PRINCE2), but rather in-house develop processes to implement projects. These processes are primarily dictated by the MIG MIS project administrative recording system.

Q.9. Please list in order of significance the five key challenges that RMLM faces regarding the successful design and implementation of MIG projects

Response: Interviewee 1

“The first challenge we are facing is our budget. Our budget is very limited. We are trying to accommodate needs in all wards, but it is not possible. So, we end up cutting the scope of our projects and not meeting the desired requirements of a project. Now, if we intending to do a 5km road, we are able to do only 1km due to the budget limitation. Our councillors always pressurise us to do all the projects contained in the IDP, no matter how small our budget is. They want to please their communities. We can only partially address the needs identified. This leads to more tension between communities and the municipality, and between councillors and us. If we can coordinate our IDP with our budget to make sure that projects are adequately funded, we can address all the needs of the wards”.

Response: Interviewee 2

“The first challenge is the community identification of projects before engineers can do feasibility studies. Now, what happens is that we implement the project which does not address the needs of the community and does not make engineering sense. Another challenge is the political interference within the implementation of projects. There is always stoppage of the project where the project does not get completed. Fourthly is the issue of the budget from the government. It is determined by the government spheres and it does not fit the needs on the ground of the community, the budget from the government is limited and we cannot address all the needs. This leads to violent protests”.

Response: Interviewee 3

“Political interference is number one; it’s a huge challenge. Another challenge is inadequate funding, the budget. We can give an example where politician might have promise the people that certain kilometres for roads has been planned, only to find that when the funding comes in we no longer can do construct the required kilometres. Another challenge is internal process where we have issues in terms of capacity and all that. Also, a challenge is the non-performance of consultants and service providers. When they underperform, we have to stick our heads out and make sure that we closely monitor them”.

Response: Interviewee 4

“The challenge is the money, which is the budget. The money we receive is not enough to finish a road for example. Another challenge is that the councillors or community want certain people to be hired. Sometimes a project cannot be implemented because of the community”.

Deductions and interpretations

Considering the responses from the participants, it can be deduced that the PMU faces the following five key challenges:

- limited budget allocation;
- political interference;
- limited and sequencing of feasibility studies;
- project management capacity; and
- non-performance of consultants and service providers.

The recommendations will follow in the next chapter to address these challenges.

Q 10. What should be done to remedy or address these challenges? Kindly elaborate on each.

Response: Interviewee 1

“To have a consultative meeting between councillors and the PMU office in order to come up with a strategic approach to solve back logs. The budget is not sufficient to address all the problems at the same time. If we can try to come up with the way of maybe addressing one ward at the time, then we can be able to address all the wards at the end of the term. We can make sure that we prioritise certain wards to finish all the roads in that ward before we go to the next ward. If we can work in that way and not try to do bits and pieces, then we can have good approach because everything is just scattered; there is no coherence in the way we work”.

Response: Interviewee 2

“The first that I would say is to capacitate the PMU, to bring more personnel basically within the project management function. The second thing is to be able to give our leadership, councillors and everyone information in terms of how the projects are being identified and what is feasible and what is not. This means educating our councillors. Also, we need to integrate the government. Public Works must together with the municipalities coordinate projects, because together we can make a difference. Government is working in silos. We may find out that a particular road is owned by Public Works and we cannot work on it. If we can integrate, align and coordinate all work, we will be able to remedy some of the issues.

The other thing is if we can make sure that the supply chain process is as effective as possible. We must make sure that service providers are appointed in terms of their capacity and experience. Through supply chain management we can rectify all issues and remedy most of the problems within the PMU. In terms of political interference, this is a broader issue where we need to capacitate our councillors upon appointment in terms of what is

their role within government spheres and within the municipal administration because politics must not come into administration”.

Response: Interviewee 3

“Political interference is going to continue. It is a big challenge. I think other municipalities are experiencing that too. The other thing is close monitoring of the performance of consultants. Contract management must be very water-tight so that you can hold them responsible for whatever deviation they are taking. The municipality must also learn to capacitate their staff and also to bring experienced people on board. We generally need to train staff in project management. They have to go to short courses in project management. There are best practices that always are coming within project management field. By attending short courses and workshops we can learn from that”.

Response: Interviewee 4

“Before we start with the road and before we come with the contractor to the community, we have to go to the community to address them of the challenges of employment. We need to tell them what is expected from them. By so doing, the community will know exactly when the road will start and how many people will be employed and the method of employing them”.

Deductions and interpretations

The responses to this question revealed a number of strategies that the municipality in general and the PMU in particular can adopt to address the identified challenges. These strategies confirm the analysis of the case study. These strategies should be placed on the council’s agenda and deserve serious attention.

4.5 CONCLUSION

The empirical research and findings revealed various challenges experienced by the RMLM participants, these challenges were considered during the formulation of recommendations provided in the final chapter. The research questions outlined in Chapter 1 were responded to through semi-structured interviews conducted with the sampled participants. The questions were extracted from the literature review expounded upon in the first three chapters.

The empirical investigation revealed that there is inadequate planning, execution, controlling and monitoring MIG projects. This is primarily as a result of the lack of project management skills, experience and sound methodology applied by PMU officials. Due to these challenges, contractors typically do not fully adhere to predetermined project specifications provided for in the tender documentation. It is further evident that PMU staff experience difficulties to work with contractors. Their general lack of experience and limited project monitoring and oversight often result in projects not being completed on time, within the budget and according to project specifications. This often caused conflict between the PMU and contractors.

CHAPTER 5

RECOMMENDATIONS AND CONCLUSIONS

5.1 INTRODUCTION

The primary aim of this study was to investigate the extent to which appropriate project management methodology is utilised to address infrastructure backlogs in RMLM. The main unit of analysis was the RMLMs PMU. The Municipal Infrastructure Grant (MIG) enabled the establishment of a comprehensive framework to guide project management applications in local government. As outlined in Chapter 3, municipalities are also guided by an extensive statutory and regulatory framework to manage municipal infrastructure projects. Section 152 of the Constitution, 1996 stipulates that all municipalities are obligated to ensure that municipal services, as provided for in Part B of Schedule 4 and Part B of Schedule 5, are delivered in a sustainable way.

DPLG (2004:8) provides guidelines that the provincial departments, through the provincial programme management units, be held responsible for supporting and developing appropriate municipal planning capabilities. “The MIG programme will integrate with these sectoral planning initiatives by ensuring that:

- the MIG programme is properly integrated with municipal IDPs;
- planning for regional scale infrastructure is guided by provincial government, working in conjunction with the municipalities and their PMUs; and
- the municipal PMUs are supported in their function of overseeing project feasibility studies within the municipalities they serve, as part of the municipal planning process” (DPLG, 2004:8).

The previous chapter revealed that challenges face RMLM specifically PMU which lacks experience with regard to the application of project management methodology for Municipal Infrastructure Grant projects. This chapter summarises the study and provides recommendations based on challenges highlighted in Chapter 4.

5.2 CHAPTER SUMMARY

Chapter 1: This chapter discussed the orientation of the research, including the identified problem. Contextual information was provided to reflect the nature of infrastructure projects associated with MIG. It also accentuated the need for the application of sound project management methodology to design and implement MIG projects successfully. The chapter also conceptualised main concepts, outlined the research objectives, and presented the research methodology adopted for the study.

Chapter 2: The concepts projects and project management as well as standardised project management methodology comprised the primary focus of this chapter. The nature, scope, life cycle phases, project management process groups was also outlined. This chapter established a sound theoretical foundation against which current project management practices can be gauged. The underlying foundations to establish whether project management praxis in this instance, RMLM conforms to established best practice, principles, and life cycle methodology was also expounded upon. As such, it also served as the theoretical substance for the recommendations provided in the final chapter.

Chapter 3: This chapter examined the statutory and regulatory framework guiding the application of projects in local government in general and MIG-projects in particular. The analysis of national legislation as well as regulatory prescripts emanating from National Treasury regulations, Department of Co-operative Governance and Traditional Affairs (COGTA), as well as the South African Local Government Association (SALGA) was fundamental to outline the nature and scope of municipal project applications. Furthermore, the statutory and regulatory framework informed the nature of collaboration between national, provincial and local government spheres in order to align national policy objectives with provincial and local government programmes and projects.

Chapter 4: This chapter focused on the empirical investigation to address the research problem identified in Chapter 1 and operationalise the fifth research objective of the study. The chapter presented the findings revealed by the participants during the semi-structured interviews. The main purpose of the interview was to establish the gaps between current

project management methodology in RMLM on the one hand and the data sets which emerged from Chapters 2 and 3. The interviews gauged the PMU staff opinions as the unit of analysis embedded in the case. The analysed findings revealed that there is generally inadequate standardised project methodology to plan successfully, execute, control and monitor MIG projects. This status is primarily as a result of the general lack of project management skills, experience and methodology applied by PMU staff. As a result of these challenges, others which emerged subsequently revealed that contractors do not adhere to the project specifications provided for in tender documents, and the councillors in the absence of clear monitoring and evaluation performance indicators are unable to perform their oversight function adequately.

Chapter 5: This chapter serves to draw conclusions and provide recommendations of how RMLM can implement MIG projects more effectively by using standardised project management principles and life cycle methodologies.

5.3 RESEARCH QUESTIONS AND OBJECTIVES

The research questions as highlighted in the orientation and problem statement (Chapter 1) was utilised to focus and direct the study. The primary objective of this study was to analyse the application of project management methodology in the implementation of MIG projects with specific reference to infrastructure (construction) projects by the PMU of RMLM. The research questions were as follows:

- What are the principles, life cycle methodology and international best practice associated with project management?
- Which legislative statutory and regulatory framework underpins Municipal Infrastructure Grant?
- How is project management life cycle implemented in practice?
- What are the challenges associated with project management life cycle methodology applications in MIG projects within the RMLM?

- Which conclusion and recommendations can be provided to address challenges associated with project applications in MIG projects?

The primary research objective was achieved through the research questions to ensure that the study is focused and compliments the problem statement. The objectives of the study were as follows:

- To explore project management principles, life cycle methodology and international best practice through literature review
- To outline the origin, nature and scope of the Municipal Infrastructure Grant (MIG)
- To analyse the statutory and regulatory framework governing MIG in municipalities in South Africa
- To uncover the challenges associated with project management life cycle methodology applications in MIG projects within the RMLM
- To make recommendations to overcome the challenges associated with project applications in MIG projects

5.3.1 Achievement of research objectives

Research objective 1: To explore project management principles, life cycle methodology and international best practice through literature review

In Chapter 2 of this study; key concepts associated with projects; and project management was contextualised and conceptualised. The chapter furthermore explored the concept - project management, its origins, professional bodies associated with project management, as well as its standardised life cycle methodologies. International best practices were highlighted by reviewing various project methodologies applied globally. Furthermore, the chapter comprised an extensive literature review related to project management processes. This was necessary to establish best practice and potential ways in which project

management can be applied effectively in the South African context, with specific reference to local government.

Research objective 2: To outline the origin, nature and scope of the Municipal Infrastructure Grant (MIG)

This objective was discussed with in Chapters 1 and 3 of this study. An extensive literature review was conducted to establish the origin, nature and scope of the MIG programme. Particular focus was placed on how the MIG should be aligned with the IDP and top-layer SDBIP of participating municipalities in order to render a particular infrastructure-related service.

Research objective 3: To analyse the statutory and regulatory framework governing MIG in municipalities in South Africa

This specific research objective was operationalised in Chapter 3. The MIG statutory and regulatory framework was examined with specific reference to the following:

- Constitution of the Republic of South Africa, 1996;
- Municipal Finance Management Act, 56 of 2003;
- Supply Chain Regulations;
- MIG policies and guidelines;
- National Treasury regulations; and
- CoGTA and SALGA guidelines.

Research objective 4: To disclose the challenges associated with project management life cycle methodology applications in MIG projects within the RMLM

An empirical investigation of the application of project management methodology for MIG projects at RMLM was the focus of Chapter 4. This research objective was achieved by means of the findings of revealed during the interviews. An analysis of the findings revealed

that there are various challenges related to the project management methodology. The primary challenges identified included:

- limited budget allocation;
- political interference;
- limited and sequencing of feasibility studies;
- project management capacity; and
- non-performance of consultants and service providers.

PMU staff at RMLM also experience issues as a result of the lack of standardised project methodology as well as challenges related to their capacity to successfully plan and execute MIG projects.

Research objective 5: To make recommendations to overcome the challenges associated with project applications in MIG projects

This research objective was achieved through the formulation of recommendations as a synthesis of the various data sets. Data triangulation principles (i.e. theory, legislation, and interview results) ensured sound scholarly foundations for the recommendations provided. These recommendations are provided in the next section and serve as a dimension of a potential solution to solve the research problem.

5.4 KEY RECOMMENDATIONS

The aim of the empirical investigation in Chapter 4 was to establish key challenges which face RMLM PMU in the application of project management methodology for municipal infrastructure grant projects. The purpose of this section is to suggest recommendations to address the identified challenges. The following recommendations are detailed below:

- involvement of PMU during feasibility studies of projects
- capacitating PMU and employ more staff

- ring-fencing of MIG funds
- appointment of capable and experienced contractors
- capacitating PMU in IDP processes and standardised project management methodology

It should be noted that these recommendations all entail certain aspects or dimensions of the adoption of standardised project management methodology for the PMU at RMLM. This methodology should not only make provision for standardised life cycle methodologies such as PMBOK and PRINCE2, but also ensure that projects are aligned with the IDP and SDBIP, and monitoring, evaluation and oversight is conducted effectively.

Recommendation 1: Involvement of PMU during feasibility studies of projects

The interviews revealed that MIG projects at RMLM are designed, approved and executed without following feasibility study best practice. The feasibility of projects in terms of municipal capacity, resources, expertise, available budget, as well as environmental impact should be conducted by the PMU. It is recommended that existing project challenges can be addressed by conducting a thorough feasibility study prior to the submission of detailed project proposals and plans to council for approval. As established in Chapter 2, feasibility studies should be conducted as part of the initiation phase of a project's life cycle. The initiation phase should thus be incorporated in the PMU project methodology to justify the project and to ensure that all required community participation processes is followed. The methodology should also make provision for a needs analysis, environmental impact assessments, and set standardised criteria for the prioritisation of projects. The feasibility study should also enable the PMU to determine an appropriate project strategy, the required expertise and capacity required, as well as ascertain operational details such as accountability and responsibility arrangements, appointment of contractors, and councillor participation in the process of setting project objectives and deliverables. The PMU should coordinate project feasibility by involving other municipal departments where appropriate.

Recommendation 2: Capacitating the PMU

The empirical investigation revealed that all PMU staff members expressed that they need to be capacitated and the municipality must employ more staff to serve in this unit. The successful planning, coordination, monitoring, reporting and oversight of MIG projects are compromised by the lack of experienced staff. It is strongly recommended that the municipality build the existing capacity of the PMU and by doing so, refrain from using consultants. The appointment of consultants places an additional financial and management oversight burden on the municipality in general and the PMU in particular. PMU staff should preferably possess the same qualifications and expertise as those of appointed consultants. The researcher concurs with DPLG (2007a:14-15) that capacity-building interventions such as training and development initiatives should receive urgent attention. A capacitated PMU will further lessen the burden currently experienced by the municipality to determine realistic budgets, deliverables and timelines for infrastructure projects. The National MIG Unit should extend its support to the PMU by funding such capacity-building initiatives. The type of interventions will obviously depend upon the qualifications and experience of existing and newly appointed PMU staff, but may include the following:

- MIG orientation workshops (e.g. nature, purpose, structures, processes, and systems of the MIG);
- technical training (e.g. planning, budgeting, risk assessments, feasibility studies, etc.); and
- legal services training (e.g. contract compliance management, legal ramifications, and accountability and reporting arrangements).

It is further recommended that the PMU Manager engage with the Head of Human Resources to ensure that staff training and development needs are absorbed in the municipal human resources plan adequately. Training should not only focus on project-specific skills such as the utilisation of the knowledge areas and the management of project

life-cycle phases, but should also include generic management skills such as organising, planning, coordination, communication, and control.

In order to implement and execute projects successfully within RMLM, it is further recommended that the PMU increase its staff complement by appointing the following additional personnel:

- Director: Infrastructure with engineering qualifications and project management expertise;
- two additional project managers;
- an electrical as well as civil engineer;
- two project technicians (electrical and civil); and
- an occupational health and safety staff member.

It is recommended that RMLM consult with sector departments responsible to ensure that the PMUs are competent to plan and implement projects.

Recommendation 3: Ring-fencing of MIG funds

The empirical investigations revealed that the budget allocated to MIG projects is currently insufficient. Funding should cover capital costs for every infrastructure project and the municipalities must ensure that it also has adequate equitable share or other revenue to fund the project's deliverables operating costs. If the latter is not covered sufficiently, the services which emanate from project deliverables will not be sustainable. It is for this reason that the MIG policy requires municipalities to prepare three-year operational budgets as part of the IDP (MIG, 2004-2007:50). DPLG (2007a:16) as well as outline how funding should be allocated. PMUs should be regarded as a ring-fenced project management function which should be funded from the MIG grant allocation made to the municipality. DPLG (2004a:11) points out that the MIG grant can only be utilised for capital investment and not to finance operating expenditure other than the prescribed percentage permitted for the operation of a project management unit in participating municipalities. DPLG

(2004a:11) further outlines that MIG funds must be allocated in the municipal budget and all MIG funds to be spent in a financial year must be allocated to specific MIG projects. However, there is a tendency among politicians to interfere with the budgets allocated for MIG projects and they often try to divert the funding for other purposes. These purposes may include payment of employee salaries or the funding of high profile, politically-prioritised initiatives. This has detrimental implications for infrastructure projects resulting in significant budget deficits and probable termination of existing projects. It is, therefore, recommended that the budget allocated for a specific MIG project is ring-fenced to ensure that it is utilised for its intended purpose. It is further recommended that the affected municipality liaise with the MIG National Office to politically assist with the demarcation and utilisation of MIG project budgets.

Recommendation 4: Appointment of capable and experienced contractors

There is a tendency among politicians (i.e. councillors) to interfere in the supply chain directorate by influencing the processes in the appointment of contractors. Consequently, the integrity of tendering and procurements processes is compromised. This often leads to a situation whereby incapable and incompetent contractors are appointed, leading to low quality projects, non-compliance with tender specifications, and ultimately poor service delivery. It is, therefore, recommended that incidences of and potential for favouritism, fraud and corruption be eliminated.

Fraud and corruption in procurement and supply chain management was highlighted as a key challenge in infrastructure projects. Ngwakwe (2012:324) offers the following due diligence in public tendering:

- “Fairness: A fair tender should give all competent contractors a chance of participation to enhance fair pricing and quality.
- Transparency: Transparency in public tendering must be based on equity, guided by stipulated codified procedures. Furthermore, the award of contract should be devoid of any form of favouritism, and must maintain a trail for tracking.

- Recourse possibility: A public tender and procurement process should create room for public contestation and for external recourse regarding adherence to procedure”.

Recommendation 5: Capacitating PMU in IDP processes and standardised project management methodology

This recommendation can be considered as the culmination of the main research findings and in essence combine all other recommendations made to remedy the identified MIG project challenges as well as the main research problem. This recommendation comprises of three layers: layer one concerns a macro methodological approach; layer two pertains to the institutional and organisational dimensions of project management; and layer three refers to the internal functioning of the PMU at RMLM.

As far as the macro methodological approach (layer one) is concerned, infrastructure projects cannot bring about socio-economic growth and prosperity envisaged as part of the developmental mandate of municipalities on their own. Hence, it is recommended that an integrated and holistic approach to community development should be pursued. Such an approach should consider institutional, social, financial, environmental and technical dimensions of local governance. It is important that the IDP process follows a more standardised methodology in the identification, prioritisation and execution of projects earmarked to address community needs. This also entails a participatory project management methodology which does not only ensure that the IDP process in itself is regarded as an annual project, but continuous community engagement in the design and execution of projects is fostered. This will improve the overall legitimacy of development-related decisions and advance community ownership of projects aimed at improving their lives.

Layer two of this recommendation pertains to the institutional and organisational dimensions of project management. The analyses of MIG, the case study (RMLM), and the functioning of the PMU revealed a number of challenges. It is argued that most of these challenges can be addressed by following a standardised organisation-wide methodology that promotes the implementation of the IDP and SDBIP by means of projects. Such an

organisational-wide project-based methodology should adjust municipal systems, structures, policies, processes, procedures, and responsibility and accountability arrangements to make them more favourable for project identification, prioritisation, approval, monitoring and oversight, as well as optimal resource allocation and utilisation. It is envisaged that such a project-based methodology will improve the overall project readiness and maturity of the municipality leading to higher performance, productivity and ultimately better service delivery.

The final layer refers to the internal functioning of the PMU. Van der Waldt (2008:743) and Köster (2010:45) confirmed that it is important to set up a central project management entity staffed with persons who are capable of taking on the day to day operations of project administration and management. In the case of MIG, such a central entity takes the form of the PMU. It is recommended that the existing PMU of the RMLM be extended to gradually evolve into a Project Management Office (PMO) that will not only service infrastructure projects, but also all other service delivery projects such as housing, electricity, roads, and so forth. The PMO should be staffed with qualified and experienced project managers who will manage with all project-related functions such as feasibility studies, risk assessments, planning, budgeting and the general coordination and management of municipal projects. It is further recommended that the RLML PMU adopt a standardised project management life-cycle methodology such as PMBOK, PRINCE2 or Waterfall. Such a standardised methodology can be adjusted to suite the particular circumstances of the municipality, as well as establish best practices for the management of the initiation, planning, execution, controlling, and closing phases of the projects. This will ensure specification and operational compliance, promote oversight by means of standardised performance indicators and reporting arrangements, as well ensure that the roles and responsibilities of all stakeholders and role-players is clarified. A standardised project management methodology will thus foster the overall tracking and management of municipal infrastructure projects.

5.5 CONCLUSION

The primary problem of this study was the general lack of appropriate project management methodology to address infrastructure backlogs in the RMLM. The PMU should play an instrumental role in this regard. The RMLM annual reports reveal that MIG projects are not completed per schedule, quality parameters are not adhered to, and there are constant budget overruns. The annual reports also highlight that there is inadequate planning, execution, controlling and monitoring of MIG projects. This is exacerbated by the general lack of project management skills, experience and methodology applied in the PMU. Because of these challenges, contractors do not adhere to the project specifications provided for in tender documents. There are also inadequate financial controls leading to disclaimers or qualified audits, lack of monitoring mechanisms for the implementation of MIG projects, lack of strong and effective project governance (i.e. PMU) structures; and appointed officials do not meet the minimum competency requirements and project skills for the positions they occupy. These challenges were confirmed by the empirical investigation.

In light of these challenges, the study provides recommendations regarding the adoption of project management methodologies for the successful implementation of MIG projects. To this end, project management principles, life cycle methodology and international best practice was explored, and the origin, nature and scope of the Municipal Infrastructure Grant (MIG) outlined. Furthermore, the study analysed the statutory and regulatory framework governing MIG in municipalities in South Africa, and confirmed the status of project management practices and processes in the RMLMs PMU. Finally, recommendations were provided to overcome the challenges associated with project applications in MIG projects. It is suggested that the adoption of these recommendations will go a long way to address most of the challenges currently experienced associated with infrastructure backlogs.

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APPENDIX A: INTERVIEW SCHEDULE

On the (name) -----, I received approval from the Ramotshere Moiloa Local Municipality Municipal Manager (name) ----- to conduct a research study and collect data for my Master`s degree in Public management and Governance. My study topic is as follows: “The application of project management methodology for Municipal Infrastructure Grant projects: The case of Ramotshere Moiloa Local Municipality”.

The questionnaire comprises of two sections. Section A focuses on the participants biographical information and Section B contains questions related to the application of project management methodology by the PMU in the municipality.

A. BIOGRAPHICAL INFORMATION

Please state the following:

1. Your current position:
2. Number of years in this position:
3. Total years of experience in the local government sector:
4. How would you rate your project management experience and expertise? (Excellent / Good / Average / Poor)

B. KEY QUESTIONS

1. To what extent does the MIG programme link to the municipality’s IDP process?
2. What is your expert opinion of whether the municipality possesses an adequate monitoring, evaluation and performance oversight system to control MIG projects?
3. Kindly elaborate on the PMU’s responsible to oversee MIG projects.
4. What type of systems and mechanisms do the PMU utilise to co-ordinate all projects allocated to the PMU directorate?
5. Does the PMU follow the prescribed policies and supply chain process diligently when appointing consultants and contractors for each project?

6. In your opinion, to what extent does the PMU take responsibility for the overall management of projects? Substantiate your response?
7. Kindly elaborate on the particular project life cycle methodology that RMLM follow to implement MIG projects
8. What is your assessment of this methodology? Is it effective? What are the limitations?
9. Please list in order of significance the five key challenges that RMLM face regarding the successful design and implementation of MIG projects
10. What would you say should be done to remedy or address these challenges? Kindly elaborate on each.

Participants were informed that the interview is voluntary and the information they provide is strictly confidential.

Name of interviewer:

Name of Interviewee:

Date-----

Date -----