Analysing the application of project management for service delivery improvements in the Dr. Kenneth Kaunda District Municipality: the case of the Maquassi Hills Local Municipality

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DECLARATION

I, the undersigned, hereby declare that the content contained in this mini-dissertation is my own original work and has not previously, in its entirety or in part, been submitted at any University for a degree.

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G. J. Moseki Date

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ABSTRACT

The local sphere of government in the Republic of South Africa is demarcated into three distinct municipal categories. These three categories represent metropolitan, district and local municipalities as, delineated in the Constitution, 1996 (RSA, 1996). A prominent intent of local government in South Africa is to achieve developmental goals and to deliver effective, effiecient and economic services to citizens. This means delivering services through programmes in a manner that encourages the sustained development of local communities. The Maquassi Hills Local Municipality (MHLM), located in the Dr. Kenneth Kaunda District Municipality of the North-West Province, has a responsibility to implement and achieve local government's developmental agenda through good governance, public participation, as well as transformation of internal, organisational systems and processes. The ultimate aim is to provide basic services to local communities and to stimulate economic development within their area of responsibility.

Contrary to this scenario of efficient, effective and economic service delivery in a democratic developmental local government, South Africa, thus far, typified low levels of service delivery to such an extent that many communities were driven to service delivery protests. The locus of this study, indicated as the MHLM, subsequently also experienced protests within the community, as a result of a low standard, or a lack of service delivery.

As possible corrective measures to help achieve the developmental goals of the MHLM, through enhanced service delivery the study introduced a basis theory as "management by projects". This theory or design is viewed as a vehicle for service delivery improvements.

The study investigates these features at strategic, tactical and operational levels within the MHLM as organisation, and compares the implementation of these features to information gained from scholarly efforts. The application of the mentioned features at these three levels within the MHLM is, furthermore, analysed to discern possible disparities, in order to recommend corrective measures that may provide service delivery improvements by the MHLM in its area of operation.

Key words

Programme management; Programme; Project management; project; "Management by projects".

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GLOSSARY

Acronym	Description
AIDS	Acquired Immune Deficiency Syndrome
ANC	African National Congress
AsgiSA	Accelerated Shared Growth Initiative for South Africa
BC	Basic Categories
COSATU	Congress of South African Trade Unions
CPA	Community Participation and Awareness
DPLG	Department of Provincial and Local Government
DPSA	Department of Public Service and Administration
DTI	Department of Trade and Industry
DWAF	Department of Water Affairs and Forestry
EPWP	Expanded Public Works Programme
GEAR	Growth, Employment and Redistribution
GoPM	Governance of Project Management
HDI	Historically Disadvantaged Individuals
HIV	Human Immune Virus
IDIP	Infrastructure Delivery Improvement Programme
IDP	Integrated Development Plan
IIF	Infrastructure Investment Framework
MDG	Millennium Development Goals
MFMA	Municipal Finance Management Act
M & E	Monitoring and Evaluation
MHLM	Maquassi Hills Local Municipality
MM	Municipal Manager
MIG	Municipal Infrastructure Grant
NGP	New Growth Path
NSG	National School of Government
OECD	Organisation for Economic Co-operation and Development
NDP	National Development Plan
PALAMA	Public Administration Leadership and Management Academy
PBO	Project Based Organisation
PMTT	Project Management Tool and Technique
Acronym	Description
PFMA	Public Finance Management Act
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project Management Organisation
PMU	Project Management Unit

RDP	Reconstruction and Development Programme
SACP	South African Communist Party
SDBIP	Service Delivery and Budget Implementation Plan
SONA	State of the Nation Address
SMME	Small Medium and Micro Enterprise
TAU	Technical Assistance Unit
UN	United Nations
WBS	Work Breakdown Structure
WPTPS	White Paper on Transformation of the Public Service
WWWTPU	Wolmaransstad Waste Water Treatment Plant Upgrading

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CHAPTER 1: ORIENTATION AND PROBLEM STATEMENT

1.1 ORIENTATION

Section 40 of the Constitution of the Republic of South Africa, 1996 (RSA, 1996) demarcates government into the following three distinct spheres: national; provincial and local government. The Republic of South Africa's local government sphere has 284 municipalities (The Local Government Handbook, 2014:online) and is divided according to the Constitution, 1996, Chapter 7, Section 155, the Local Government Municipal Demarcation Act, 1998b and the Local Government Municipal Structures Act, 1998c into the following categories and category descriptions: Category A Municipalities, also known as Metropolitan Municipalities (municipalities that have "exclusive municipal executive and legislative authority in its area"); Category B Municipalities, also known as District Municipalities (municipalities that "share exclusive municipal executive and legislative authority in its area"); and Category C Municipalities, also known as Local Municipalities (municipalities that have "municipal executive and legislative authority in its area that includes more than one municipality"), (RSA, 1996:75; RSA, 1998b; and RSA, 1998c). Section 152 of the Constitution, 1996 (RSA, 1996) states that the objectives of local government are the following:

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

Based on the clarification of the municipal classification, included in the Constitution, 1996 (RSA, 1996), the Maquassi Hills Local Municipality (hereinafter referred to as MHLM) is classified as a Category C municipality and is legally compelled to perform the abovementioned objectives in its particular area of responsibility which will be elaborated on below.

According to the Local Government Municipal Structures Act, 1998 (RSA, 1998c), MHLM is located within the Dr. Kenneth Kaunda District Municipality in the North-West Province. The MHLM furthermore includes the following towns as indicated in **Figure 1**: Leeudoringstad**;** Makwassie**;** Wolmaransstad**,** and Witpoortjie:

Figure 1: Map of Dr. Kenneth Kaunda District Municipality. (**Source:**http://www.localgovernment.co.za/districts/view/40/dr-kenneth-kaunda-district-municipality)

According to Global Insight Southern Africa (2011), the MHLM has a total population of 79 354 people and a population density of 17.06 per km^2**.** Statistics for 2011 indicated that 15 540 members of the population are formally and informally employed, whilst 3 213 members of the population are unemployed (Global Insight Southern Africa, 2011). Global Insight Southern Africa (2011) further indicates that in terms of development, the illiteracy level of the population located in the MHLM's geographical area of responsibility, increased from 49% in 2010 to 51.7% in 2011.

Service delivery, after 1994, in MHLM's area of responsibility as well as in South Africa at large, takes place within a democratic developmental state context. The type of service delivery envisaged by the democratic government of South Africa was informed by the historical challenges and features of the surrounding social structure (Evans, 1995:29). These challenges and features were encountered in the context of South Africa post-1994 as the catalysts of a democratic developmental state, which will be examined below.

1.1.1 The catalysts of a democratic developmental state in South Africa

The broad outlines for a democratic developmental state were included in the Constitution, 1996 (RSA, 1996). The first full democratic government instituted in 1994, faced multiple challenges regarding service delivery and poor performance by the public service (Nengwekhulu, 2009:34). The newly elected government inherited a population that reflects vast inequalities across racial groups, where studies indicate that 68% of black citizens lived in abject poverty (Aliber, 2003:476; Berk, 2007:488; & Nengwekhulu, 2009:34). The social structure was characterised by inequalities across the board in education, health, recreational parks and housing, as well as basic infrastructure such as access to clean water

and sanitation (Russel & Bvuma, 2001:241-242; and Berk, 2007:489;). In addition, the economy of South Africa faced serious challenges that caused the country to incur reportedly the highest unemployment rate in the world (Rama, 2001:3; Russell & Bvuma, 2001:241-242; Aliber, 2003:477; Kingdon & Knight, 2004:391; Berk, 2007:489; & Nengwekhulu, 2009:34).

The newly elected democratic government of South Africa undertook to address the inequalities of the previous *apartheid* dispensation through planned service delivery to all citizens, especially the historically disadvantaged individuals (hereinafter referred to as HDIs) (ANC, 1994:11). In support of this aim, the government adopted a labour-driven development programme called the Reconstruction and Development Programme (hereinafter referred to as the RDP), (ANC, 1994:11). The RDP was formulated by the Congress of South African Trade Unions (COSATU), (Baskin, 1994:1; Buhlungu, 1994:7-22; and Marais, 2001:133). The RDP became the manifestation of the African National Congress' (ANC), (ANC, 1994:11) election manifesto during the first democratic elections of 1994 (Baskin, 1994:1; Buhlungu, 1994:7-22; Marais, 2001:133; Terreblanche, 2003:108- 109; & Visser, 2004:6).

Gumede (2011:2) argues that the construction of a democratic developmental state in the context of South Africa can be compared to the circumstances in India. According to Gumede (2011:2) both countries had to focus on nation building and economic development. In the same vein, Malaysia can be mentioned since this country also had to construct a developmental state from a population that is not racially homogeneous. Evans (1995:29) further points out that a state's historical challenges and surrounding social structure may either inhibit, or help to build a democratic developmental state.

The developmental approach envisaged by the government of South Africa was further strengthened and focussed in 2000 when the United Nations (hereinafter referred to as the UN) adopted the Millennium Development Goals (hereinafter referred to as the MDGs) during the MDG Summit (UN, 2000). The MDGs were adopted by 147 heads of states, including the Republic of South Africa, with a shared commitment to achieve these goals by 2015 (UN, 2000; and Sachs & McArthur, 2005:347). The eight MDGs seeks to improve living conditions of and service delivery among member states through "eradicating poverty, provisioning of primary education; promoting gender equality and empower women; reducing child mortality; improving maternal health; preventing HIV/AIDS, malaria and other diseases; ensuring environmental sustainability and developing a global partnership for development" (United Nations, 2000; Sachs & McArthur, 2005:347; & Van Aardt *et al*., 2011:1).

The member states of the UN are obligated to develop and implement policies in their countries to ensure the achievement of the eight MDGs as outlined in the aforementioned

paragraph (UN, 2000). “To ensure environmental sustainability”, as MDG and national priority, simulteaneously implies access to improved sanitation and is thereofore of particular relevance to this study as it suggests a distinct strategic direction (UN, 2014:45).

The RDP and related policies, developed by the South African government, are therefore mechanisms to help achieve the MDGs. The aim of the RDP was to ensure that service delivery is enhanced, jobs are generated through programmes, land reallocated through measures of land reform, and employment created through major infrastructure projects in housing, water, electricity, transport, nutrition, healthcare and social welfare (ANC, 1994:7; Leibbrandt, Van der Berg & Bhorat, 2001:16; & Berk, 2007:488). These service delivery programmes, as contained in the RDP policy, were envisaged to be implemented within a democratic developmental state, which will be examined in further detail.

1.1.2 A democratic developmental state in the context of South Africa

The RDP was considered by the ANC as a spring board from which the various developmental programmes and policies of the government were to be discussed (Wenzel, 2007:48). The government adopted a democratic developmental form of state, focusing on sustained, rapid economic growth, facilitation of redistribution and effective service delivery (Edigheji, 2005:9; and Wenzel, 2007:48). According to Nel (2001:606), the RDP provided a developmental framework within which service delivery in all spheres of government was to take place.

According to Edigheji (2007:2), the concept of a developmental state in the context of South Africa is defined by the role that the state plays in socio-economic development. The conception of a developmental state’s role is also prevalent in many organisations and government departments, with the ANC as ruling party, together with its alliance partners – COSATU**,** the South African Communist Party (SACP) and the Department of Trade and Industry (DTI), (Edigheji, 2007:5). Edigheji (2007:2) further argues that the concept of a developmental state focuses more on policies than on the state’s institutional attributes or its capacity for growth and development. Hence, the period from 1996 to 2011 saw the introduction of the following initiatives that supports economic policy to achieve developmental goals and thereby address service delivery backlogs:

- The Growth, Employment and Redistribution Programme (herein after referred to as GEAR) were introduced in 1996 to increase growth and stimulate job creation (Leibbrandt, van der Berg & Bhorat 2001:16; Adato, Carter & May, 2006:227; and Berk, 2007:487). GEAR included the goals of the RDP as well as changes that would enable labour markets to be “more flexible, improve productivity and increase training

and employment to the unskilled majority of South Africans" (Leibbrandt, van der Berg & Bhorat, 2001:16; Adato, Carter & May, 2006:227; RSA, 2006a; & Berk, 2007:489).

- After the South African general elections in 2004, the government evaluated the impact of economic policy and service delivery on the HDIs (Adelzadeh, 1996:68). Failures of the GEAR programme resulted in the South African government announcing a new economic policy, recognised as the Accelerated Shared Growth Initiative for South Africa (herein after referred to as ASgiSA) (RSA, 2006a). The goal of ASgiSA was to halve poverty and unemployment by 2014. The goal would be achieved through public spending on infrastructure (transportation and communication), a renewed commitment to education, training and skills development as well as sectoral economic plans (RSA, 2006a; & Basset & Clarke, 2008: 788).
- The South African government**,** after having realised the shortfalls in achieving its objectives and the set targets for the RDP, GEAR and ASgiSA, introduced a fourth programme on 23 November 2011. This programme is known as the New Growth Path (NGP) with the aim of increasing economic growth to rates between 6% and 7% per annum in order to create five million jobs (Van Aardt *et al*., 2011:1).
- Thereafter, the South African government introduced the National Development Plan (hereinafter referred to as the NDP), (RSA, 2011a) which is the embodiment of its vision in seeking to achieve a developmental role by reducing poverty, inequality and unemployment by 2030. The South African government's (RSA,2011a) vision for the NDP will be achieved through the effective implementation of the following programmes: "Economy and employment; economic infrastructure; transitioning to a low carbon economy; inclusive rural economy; human settlements; improving education; promoting health; social protection; building safer communities; promoting accountability and transforming society; uniting the country; and building a capable state." The economic infrastructure; human settlements; building safer communities; promoting accountability and transforming society; and building a capable state, provides a particular impetus and direction to this study.

Edigheji's (2007:2) assertion is supported by Fakir (2007:2-3), who states that a developmental state cannot be defined only in terms of the state intervening in development, but rather by what Evans (1995:323) terms as "embeddedness". "Embeddeness" as concept refers to the "social relationship that results in a shared developmental vision between the state and large sectors of society that is fashioned through institutionalised channels for the continual negotiation and renegotiation of goals and policies" (Fakir, 2007:2). At the ANC's 2007 Conference in Polokwane, the ANC committed itself to creating a developmental state with a foundation grounded on principles of democratic governance (ANC, 2007:17). The state then undertook to accelerate economic growth and change the economy, address the

challenges of unemployment, poverty and inequality and building social cohesion (Edigheji, 2010:1).

According to Mkandawire (2001:298) and Edigheji (2005:5), a developmental state should not be defined only in terms of the particular form of state's role or goals, but also its institutional capacity, *i.e*. the capacity to formulate and implement the developmental agenda. Mkandawire (2001:299) and Edigheji's (2005:5) aforementioned assertion is further supported by Gumede (2011:2) who states that a developmental state should bear in mind the following interdependent conditions: "an effective state, the presence of key institutions, their inter-arrangements and mix, and their relationships with the market, civil society, business, organised labour, communities and citizens".

Gumede (2011:2) further argues that such a successful democratic developmental state should have "political will, long term vision and a determination by the country's political elite to drive a broad-based and inclusive industrialisation and development project". Political will, according to Edigheji (2007:3), is the state's ability to establish "programmatic and reciprocal relationships with the trade unions, businesses, members of the community and community based organisations". A democratic developmental state can, according to Edigheji (2007:3), thus be defined as: "a state that could act authoritatively, legitimately and in a binding manner to formulate and implement its policies and programmes, possessing a developmentalist ideology". Such an institution should be able to construct and deploy the institutional architecture within the state and mobilise society towards realising its "developmentalist projects" (Edigheji, 2007:3).

Following the views by Fakir (2007:2), Edigheji (2007:3) and Gumede (2011:2), a municipality, as the embodiment of a developmental local government in South Africa, should strive towards achieving the following Five Year Local Government Strategic Agenda (RSA, 2006b). The Five Year Local Government Strategic Agenda is in line with the Key Performance Areas of Municipalities that can be outlined as follows:
"KPA1: Municipal Transformation and Organisational Development;
KPA 2: Basic Service Delivery;
KPA 3: Local Economic Development;
KPA 4: Municipal Financial Viability and Management; and
KPA 5: Good Governance and Public Participation" (RSA, 2006b).

The capacity to deliver services in accordance with developmental goals to the citizens of South Africa was a catalyst for the South African government to focus on the transformation of the public service (Naidoo, 2005:76; & Tshisonga & Mafema, 2010:563). This strategy

aims to address service delivery backlogs (Naidoo, 2005:76; & Tshisonga & Mafema, 2010:563). In line with the above assertions, the following section will, therefore, briefly outline the transformation of the public service as a vehicle to improve service delivery.

1.1.3 Transforming the public service to improve service delivery post 1994

As was pointed out above, researchers such as Mkandawire (2001:297), Edigheji (2007:3), Fakir (2007:2), and Gumede (2011:2) emphasise that the challenges that service delivery hold in the context of South Africa cannot be achieved through policy formulation alone**.** The South African government requires a strategic machinery to speed up the process of delivering services to its citizens effectively, efficiently and economically (RSA, 1996; and Van der Waldt, 2008:63). The government was not only required to improve service delivery structures, but also to enhance processes, procedures and systems – prerequisites that could spearhead transformation of the public service in South Africa (Ncholo, 2000:88; Russel & Bvuma, 2001:242; & Van der Waldt, 2008:63).

The process to transform the public service was regulated in terms of the White Paper on Transformation of the Public Service (hereinafter referred to as the WPTPS), (RSA, 1995b, Van der Westhuizen, 1998:15; Ncholo, 2000:88; Russel & Bvuma, 2001:242; and Van der Waldt, 2008:63). The principles of the WPTPS were realised through the promulgation of the White Paper on Transforming Service Delivery – *Batho Pele* Programme (RSA, 1997).

Edigheji (2007:2) and Fakir (2007:1) maintains that the role of the public service in a democratic developmental state is to provide essential services to citizens, as well as stimulate socio-economic development. The main focus of the public service in a democratic developmental context is not only the outputs (service delivery), but also the outcomes (enhanced living conditions) that has an effect on communities, particularly the HDIs (Fakir, 2007:1). The WPTPS (RSA, 1995b) calls for service excellence by the South African government (Van der Westhuizen, 1998:15; Ncholo, 2000:88; Russel & Bvuma, 2001:242; and Van der Waldt, 2008:63). Fourie (2005:679) and Thompson (2005:168) assert that service excellence, as advocated by the WPTPS (RSA, 1995b) and the *Batho-Pele* document (RSA, 1997), is to enhance the quality and accessibility of services by improving levels of efficiency and accountability within the South African government. Efficiency and accountability in service delivery will be achieved by means of the following factors: communities' participation in and consultation on service delivery programmes; citizens gaining access to information on services provided by the government of South Africa; the setting of good service delivery standards; and correcting failures and mistakes of service

delivery mechanisms (RSA, 1997; Fourie, 2005:679, Thompson, 2005:168; and Maimela, 2009:471, 473).

The WPTPS (RSA, 1995b) demands management of strategic changes at the structural level of the public service (Van der Westhuizen, 1998:16; Ncholo, 2000:91; and Van der Waldt, 2008:67). Such strategic change management, proposed implementation on a structural and operational level, comprise the following features: “decentralisation of decision making, the strengthening of managerial responsibility and accountability for results, the democratisation of internal work procedures, the establishment of flatter organisational structures, the development of team work and a project or programme based approach” (Ncholo, 2000:91; Thiry, 2002: 221; and Van der Waldt, 2008:67-68).

In addition to the strategic change management, suggested above, the South African government also called for going “back to basics” on managerial level (RSA, 2010b:13). The government has, therefore, assigned this task to the following institutions: the Performance and Evaluation Department located within the Presidency, together with the Department of Public Service and Administration (DPSA) and the National Treasury. These institutions are to play a principal role in improving the capacity of programme and project management in the South African government, in accordance with the Delivery Agreement for Outcome 12 (RSA, 2010a:13). The above mentioned government departments developed guidelines and toolkits to support and assess the South African public sector’s capabilities regarding programme and project management, in line with the Delivery Agreement for Outcome 12 (RSA, 2010a:13).

The development of teamwork in a project, as well as an approach of programme management, is central to remodelling a public service towards a new paradigm of service excellence (Van der Waldt, 2007:250). Project management, according to Koskela and Howell (2002:295), rests on the transformation theory of production. Koskela and Howell (2002:295) further argue that the theory of production is conceptualised as transformation moving from inputs to outputs. Therefore, the application of project and programme management is regarded as a tool that supports the effective, efficient and economic use of scarce resources, in order to achieve the set objectives of the public service (Wilson-Murray, 1997:11; Pellegrinelli, 2002:230; and Thiry, 2002:222). Van der Waldt (2009a:36) points out that “management by projects” is an approach that would ensure that governments improve service delivery to communities. “Management by projects” is therefore defined as an approach “to operationalise strategic objectives and policy programmes” (Van der Waldt, 2009a:36).

Project and programme management will ensure measurable accountability of public service managers in the way that resources are allocated and used to achieve the goals of the public service (Wilson-Murray, 1997:11; Pellegrinelli 2002:229; and Thiry, 2002:221). This approach also provides assurance to stakeholders that resources are managed effectively (Wilson-Murray, 1997:11; Pellegrinelli, 2002:229; Thiry, 2002:221; and Srivannaboon & Milosevic, 2006:495). Van der Waldt (2007:251) further argues that project management ensures the timely completion of service delivery projects within budget and to an acceptable level of quality. Moreover, "It provides the public service with standardised processes and procedures (methods) to deal with all output and outcomes-driven initiatives in government" (Van der Waldt, 2007:251).

1.1.4 Service delivery in a developmental local government

With respect to the local sphere of government, a developmental local government was advocated in terms of the Constitution, 1996 (RSA, 1996). The legislation on such an institution was formally introduced by the White Paper on Local Government (Pycroft, 2000:143). The main purpose of creating a developmental local government was to transform municipal institutions and management to such an extent that they could focus on "service delivery, changes in leadership, poverty alleviation, economic growth and management of development in an integrated and sustainable manner" (RSA, 1993; RSA, 1995a; RSA, 1998a; and Pycroft, 2000:144).

The policies and acts, promoting a developmental local government within a democratic South Africa, are a call upon local municipalities to be more strategic and visionary in management and leadership, and in the manner in which they function (RSA, 1993, RSA, 1996; RSA, 1998a; RSA, 1998b; and RSA, 2000). The next section will investigate service delivery during the first two decades of a democratic South Africa.

1.1.5 Service delivery throughout 20 years of democracy in South Africa

Throughout the 20 years during which South Africa started functioning as a democracy, the country experienced many protests on service delivery in the sphere of local government (Booysen, 2007:21; Alexander, 2010:25; and Tsheola, 2012:161). Particularly since 2004, the country experienced more than 900 protests throughout all of its nine provinces as citizens protested *en masse* against poor provisioning of services such as sanitation, water, electricity and housing (Booysen, 2007:24; Atkinson, 2007:54; Alexander, 2010:25; and Nleya, 2011:3). The reasons for protests about service delivery were exacerbated by corruption, lack of skills, capacity, strategic leadership as well as weaknesses of the local

government to address developmental backlogs (Booysen, 2007:25; Tsheola, 2012:166; and Netswera & Kgalane, 2014:265).

An observation by Booysen (2007:25), with respect to the widespread service delivery protests is coroborated by Tsheola (2012:166) as well as Netswera and Kgalane (2014:265). This theme was also touched upon by the President of South Africa, Mr. Jacob Zuma, in the 2010 State of the Nation Address (SoNA) (RSA, 2010b). President Zuma raised the concern that the "government is not reaching its desired targets of service delivery improvements due to a lack of political will, inadequate leadership, corruption, management weaknesses, inappropriate institutional design and misaligned decision rights, as well as the absence of a strong performance culture" (RSA, 2010b:2).

The MHLM was similarly affected by community protests, due to a lack of proper service delivery in providing housing, water, electricity and sanitation (Nandipha, 2007:4). In the past three years, the MHLM was rife with community uprisings due to poor and ineffective service delivery (Nandipha, 2007:4). The uprisings led to the destruction of local facilities such as the Tswelelang Youth Centre and the obstruction of traffic along the N-12 road that passes through Wolmaransstad town (Nandipha, 2007:4).

According to Global Insight Southern Africa (2011:online) and the MHLM's Integrated Development Plan (hereinafter referred to as the MHLM's 3rd Generation IDP), (MHLM, 2012 - 2016:58), the MHLM was found to experience service delivery backlogs on sanitation, water, electricity and housing. In 2011 the number of households without sanitation in the MHLM's area stood at 8 443, without electricity at 5 834, and without water at 430 (Global Insight Southern Africa, 2011:online). Global Insight Southern Africa (2011:online) further indicates that the number of households with no formal refuse removal was 1 999. The MHLM 3rd Generation IDP (MHLM, 2012 - 2016:21) furthermore found that 51% of the population within the geographical boundary of the MHLM is unemployed.

The scenario depicted above demonstrates that local municipalities are faced with a myriad of challenges regarding service delivery backlogs that needs to be addressed with limited resources. In terms of the Constitution, 1996 (RSA, 1996) and according to Nel (2001:605), local municipalities represent a sphere of government which is nearest to communities and is therefore a key institution that is driven by the following functions: redistributing of public resources; delivering basic services; promoting socio-economic development within local communities; and participation in national and provincial developmental programmes. Nel (2001:606) explains the way forward as that "Efficient and effective implementation of development programmes requires local authorities to undertake a series of interrelated and

interdependent development projects. Therefore, local municipalities can apply project and programme management as a particular technique to ensure the execution of developmental programmes with an optimal utilisation of scarce public resources."

The link between policies, programmes and projects is illustrated in the White Paper on Local Government, 1998 (RSA, 1998a), by presenting the IDP as a central development plan that is prescribed at local government level. The guidelines of the White Paper on Local Government, 1998 (RSA, 1998a) finds momentum in the arguments made by Willson-Murray (1997:19); Nickson and Siddons (1997:11) and Newbold (1998:26) who maintain that the management of projects and programmes is a proven approach to effective service delivery, which makes projects and programmes important vehicles that reitterates public institution's reason for existence.

A strong performance culture promoted in 2010 by President Jacob Zuma (RSA: 2010b) is in line with the argument by Van der Waldt (2004:94-95), that improved service delivery will be realised through enhanced performance. The argument that a performance culture or improvement is a means to enhance service delivery is further strengthened by Seemela and Mkhonto's (2007:201) observation that there is an assumed relationship between good governance, service delivery and a performance-based culture.

The following sources all indicate that project management is a proven approach to effective service delivery: Nickson and Siddons (1997:11), Wilson-Murray (1997:19), the White Paper on Local Government, 1998 (RSA, 1998a); Newbold (1998:26) and Nel (2001:606). These sources all point to a relationship between a performance culture, service delivery and projects, and programme management. Building on this insight, the researcher will, in the final chapter of this study, make recommendations about how the application of management by projects may improve service delivery by the MHLM in its area of responsibility.

1.2. PROBLEM STATEMENT

The orientation above indicated that since 2004, local communities in South Africa have "taken to the streets" due to poor service delivery. Sidimba (2010:5) further indicates that the North West Province has the third highest rating (10%) for service delivery protests in the country, after the Western Cape (15%) and Gauteng (40%).

As mentioned previously, service delivery protests erupted in the MHLM, owing to the poor provision of several basic necessities and a defunct infrastructure. The uprisings resulted in the destruction of the Tswelelang Youth Centre and a temporary closure of the N12 road

(Nandipha, 2007:4). The communities located within the MHLM lodged complaints about poor service delivery regarding water, electricity, low-cost housing, proper roads and sanitation (Nandipha, 2007:4). The high incidence of service delivery protests, discussed in the paragraphs above, indicate that the South African public service, particularly at local government level, is not addressing backlogs at the rate expected by communities. This view is also supported by Naidoo (2005:35) who points out that inhabitants do still experience significant gaps in service delivery in areas occupied by HDIs.

Naidoo (2005:34) and Booysen (2007:online) argue that a number of challenges are serious impediments to effective and efficient service delivery to communities in the local government sphere. These challenges include corruption, lack of skills, capacity and strategic leadership, as well as local government's ineptness to address developmental backlogs, mostly due to a lack of resources. According to the Auditor General's report (RSA, 2013(b):online), the MHLM has received a disclaimer for the past five financial years. Such a disclaimer implies that the MHLM was placed under Section 139 1(b) of the Constitution, 1996 (RSA, 1996) which is a provincial administration intervention, grounded on the following conditions: "a deterioration in service delivery, poor administrative leadership and management, lack of administrative capacity within the municipality, and lack of proper governance and financial management systems" (RSA, 2013 (c):online).

To counter these challenges, the previously mentioned directive by Nel (2001:606) applies, that "efficient and effective implementation of development programmes requires local authorities to undertake a series of interrelated and interdependent development projects"**.** Van der Waldt (2007:250) adds in this regard that: "Team work and a project and programme based approach is critical in redirecting the public service towards a new paradigm of service excellence. Therefore, municipalities can apply "management by projects" as a significant technique to improve the attainment of developmental programmes with an optimal utilisation of scarce public resources for service delivery improvements" (Van der Waldt, 2007:250).

In light of the arguments above, the research problem that this study will address is: Which organisational (strategic, tactical and operational) improvements, with a specific focus on programme and project management, can be recommended to initiate and sustain enchanced service delivery by the MHLM in its municipal area?

1.3. RESEARCH OBJECTIVES

The primary objective of this study is to:

determine the extent to which the basis theory of “management by projects” initiatives and its features can suggest possible advantages towards sustained service delivery improvements by the MHLM in its municipal area of responsibility.

The secondary objectives of this study, which flow from the primary objective, are as follows:

- Examine the theory that grounds “management by projects” for service delivery improvements in the MHLM by means of a literature review.
- Research the application of the theory, underlying the notion of “management by projects”, through semi-structured interviews focusing on the Wolmaransstad Waste Water Treatment Plant Upgrading Project (WWWTPU).
- Investigate the practice of this basis theory by the MHLM through semi-structured interviews at strategic and tactical level, and a focus-group session on operational level.
- Perform a comparative analysis of “management by projects” in the MHLM.
- Reach a conclusion and provide recommendations on how this design can be applied to service delivery improvements by the MHLM in its municipal area.

1.4. RESEARCH QUESTIONS

Based on the primary and secondary research objectives, the following research questions will be posed and investigated:

- How should the basis theory that grounds “management by projects” be applied for service- delivery improvements in the MHLM?
- How is this theory applied in the case of the Wolmaransstad Waste Water Treatment Plant Upgrading Project (WWWTPU)?
- How is this basis theory implemented in practice by the MHLM?
- Which disparities can be pointed out regarding the Maquassi Hills Local Municipality’s application of this theory?
- Which conclusions can be reached and recommendations made on this design for efficient, particularly with regard to the MHLM’s strategies for improved service delivery in its area of responsibility?

1.5. CENTRAL THEORETICAL STATEMENTS

The public service in South Africa has an obligation to provide services to the society in an effective, efficient and economic manner (RSA, 1996; Nel, 2001:606; Van der Waldt, 2008:63). The South African public service encounters enormous pressure to provide services while being accountable in terms of how resources are allocated and used (Naidoo, 2009:12-13).

The White Paper on Local Government, 1998 (RSA, 1998a) stresses the shift of the local government's responsibility from only focussing on public service delivery to a broader orientation on development.

South Africa, throughout its 20 years of democracy**,** has encountered service delivery protests at the local sphere of government (Booysen, 2007:online). The developmental orientation of the local government requires municipalities to implement developmental programmes that are effective, efficient and economically viable (Nel 2001:606). This places efficient project management high on the agenda of local authorities. Project management has the following three goals (Koskela & Howell, 2002:294):

- "Getting intended products produced in general.
- Internal goal of cost minimisation and level of utilisation,
- External goals related to the needs of the customer, like quality, dependability and flexibility."

Project management is a technique that can be applied to ensure the achievement of developmental programmes by using scarce resources optimally (Nel, 2001:606). This is accomplished through "the process by which projects are defined, planned, monitored, controlled and delivered such that agreed benefits are realised" (Burke, 2010:29).

The basis theory that grounds this study can be explained as "management by projects". Van der Waldt (2009a:36) defines "management by projects" as "the use of projects by organisations to implement objectives and policy programmes of organisations". It is evident that the difference between project management and "management by projects" is located in an element such as the fact that "management by projects" is organisationally driven, whilst project management refers to the management of a single project (Gareis, 1991:71; Van der Waldt, 2009a:36). The study applied the basis theory of "management by projects" and its features to view the MHLM as organisation on strategic, tactical and operational levels.

The next Section outlines the research methodology followed in this study in order to respond adequately to the problem statement, primary and secondary research objectives, and the research questions.

1.6 RESEARCH METHODOLOGY

In order to address this study's problem statement, primary and secondary research objectives, and answer to the research questions, the research adopted an interpretive type of study. The aim was to determine the extent to which features of "management by projects" can suggest possible improvements in service delivery by the MHLM in its area of operation.

Social sciences consist mainly of quantitative and qualitative research inquiries. However, there is an increase in the use of mixed-method approaches that allow for the combination of the two research paradigms (Auriacombe & Webb, 2006:591). The present study utilised a qualitative research design to collect information on how the basis theory that grounds "management by projects" is used for service delivery improvements in Maquassi Hills Local Municipality.

A qualitative research method is "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" (Auriacombe & Webb, 2006:597). Qualitative research methods allow the researcher to enter the social world in order to understand an occurrence in its natural state (Auriacombe & Mouton, 2007:441). A qualitative research design helps the researcher to study the phenomenon in its natural setting without comparing it in terms of measurements or amounts. The researcher then is able to interpret only the phenomenon according to subjective meanings or the understanding people attribute to it (Maxwell, 1996:17; Fossey *et al*., 2002:717; Thomas, 2003:1; and Auriacombe & Mouton, 2007:441). Jarbandhan and De Wet Schutte (2006:672) point out that the meaning of a phenomenon may be subjective because the dependent variables are not empirically defined.

Fossey *et al*. (2002:718) further explains the difference between qualitative and quantitative research as that the former is more concerned with descriptive, textual and narrative information, whilst the latter focuses on the enumeration of information. Maxwell (1996:17), Thomas (2003:33) and Rabionet (2011:563) indicate that qualitative research derives its strength from an inductive approach and its focus is on people, events and situations as well as on meanings rather than numbers. Qualitative research consists of the following methods: biography, ethnographic studies, grounded theory, case studies and phenomenological

studies (Babbie, 2003:302-306; De Vos *et al.,* 2005:75; Auriacombe & Webb, 2006:598-600; and Creswell, 2007:85).

A qualitative research design was preferred in the present study as it allowed the researcher to get an impression of the target people or organisation that was studied. This provided "an insider's view", to formulate and collect detailed and in-depth data about the phenomenon (Flick, von Kardorff & Steinke, 2005:18; De Vos *et al.,* 2005:75; and Auriacombe & Webb, 2006:592). It helped the researcher gain a better understanding of social realities, the meaning of events and of people's actions and behaviour in certain situations (Maxwell, 1996:17; Fossey *et al*., 2002:717; Flick, von Kardorff & Steinke, 2005:18; De Vos *et al.,* 2005:75; and Jarbandhan & De Wet Schutte, 2006:672).

A qualitative research design gives participants the opportunity to describe and explain in their own words and to articulate their impressions of the phenomenon under discussion (Boeije, 2010:32). In using qualitative research methods, the researcher was fully aware of the advantages and disadvantages as advised by Auriacombe and Mouton (2007:443), as well as by Auriacombe and Webb (2006:592). The advantages and disadvantages of qualitative research can be outlined as follows:

Advantages:

- It allows the researcher to gain an "inside view" of events by defining situations and understanding viewpoints (Auriacombe & Mouton, 2007:443).
- These research methods develop rich and detailed data that provide the researcher an intact perspective about a phenomenon (Auriacombe & Webb, 2006:592).
- It can be used to study dynamic situations that are rapidly changing because the methods are flexible (Auriacombe & Mouton, 2007:443).

Disadvantages:

- Data collection and analysis in qualitative research can require more work and is time consuming (Auriacombe & Webb, 2006:592; and Auriacombe & Mouton, 2007:443).
- Such research can be costly to undertake especially if the research setting is a distant area, removed from where the researcher is situated (Auriacombe and Mouton, 2007:443).

Following the guidelines above, the present study employed a qualitative research design as it enabled the researcher to determine the extent to which successful initiatives of public organisation "management by projects" provided possible suggestions for sustained service delivery improvements by MHLM in its municipal area of responsibility. The objective was

addressed by collecting and analysing data through tools of qualitative data collection. The participants were senior and middle management officials located within MHLM. The focus of the analysis was to investigate the application of features from the basis theory of "management by projects" at strategic, tactical, and operational levels. In addition, the study aimed to recommend new features that can ensure improved service delivery in the MHLM. As part of the qualitative research design, outlined above, the study focused on a case-study research, which is discussed subsequently.

1.6.1 Research design

A research design is the "blueprint", roadmap or guidelines and instructions that a researcher follows and implements to answer the research questions test the validity of the hypothesis or address the research problem. This gives the researcher maximum control over factors that may affect the validity of the study (Mouton, 1996:108; Bell, 2005:159; and Auriacombe & Webb, 2006:589). Rowley (2002:18) defines a research design as "a logic that links the data to be collected and the conclusions to be drawn to the initial questions of a study to ensure coherence". The definition of a research design by Rowley (2002:18) corresponds with the concept of research design put forward by Mouton (1996:108), Bell (2005:159), as well as Auriacombe and Webb (2006:589) that implies a plan of arriving at a conclusion on the basis of the initial research questions, posed by the researcher. The next section will outline the case study research design, employed in the research.

1.6.1.1 A case-study research design

A case-study research design is an in-depth study of an event or a social phenomenon which is bounded by time, place and an environment. Such a design also can be regarded as a research strategy, a methodology or type of qualitative research (Creswell, 2013:97; Edmonds & Kennedy, 2013:123; and Babbie, 2014:318). A case study can involve an individual, family, unit, office, organisation, or an institution (Gillham, 2000:1; Rowley 2002:19; Terre Blanche, Durrheim & Painter, 2006:460; and Yin, 2009:17). Various researchers such as Gillham (2000:1); Rowley (2002:19); Terre Blanche, Durrheim and Painter (2006:460), and Yin (2009: 17), focused on case-study designs. In their view a case study research seeks to elucidate or explicate thinking by establishing a connection or relationship between abstract ideas and tangible cases people observe in real life situations (Neuman, 2014:42). According to Rowley (2002:21-22) and Creswell (2013:99), case studies can be divided into three types:

- The single, instrumental case has focal point of a single issue or concern, which the researcher selects as a bounded case to illustrate the issue at hand.

- In collective case studies one issue or concern is selected but multiple case studies are done to illustrate the issue. Thus, the researcher uses replication.
- Intrinsic case study's focal point is the case itself.

Case studies can also be categorised into explanatory, exploratory and descriptive forms of studies (Baxter & Jack, 2008:547-548; and Runeson & Host, 2009:135). Explanatory case studies seek to establish and explain a situation or problem by establishing causal relationships. Exploratory case studies investigate or establish what is happening by generating ideas or hypotheses for further research. Descriptive case studies seek to describe or depict an eventuality and the framework within which it exists (Baxter & Jack, 2008:547-548; and Runeson & Host, 2009:135).

According to Yin (2003:12) a case-study design depends on multiple sources of data. This allows for convergence of collected information through a process of triangulation. This process helps to increase the validity and reliability of the entire study. A case study design profits from a theory that is already developed as guidance to the process of data collection and analysis (Yin, 2003:12). The next sub-section will outline the qualitative research instruments employed to collect the empirical data.

1.6.2 Data-collection methods

The data that supported this study was collected to address the problem statement, primary and secondary research objectives and the research questions. The method of data collection is expounded below.

1.6.2.1 Literature review

In order to respond to research objectives and subsequent questions, relevant data was collected to establish the drivers of "management by projects" in the South African public service, as well as data that on the basis theory of "management by projects" itself. This was done by means of a literature review, using primary sources. The literature review aimed to find a conceptual frame of reference for the study, and to establish a relationship between the study and existing knowledge. The aim was also to obtain knowledge and information on the types of research designs (Fox & Bayat, 2007:36; & Glesne, 2011:32-33).

The following material was consulted for the study: books and academic journal articles relevant to the topic, as well as papers and abstracts from the databases of North-West University (Potchefstroom Campus). Additional information was obtained from the following

search engines: http:/scholar.google.com.advancescholarsearch.com and http://www.global.insight.co.za. Material relevant to the topic was obtained from the website of the South African government at all three levels: national; provincial and local. The data gathered through the literature review will be examined in Chapter 2. The following Sub-section will discuss the instruments used to collect the empirical data.

1.6.2.2 Collection of empirical data

Data collection in qualitative research involves an observation of participants, conducting of interviews, consulting documents and using audiovisual media (Bryman, 1995:45-49; Creswell, 2007:130; and Creswell, 2009:179-180). In the same vein, a case-study research design can be conducted by using different methodologies, methods and data sources. These include interviews, audio-visual material, documents and by observing participants (Gillham, 2000:13; Rowley, 2002:18; & Silverman, 2011:16).

In qualitative research the most commonly used method to collect data is interviews (Goulding, 2002:59; Mason, 2002:62; and King & Horrocks, 2010:1). An interview can be defined as a discussion between the interviewer and the interviewee or participant, in which the interviewer poses questions on the topic under discussion by using an interview guide (Boeije, 2010:61). The purpose of an interview is to gather information, ideas, impressions and perceptions, as well as insight and a grasp of the context. This information is gathered from interviewees on the social phenomenon under discussion (Whiting, 2008:35; Boeije, 2010:62; and Doody & Noonan, 2012:28). Interviews give the researcher control over the line of questioning while allowing interviewees/participants to provide answers to the questions (Creswell, 2009:179).

Interviews can be categorised as structured, semi-structured and unstructured (Welman, Kruger & Mitchell, 2005:167; Whiting, 2008:35; & Boeije, 2010:62). Creswell (2009:179) cautions that, in interviews, the presence of the researcher may make the participants uneasy. The researcher was mindful of the fact that not all participants will be able to present their views equally as well as the fact that they are able to express a particular position. Interviews can be conducted in the following manner: face-to-face or one-on-one, telephonic, focus groups and e-mail or social media (Creswell, 2007:130; & Creswell, 2009:179). In the present study interviews gave the researcher the opportunity to follow up on questions and to explain aspects that were not clear to the interviewee (Brynard & Hanekom, 2006:46).

The researcher employed interviews to collect data on the application of the basis theory on strategic, tactical and operational levels of MHLM. A combination of a focus-group session

and semi-structured interviews were used. The gains was that a focus group provided a wider application, while individual interviews allowed an in-depth understanding of the extent to which the basis theory under investigation was applied by MHLM in order to improve service delivery (Morgan, 1996:134; & Morgan, 1997:23). Morgan (1996:134) and Morgan (1997:23) further advise that the use of focus groups with follow-up individual interviews allow for an in-depth exploration of topics, opinions, information, knowledge, experiences and perceptions, which were broadly or under-represented during focus group sessions.

Interviews gave the researcher the chance to obtain large amounts of data faster than by means of other methods, to clarify matters to participants, and to observe their behaviour (Marshall & Rossman, 1999:108; & Welman, Kruger & Mitchell, 2005:45-46). However, the researcher was also mindful of the following weaknesses: interviewees may not be willing to share or disclose all the information, or they may not be truthful about the matter under discussion. Moreover, it is time-consuming to process and analyse the data obtained through interviews (Marshall & Rossman, 1999:110; Welman, Kruger & Mitchell, 2005:45-46). The data-collection tools utilised for this purpose will be elaborated below.

a) Focus-group

A focus group is a tool used to collect research data by means of a group interacting on topics that the researcher selects (Morgan, 1996:130; & Langford & McDonough, 2003:22). Participants were given the opportunity to discuss topics related to the study. The focus-group session was facilitated under the supervision of a moderator who promoted and guided the discussion without directing the group, as adviced by Morgan (1996:131), Langford & McDonough (2003:22), and Boeije (2010:64). Tong, Sainsbury and Craig (2007:351) as well as Boeije (2010:64) mention that the size of an ideal focus group is about six to ten members.

The present study used a focus group as a data-collection tool because focus groups provide qualitative data in a manner that is flexible, while a researcher gains insight into how others think. The focus-group discussion helped participants to express different opinions. Thus, large amounts of data were gathered on the extent to which features of “management by projects” were used to improve service delivery in the MHLM (Langford & McDonough, 2003:22). Furthermore, Bauer and Gaskell (2000:44) maintain that focus groups or the observation of participants, open up the study for a wider application and an in-depth understanding of the matter under research. In this case it is the grounding theory for “management by projects”. The researcher triangulated different impressions and observations regarding this grounding theory. The use of focus groups allowed the

researcher to follow up on possible discrepancies (Bauer & Gaskell, 2000:44). The study, as Morgan (1996:130) explains, could provide topics to the focus groups in order to generate qualitative data. Focus topics were formulated from primary and secondary research questions, as well as the grounding theory under discussion. Focus groups create the opportunity for participants to explore and discover individual as well as group or shared experiences and perspectives (De Vos *et al*., 2005:301; and Tong, Sainsbury & Craig, 2007:351).

Focus groups may cause problems and even fail if conducted by an unskilled facilitator who is unable to handle group discussions and group dynamics. The issue is to avoid unfairness and domination of the discussions by active participants who might influence perceptions of the dormant members, or those who might conform to the norm (De Vos *et al*., 2005:312). In order to counter these problems, the researcher involved a skilled facilitator who ensured that all members participated in the discussions. The facilitator was knowledgeable about the subject under study and was provided with detailed notes on the subject. A focus-group session was followed by semi-structured interviews that were held with relevant senior managers within MHLM. A focus-group session was used to collect data at operational level of MHLM and will be further elaborated upon in Chapter 4 of this study.

b) Semi-structured interviews

Semi-structured interviews were used, in addition to a focus group session, in this study. The interviews helped the researcher to explore and follow up on specific ideas and impressions that emerged from the focus-group discussions. In this way the researcher could get an in-depth view of the experience, thoughts, emotions and meanings that the participants attach to the basis theory under investigation (Fossey *et al*., 2002:727; Tong, Sainsbury & Craig, 2007:351; and Whiting, 2008:35). The use of two methods of data collection allowed the researcher to compare and observe converging or diverging views on specific topics regarding the research (Fossey *et al*., 2002:728).The interviews were used to elicit data from managers of the MHLM at strategic and tactical levels (Whiting, 2008:35). In line with findings by Fossey *et al*. (2002:727) the semi-structured interviews were sensitive to the participants' choice of language and thus helped to obtain more information from managers at strategic and tactical levels.

To reach validity and reliability of the interview, Jarbandhan and Schutte (2006:679-680) advise that the researcher should be familiar with the interview guide, be able to ask questions without making mistakes and pose the questions identical to all participants. In addition, the researcher is expected to explain the following aspects to the interviewees prior

to the interview process: the purpose of the interview and the topic under discussion, as well as the format and the length of the interview. Beforehand the participants' permission was asked to use a digital recorder. During the interviews the researcher ensured that the privacy of participants was not invaded. This was also explained to the participants who would listen to the recording of the interview (Morgan, 1997:31; & Whiting, 2008:37).

The following subsection will focus on the strategy to analyse and interpret the empirical data.

1.6.3 Analysis and interpretation

The data collected through semi-structured interviews in the case of the WWWTPU project focused on the basic features of "management by projects" at the strategic, tactical and operational levels. On the other hand, the data collected about the practical application of this basis theory was done through a combination of semi-structured interviews at the strategic and tactical level of the organisation, and by a focus-group session at operational level. In accordance with the interpretive research type and design, the data was processed through an interpretive data-analysis strategy, guided by the following steps: familiarisation and immersion; identifying the themes; indexing/coding; elaboration and lastly interpreting the results (Srivastava & Thomson, 2009:76; & Terreblanche, Durrheim & Painter, 2009:322).

The purpose of data analysis in qualitative research is to depict or portray an event or happening by employing a qualitative logic in order to make sense, comprehend and interpret other events in future (Cloete, 2007:514). The strategy was employed as it subscribes to the interpretive study type and design, and allowed for an in depth analysis of the phenomenon, due to its unique interpretive feature of oscillating between the known and unknown as well as description and interpretation of a phenomenon (Srivastava & Hopwood, 2009:76; Terreblanche, Durrheim & Painter, 2009:322). Lastly, the strategy allowed the process of data analysis to be more transparent as it demonstrates the linkages between the steps (Smith & Firth, 2011:4).

The discussions were transcribed verbatim (Smith & Firth, 2011:4), upon which an interpretive data analysis method was employed to describe and interpret empirical findings (Srivastava & Thomson, 2009:76; Terreblanche, Durrheim & Painter, 2009:322):

1.6.3.1 Interpretive data analysis strategy

The following steps of interpretive data analysis method were employed to describe and interpret empirical findings as recommended by Srivastava and Thomson (2009:76), Terreblanche, Durrheim and Painter (2009:322):

a) Familiarisation and immersion

Srivastava and Thomson (2009:76), and Terreblanche, Durrheim and Painter (2009:322), advise researchers to read through the transcribed material in order to be familiar with the content. The step of familiarisation allowed the researcher to gain ideas and concepts and themes for later consideration in the process of data analysis (Srivastava & Thomson, 2009:76; and Terreblanche, Durrheim & Painter, 2009:322). In line with the above assertions the reading of the transcripts allowed the researcher to note ideas and themes relating to features of "management by projects" at different levels of management in MHLM. The process of familiarisation was followed by the identification of themes as outlined below.

b) Identification of themes

The researcher applied an inductive approach to identify themes noted during familiarisation which suggests features of "management by projects". The application of an inductive approach in this research means that the themes suggesting features of "management by projects", noted in paragraph 6.4.1 during familiarisation, were allowed to emerge spontaneously from the empirical data by quoting verbatim, statement by participants out of which inferences were made, as advised by the scholarly efforts of Srivastava and Hopwood (2009:77); and Terreblanche, Durrheim and Painter (2009:323). The process of theme identification was followed by coding of data or themes as elaborated upon below.

c) Indexing/Coding

Coding or indexing of data in this research was conducted through a reflexive process of identifying sentences, statements and paragraphs uttered by participants which connected with certain themes that suggested the use of features of "management by projects" in MHLM as suggested by (Srivastava & Hopwood, 2009:77; Srivastava & Thomson, 2009:76; and Terreblanche, Durrheim and Painter, 2009:323). The indexing or coding process was followed by elaboration or charting.

d) Elaboration/charting

The process of charting or elaboration entails going back to the process of identifying themes and coding them in line with the themes that suggested features of "management by projects", the themes should be re-evaluated in order to determine hidden issues as well as nuances to the themes for further analysis. The process of elaboration ensured that themes that emerged from the data responded to the research questions (Srivastava & Hopwood, 2009:77; Srivastava & Thomson, 2009:76; and Terreblanche, Durrheim and Painter, 2009:323). The process of charting was followed by interpretation of data.

e) Interpretation

The process of interpretation of data is based on the themes that emerged from the empirical data and included points which might contradict the emergent themes which must be elaborated upon as suggested by scholars such as Srivastava & Hopwood (2009:77); Srivastava and Thomson (2009:76); and Terreblanche, Durrheim and Painter (2009:323). Furthermore, the act of interpretation allowed the researcher to reflect on how inferences and conclusions on the themes that emerged from the data could be made, i.e. to review the researcher's role of collecting and analysing data to arrive at certain inferences and conclusion as suggested by Srivastava & Hopwood (2009:77); Srivastava & Thomson (2009:76); and Terreblanche, Durrheim and Painter (2009:323).

The interpretive data analysis strategy outlined above is in line with the interpretive case study type and design that informed the process of data collection and analysis in order to respond to the problem statement and the primary objective of the study. The next section will elaborate on how data analysis took place in the case of WWWTPU project and the "management by projects" in practice: The MHLM.

1.6.4 "Management by projects" in MHLM: the Case of the WWWTPU – an interpretive data-analysing strategy

An interpretive data-analysing strategy was used to process the data that was collected through semi-structured interviews. These interviews focused on features of "management by projects" at the strategic, tactical and operational levels of the organisation. These features entail the following:

Features at strategic level: Drivers (legislation, strategic documents, national and provincial priorities) considered when developing the strategic goals and objectives in MHLM (RSA,

1996; RSA; 1998a; RSA, 1998c; and RSA, 2011a); strategic goals and objectives; programmes or programme management (Pellegrinelli, 1997:142; Knipe *et al.,* 2002:43; & Gray & Larson, 2006:24); types of organisational structure (RSA, 2001; Knipe *et al*., 2002:43; Gray & Larson, 2006:24; Clements & Gido, 2006:391; Gray & Larson, 2006:56; & Meredith & Mantel, 2010:19); the management and leadership structures (Thiry & Deguire, 2007:654; RSA, 2007; CoGTA, 2007; & Van der Waldt, 2009a:36); location of the management and leadership structures (Van der Waldt, 2009a:36); the organisational systems and processes (RSA, 2000; RSA, 2001; PMBOK Guide, 2008:43; & Burke, 2010:66); Performance Management System (RSA, 2000; & RSA, 2001); modalities to monitor the 'management of programme's' performance (RSA, 2000; RSA, 2001; & RSA, 2005a:8); the Critical Success Factors (CSFs) as suggested by Westerveld (2002:412), Cook-Davies *et al*. (2009:117), Muller and Jugdev (2012:761) and Ika *et al*. (2012:107); and translation of organisational strategy into programmes and programmes and projects (McElroy, 1996:328; Pellegrinelli, 1997:142; PMBOK, 2000:6; Williams & Parr, 2006:31; Morris & Pinto, 2007:118; RSA, 2010c:23).

Features at tactical level: Project Knowledge Areas – project human resource management and team structures (Tomczyk, 2005:56; The PMBOK Guide, 2008:216; & Burke, 2010:316); project scope management (PMBOK Guide, 2008:103; & Burke, 2010:115); project cost management (PMBOK Guide, 2000:83, 87; Lientz & Rea, 2002:182; CoGTA, 2007:49; Portny *et al.*, 2007:122; Wideman, 2007:4; Abdomerovic, 2012:3190; Cobb, 2012:47-48; & Matsiliza, 2012:446); project quality management (PMBOK Guide, 2000:95; Knipe *et al.*, 2002:227; & Turner, 2009:141); project time management (PMBOK Guide, 2008:148; & Burke, 2010:146); project communication management (PMBOK Guide, 2000:117; RSA, 2000; RSA, 2001:610; Knipe *et al.*, 2002:110-113; & Wideman, 2007:3); project risk management (RSA, 2004; Cobb, 2012:87; & Kerzner, 2012:193); project procurement management (RSA, 2000; Knipe *et al.*, 2002:289; Kwak & Ibbs, 2002:153; RSA, 2005b; Kerzner, 2006:812-813; & Wideman, 2007:6); project stake holder management (McEwan, 2003:473; RSA, 2003b; El-Gohary, Osman & El-Diraby, 2006:595; Wang & Huang, 2006:254; RSA, 2007:6; Cleland & Ireland, 2010:134; & Van der Waldt, 2010:258); and project integration management (PMBOK Guide, 2008:215; Burke, 2010:53; & RSA, 2011a:9).

Features at operational level: The implementation of projects takes place at operational level through the following project life-cycle phases: conceptual/initiation; planning/design; execution/implementation; termination/closure; operation, maintenance and mentoring and monitoring and evaluation (CoGTA, 2007:39; Wideman, 2007:2; Patanakul, Lewwongcharoen & Milosevic, 2010:46; & Hewagamage & Hewagamage, 2011:98).

Modalities of project life-cycle phases: In addition to the above mentioned project life- cycle phases, the data collection at operational level focused on the following modalities within each phase:

- **Conceptual/initiation phase**: ward/community meetings; needs identification; needs analysis; prioritisation of needs; identification of projects; adoption of IDP; development of SDBIP; feasibility of the study; project proposal; project terms of reference, and project charter (RSA, 1996: RSA, 1998a; Kloppenborg & Patrick, 1999:9; RSA, 2000; McEwan, 2003: 471; Clements & Gido, 2006:7; CoGTA, 2007:39; Wideman, 2007:2; Bangalore & Srinivasan, 2009:32; & Kwak & Anbari, 2010:9).
- **Planning/design phase:** project design; project activities; Work Breakdown Structure (hereinafter referred to as WBS); Gantt chart; project time-frames; resource plan; procurement, and appointment of a contractor (Kloppenborg & Patrick, 1999:9; PMBOK Guide, 2000:42; Van der Waldt & Knipe, 2002:74; Cooke & Tate, 2005:42; CoGTA, 2007:39; Wideman, 2007:2; McGhee & McAliney, 2007:58; & Van der Waldt, 2010:26).
- **Execution/implementation phase:** creating project deliverables; implementation through WBS and Gantt chart; monitoring & controlling the management processes regarding the following project knowledge management areas: project time management, project risk management, project change management, project cost management, project quality management, project procurement management project communication management, project stakeholder management, project human resource management, project integration management and the project steering committee (Van der Waldt & Knipe, 2002:82; Kwak & Ibbs, 2002:154; Kerzner, 2003:70; RSA, 2003a; CoGTA, 2007:39; & Wideman 2007:2).
- **Termination/closure phase:** final inspection of the project, releasing resources; terminating contracts; project handover; project close-out reports; project review; and certificate of completion (Mian & Dai, 1999:42; Kwak & Ibbs, 2002:154; CoGTA, 2007:39; Wideman; 2007:2; & Van der Waldt, 2010:264).
- **Monitoring and evaluation** occurs throughout the life cycle of a project (Brewer & Dittman, 2013:373).
- **Operation, maintenance and mentoring:** mentoring sessions, and maintenance of the project for a specified period (CoGTA, 2007:39).

The above mentioned elements guided the data-collection process for the WWWTPU project. The next sub-section will examine how the data was analysed for the practical application of the basis theory of project management in MHLM.

1.6.5 "Management by projects" in MHLM: semi-structured interviews and focus group session – an interpretive data-analysing strategy

Semi-structured interviews at strategic and tactical levels and a focus-group session at operational level were used to collect empirical data on the practical implementation of "management by projects" in MHLM. During the semi-structured interviews and focus-group session, the features of the basis theory of "management by projects", applied in the case of the WWWTPU project were replicated as indicated in par. 6.4.2.

1.6.6 Unit of analysis

The unit of analysis that supports this study is located in MHLM and comprise of the senior managers, managers and officials (senior, middle and junior levels of the organisation, respectively) who are responsible for "management by projects" in the municipality. Two managers are located at strategic level; three managers are located at tactical level and seven officials at operational level, whom are directly responsible for "management by projects" in MHLM. The participants were sampled as explained in the following Subsections.

1.6.6.1 "Management by projects" in MHLM: Sampling that supported - the Case of the Wolmaransstad Waste Water Treatment Plant (WWWTPU)

The unit of analysis, identified to support the WWWTPU project case study, was in particular officials located in the Engineering Services Directorate and the Supervisor of the WWWTPU. The Directorate: Engineering consists of three officials namely: the Director Engineering, the PMU Manager. The Supervisor of the treatment plant was included as a key source of information relevant to the exploratory case study.

1.6.6.2 "Management by projects" in MHLM: Sampling that supported - semi-structured interviews

MHLM has twelve managers located at different levels of the organisation. These senior managers, managers and officials are recognised as follows: two senior managers at strategic level, three middle managers at tactical level and seven officials at operational level. These twelve officials were sampled to participate in the research that investigated the applied "management by projects" in the MHLM. These twelve officials were selected, seeing that their input was considered relevant to the research question. According to Auriacombe and Mouton (2007:450), theoretical sampling is applied to a group suitable to "the research question, theoretical position and account which is developed by the study". It is therefore

noted that a hundred per cent of the sample population that are relevant to “management by projects” in the MHLM were selected to participate in this study.

1.6.7 Validity and reliability

Validity and reliability are critical in assessing the rigor of the research (Rowley, 2002:20; Vos *et al*., 2002:211; Gibbert, Ruigrok & Wicki; 2008:1465). Thus, the validity and reliability in this study will be discussed below.

1.6.7.1 Validity

Validity in qualitative research implies a research study that is “plausible (reasonable or probable), credible (convincing or believing), trustworthy (truthful) and defensible (justifiable by argument) or the extent/degree of correct representation of what really happened in a situation” (Burke, 1997:282; Oxford Concise Dictionary, 2002:271, 304, 895, 1261; Graziano & Raulin, 2004:181; & Welman, Kruger & Mitchel, 2005:142). Whittemore, Chase and Mandle (2001:527), as well as Shank (2006:111), define validity as “the state or quality of being sound, just, and well-founded” or the fact that, what is stated did really happen as such. There are three types of validity that are important in qualitative research (Burke, 1997:284). These types can be described as follows:

a) **Descriptive validity:** Refers to the researcher’s correct and accurate reporting of facts, information, objects and events as they occurred (Burke, 1997:284). Burke (1997:285) further points out that descriptive validity can be ensured through an investigative triangulation. Investigative triangulation entails different observers who obtain record and describe information and facts (Burke, 1997:285). Descriptive validity in the present research was reached by a method of triangulation, which gathered information on the use of the features of “management by projects” from different sources (academic scholars, and senior, middle and junior managers in MHLM). The triangulation was effected by using different research methods such as: a literature study; a focus group session; and semi-structured interviews, as advised by the scholarly efforts gathered from Schurink and Auriacombe (2010:442), and Boeije (2010:176). If and when the information and observations from different sources is in agreement, the research will be deemed more credible and defensible, due to triangulation (Burke, 1997:285; Fox & Bayat, 2007:107; Boeije, 2010:176; Schurink & Auriacombe, 2010:444).

b) **Interpretive validity or member validation:** Interpretive validity or member validation refers to the ability of the researcher to understand, represent and attach meaning accurately to the views, thoughts, intentions, feelings and emotions of the participants when reporting the findings of the research (Burke, 1997:285; Fox & Bayat, 2007:107; Boeije, 2010:177). It is crucial to the research that the interpretive validity of the data is assured, as pointed out by Shenton (2004:68); Fox and Bayat (2007:107); Schurink and Auriacombe (2010:444); and Boeije (2010:177). These sources advise researchers to employ a mechanism for participant feedback or member validation where participants are allowed to review the interpretations and conclusions of the researcher, to verify them as a true representation of their views regarding the social context under investigation. The researcher, in line with the guidelines by Burke (1997:283); Fossey *et al*. (2002:728); and Shenton (2004:68), employed "low inference descriptors". "Low inference descriptors" (Burke, 1997:283; Fossey *et al*., 2002:728; and Shenton, 2004:68) helped to report the meaning participants attached to the collected data; direct quotations from the participants or emerging themes were also used. A feedback mechanism was also employed by the researcher by allowing participants to review the interpretations and conclusions of the researcher. The feedback mechanism increased the validity as well as the reliability of the research results as advised by Boeije (2010:177).

c) **Theoretical validity:** This means the extent to which the basis theory that was studied correlates with the research data (Burke, 1997:285; Schurink & Auriacombe, 2010:444). Theoretical validity was achieved in the present research through triangulation with the basis theory on "management by projects" as well as with its application by MHLM in its area of operation.

The researcher was also mindful of the fact that when using interview guides certain aspects of the process can impede the validity of the instruments: changing the wording of questions; participants who may misinterpret/misunderstand or are not willing to respond to questions; questions that may be conceptually loaded (Fox & Bayat, 2007:96-97). In line with the guidelines provided by Fox and Bayat (2007:98) the following were considered in the study: the use of words understood by most participants and consistency in the use of those words, follow up was done by the researcher on questions that were not answered by some participants, and the participants were assured of confidentiality and anonymity of the information gathered during research.

1.6.7.2 Reliability of the study

Reliability is concerned with the accuracy of the research findings, i.e. whether the same results can be obtained if the measurement is repeated, or the “degree to which results are consistent” (Shank, 2006:110; and Gray, 2009:363). Dooley (1990:82) maintains that reliability refers to the extent to which the measured data are “free from errors of measurement”. This implies the credibility of the findings and the degree to which obtained results can be generalised to different situations, by various researchers (Welman, Kruger & Mitchel, 2005:145). Reliability in the study was achieved by firstly ensuring a clear documentation of the research procedures, and by keeping the documents, notes, and mechanical recordings of all interviews (Riege, 2003:81; and Gibbert, Ruigrok & Wicki, 2008:1468). In addition an interpretive data-analysis strategy was followed in analysing the empirical findings. This was done unbiased and objectively to draw certain inferences and conclusions.

1.7 LIMITATIONS OF THE STUDY

The study focused on the extent to which the application of features of “management by projects” can suggest possible improvements of service delivery by the MHLM in its area of operation. The study was further delimited by its focus on the proper use of “management by projects” to remedy various causes of poor service delivery at local municipal level. The outcomes of the study can, therefore, provide much needed guidelines to local municipalities where poor service delivery exists due to ineffective application of the basis theory for “management by projects”.

1.8 ETHICAL CONSIDERATIONS FOR THE STUDY

Data was collected through semi-structured interviews on the WWWTPU project, as well as at strategic and tactical levels in MHLM. In addition, a focus-group session was held to collect data at the operational level of MHLM to ascertain the practical application of the mentioned basis theory. Before the data-collection process commenced the researcher was required to obtain informed consent from all participants (Whiting, 2008:37; and de Vos *et al.,* 2011:117). At the beginning of the data-collection process the researcher advised participants about their right not to participate or to withdraw from the research process at any time. It was also made clear that their participation in the research was voluntary.

The researcher undertook not to deceive participants, but rather to inform them about the purpose of the data collection and the type of data that would be needed from them

(Lutabingwa & Nethonzhe, 2006:695; & Boeije, 2010:45). The privacy and confidentiality of participants' identity, their anonymity, was assured throughout the process of data collection (Lutabingwa & Nethonzhe, 2006:695; & Whiting, 2008:37). The researcher thus ensured that the names of the participants as well as the views they expressed, were not disclosed to any person or interested parties. The researcher guaranteed the privacy of participants by requesting all participants to respect the confidentiality of the thoughts, views and impressions that they themselves or others articulated during the sessions (Whiting, 2008:37). The researcher also ensured that the participants were in no way harmed during the process by asking or expecting participants to disclose information that may put their employment at risk (Lutabingwa & Nethonzhe, 2006:695). Participants were, therefore, advised about their right to decline answering questions or to disclose information that may put their job or themselves at risk. Furthermore, the researcher was granted permission on request to use a recording device to provide the database and thereby enhance the validity and reliability of the empirical data.

1.9 SIGNIFICANCE OF THE STUDY

The objective of this study was to determine the extent to which successful initiatives of "management by projects" can suggest possible developmental steps to improve sustained service delivery by MHLM. This was done by focussing on the features of the basis theory "management by projects" at strategic, tactical and operational levels, as outlined in paragraph 6.4.2 of this study.

The current state of "management by projects" in MHLM was measured against the framework of features as listed in paragraph 6.4.2 of this study. Inferences and recommendations were drawn from a comparative analysis between data obtained from the literature review and data gathered during the empirical phase of this study. The outline discussed in paragraph 6.4.2 is a reflection of the significance and contribution of the present study.

1.10 STRUCTURE OF THE STUDY

The chapters of the study can be outlined as follows:

CHAPTER 1 ORIENTATION AND PROBLEM STATEMENT

The researcher provides an orientation and background to the study regarding the need for service delivery improvements in MHLM. The chapter sketches the landscape within which the study was conducted, i.e. a democratic developmental local government. The legislative

framework supporting improvements in the delivery by MHLM is briefly outlined. The chapter then suggests “management by projects” for service delivery improvements in the local sphere of the public service and in particular in the locus of the study – MHLM. The following frame of reference that guided the study, in line with the type of interpretive study and research methodology, are outlined as follows: the problem statement**;** the primary and secondary research objectives; the research questions**;** the data-analysis strategy, and the significance of the study.

CHAPTER 2: THE BASIS THEORY THAT GROUNDS “MANAGEMENT BY PROJECTS” FOR SERVICE DELIVERY IMPROVEMENTS

The chapter starts off by defining “management by projects”. The theory that grounds “management by projects” is explored by examining features of this basis theory at strategic, tactical and operational levels, as outlined in Chapter 1, paragraph 6.4.2. At the end, the conclusion for the chapter is put forward.

The objective of chapter 2 is to examine the theory that grounds “management by projects” by focusing on its features at strategic, tactical and operational levels. This will be established as a frame of reference to the study.

CHAPTER 3: “MANAGEMENT BY PROJECTS” IN THE MAQUASSI HILLS LOCAL MUNICIPALITY: THE CASE OF THE WOLMARANSSTAD WASTE WATER TREATMENT PLANT UPGRADING PROJECT (WWWTPU)

Chapter 3 presents an exploratory case study on the Wolmaransstad Waste Water Treatment Plant Upgrading Project (WWWTPU). The chapter outlines four general types of case studies, after which a case-study type that is suitable to this particular study is selected and motivated. The methodology of the case study is examined by outlining a case study research design, the empirical investigation to be followed in collecting data relevant to the case study and the context of the case study. The expose on the process of the case study is followed by a case study. An analysis strategy that is in line with the interpretive case study type and design was employed to analyse the case study. On the bases of the empirical findings presented in an actual case, deductions and inferences are made, followed by the conclusion of the chapter.

The main objective of Chapter 3 is to document the application of features of “management by projects” in the case of WWWTPU in order to triangulate data for the comparitve analysis, which is discussed in Chapter 5.

CHAPTER 4: "MANAGEMENT BY PROJECTS" IN PRACTICE: THE MAQUASSI HILLS LOCAL MUNICIPALITY

Chapter 4 investigates the practical implementation of **"**management by projects" in the MHLM. This was done by collecting data through semi-structured interviews at strategic and tactical levels in the organisation, and through a focus-group session at operational level. The qualitative research methodology, employed during the process of data collection, is outlined. The data-collection was anchored on the features of the basis theory for "management by projects" at strategic, tactical and operational levels of the MHLM. An interpretive analysis strategy was employed to analyse the empirical data in order to draw inferences and reach a conclusion of the findings.

The objective of Chapter 4 is to investigate the practical application of **"**management by projects" within the MHLM.

CHAPTER 5: "MANAGEMENT BY PROJECTS": A COMPARATIVE ANALYSIS

Chapter 5 discusses a comparative analysis that was done on the application of "management by projects" through its features at various levels of the MHLM as investigated. The analysis took into account the features of the basis theory as documented in Chapter 2 through the literature review. This analysis also focused on the features of the said basis theory, as it is inferred in the case of WWWTPU in MHLM (as discussed in Chapter 3). Lastly the analysis gauged the practical application of the basis theory's features (as set out in Chapter 4). This comparative analysis was conducted by triangulating the data in order to determine the disparities if any, that exists between the literature (theory) and application (empirical) of "management by projects" through its features by the MHLM in its area of operation.

The objective of Chapter 5 is to discuss the triangulation of the comparative analysis done on the features of the basis theory, in order to determine any disparities and suggest possible improvements for service delivery in the MHLM.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

Chapter 6 provides the concluding remarks and recommendations by reflecting on the course that the study took along the guiding pillars of the research as documented in Chapter 1: the problem statement; the primary and secondary research objectives, and the research questions, and how the title of the research study was addressed through these pillars. In

answer to the disparities that were identified in Chapter 5, recommendations are made on possible improvements to service delivery by the MHLM in its area of operation. At the end of the chapter a conclusion of the study as a whole is presented.

1.11 CONCLUSION

Chapter 1 provided a broad framework for an analysis of the application of “management by projects” to propose service delivery improvements in MHLM, located within the Dr. Kenneth Kaunda District Municipality. Chapter 2 will document the basis theory that grounds “management by projects” through its features at strategic, tactical, and operational levels in MHLM by means of a literature review.

CHAPTER 2: THE BASIS THEORY THAT GROUNDS "MANAGEMENT BY PROJECTS"

2.1. INTRODUCTION

Chapter 1 presented an orientation to the study by outlining the reasons for improving service delivery by the public service in a democratic developmental South Africa. This was achieved by sketching the landscape of service delivery at the local sphere of government and by giving an outline of the legislative framework that underpins service delivery in the context of a democratic developmental local government. Furthermore, the chapter outlined the pillars that will guide the study as the problem statement, primary and secondary research objectives, and research questions. In line with the interpretive study type, Chapter 1 selected the data collection methods as well as an analytical strategy for the study. The ethical considerations, the structure of the study, and the conclusion were also presented.

Chapter 2 presents the basis theory that grounds "management by projects" for service delivery improvements. The chapter will firstly define the basis theory of "management by projects", and secondly examine how this basis theory, through its features at strategic, tactical and operational levels, can be incorporated into an organisational strategy for improved service delivery. The basis theory of "management by projects" will be explained in the following section.

2.2. "MANAGEMENT BY PROJECTS"

"Management by projects" is a management strategy that directs project-oriented organisations that conduct small, large and complex, as well as internal and external projects (Gareis, 1991:71). Organisations apply "management by projects" as a management strategy to deal with modern, 21st century, service delivery dynamics and challenges (Gareis, 1991:71). "Management by projects" is supported by a suitable, supportive structure and culture in a project-oriented organisation (Gareis, 1991:71). The entire organisation is therefore engaged at all levels in the implementation of strategies through programmes and projects (Van der Waldt, 2007:253). In line with the above assertions, "management by projects" is defined as "the use of projects by organisations to implement objectives and policy programmes of organisations" (Van der Waldt, 2009a:36).

"Management by projects" is therefore organisationally driven, whilst project management refers to the management of a single project (Gareis, 1991:71; Van der Waldt, 2009a:36).

The study applied the basis theory of “management by projects” and its features to view the MHLM as organisation on strategic, tactical and operational levels.

In line with the above assertions, the following section will examine the features (characteristics) of the basis theory of “management by projects” that is required at the strategic, tactical and operational levels of an organisation, which are, in addition, paramount to ensure linkages between national, provincial and local organisational strategy and objectives, policy implementation, programmes and projects.

2.3. FEATURES OF “MANAGEMENT BY PROJECTS” AT THE STRATEGIC LEVEL OF A LOCAL GOVERNMENT ORGANISATION

Strategic managers in government organisations are faced with the complex challenge of connecting policy implementation with programme and project management (Van der Waldt, 2009a:36). Such a sustained and successful connection between policy implementation, programme and project management is meant to create a value chain for service delivery by using scarce resources in an effective, efficient and economic way (RSA, 1996; Van der Waldt, 2009a:36; & RSA, 2010c:29). Successful implementation of “management by projects”, at municipal level, may be aided by introducing certain basic features in the structure of the organisation at strategic, tactical and operational levels, as will be expounded in the rest of this chapter.

2.3.1 The strategic drivers that grounds the theory of “management by projects” in the South African Local Government

Chapter 1 section 6.4.2 outlined the main drivers of “management by projects” in the South African Government that directs the need to provide services to all citizens in an effective, efficient and economical way. The drivers for the application of “management by projects” are not unique to South Africa. As mentioned in Chapter 1, OECD members such as Australia, Canada, Denmark, Japan, United Kingdom, Korea and the United States of America, also experienced pressure to improve services to their citizens (Crawford & Helm 2009:75). In the South African context, legislative frameworks and strategies serve as drivers that direct the basis theory for “management by projects” in the public service. These frameworks and strategies are examined below.

2.3.1.1 The Millennium Development Goals

The Millennium Development Goals (hereinafter referred to as MDGs) were adopted by 147 heads of states, including the Republic of South Africa, with a shared commitment to achieve these goals by 2015 (UN, 2000; and Sachs & McArthur, 2005:347). The eight MDGs seek to improve living conditions of and service delivery among member states through "eradicating poverty, provisioning of primary education; promoting gender equality and empower women; reducing child mortality; improving maternal health; preventing HIV/AIDS, malaria and other diseases; ensuring environmental sustainability and developing a global partnership for development" (United Nations, 2000; Sachs & McArthur, 2005:347; & Van Aardt, Ligthelm, & Van Tonder, 2011:1).

The member states of the United Nations (UN) are obligated to develop and implement policies in their countries that will strive towards the achievement of the eight MDGs as outlined in the aforementioned paragraph (UN, 2000). The MDG, Goal 7 that addresses environmental sustainability and Target 7(c) implies access to improved sanitation and is therefore of particular relevance to this study, its locus and focus as it suggests a distinct strategic direction and goal to be achieved by local government organisation's in its area of delivery (UN, 2014:45). Target 7(c) of the 7th Goal of the MDGs is titled as follows: "Halve, by 2015 the proportion of the population without sustainable acces to safe drinking water and basic sanitation" (UN, 2014:online). The UN and strategic partners (UN, 2014:online) give an account of the following statistics in terms of the current global status on sustainable access to basic sanitation :

- Since 1990, over a quarter of the global population obtained access to improved sanitation, however, 1 billion people still resort to open defecation.
- 82 per cent of people practicing open defecation is located in middle-income countries.
- Notwithstanding the fact that there is progress, 2.5 billion people across the globe still lack access to improved sanitation.

According to the South Africa, MDGs Country Report, 2013 (RSA, 2013:93), South Afica is in the likely position to provide 74.6 per cent of its population with improved sanitation facilities, which will then be recorded as that the target for 2015 has been achieved. However closely linked, the emphasis of this study considers the maintenance of infrastructure and the sustainability of citizens, having access to basic sanitation facilities.

2.3.1.2 The Constitution of the Republic of South Africa, 1996 (RSA, 1996)

The Constitution, 1996 (RSA, 1996) accords local government's democratic developmental role. South Africa's Local Government is not only expected to ensure service delivery to the

communities at local level as Mogale (2003:227), Maserumule (2008:436) and Kanyane (2008:5130) point out, but also to ensure economic and social development of local communities, as stated by the South African Yearbook (RSA,2003d:348) and Koma (2012, 113). In view of this fact, Section 152(c) of the Constitution, 1996, (RSA, 1996) directs, that the objectives of local government is to: “offer a democratic and accountable government to local communities; avail services to communities in a sustainable manner; advance social and economic development; encourage a safe and healthy environment; and support the involvement of local people and organisations in the affairs of the local municipality”.

Part B of Section 4 and 5 of the Constitution, 1996 (RSA, 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”.

To ensure the achievement of the above mentioned mandates and objectives of the Constitution, 1996 (RSA, 1996) as the supreme law, this study includes following drivers that direct service delivery improvements in the local government sphere.

2.3.1.3 The National Development Plan: Vision for 2030 (RSA, 2011a)

The National Development Plan: Vision for 2030 (hereinafter referred to as the NDP), (RSA, 2011a:365) envisions that by 2030, South Africa will be a state that is able to implement its developmental role by means of public institutions at all levels of government that are effectively managed and coordinated. Such a government will include a highly skilled and capacitated workforce, which is able to deliver services of high standard to communities.

The NDP’s (RSA, 2011a) vision for 2030 is focused to ensure that the South African government will be able to address the three major challenges, recognised as poverty, inequality and unemployment through the effective implementation of the following programmes: “Economy and employment; economic infrastructure; transitioning to a low carbon economy; inclusive rural economy; human settlements; improving education; promoting health; social protection; building safer communities; promoting accountability and fighting corruption; transforming society; uniting the country; and building a capable state.” The above areas outlined in the NDP (RSA, 2011a) require service delivery programmes which the local government is obligated to provide to local communities through the implementation of an Integrated Development Plan (hereinafter referred to as the IDP), as entrenched in the Constitution of South Africa, 1996 (RSA, 1996); the Municipal Systems Act, 2000 (RSA, 2000); and the Municipal Infrastructure Grant Programme (MIG) document (CoGTA, 2007).

2.3.1.4 The White Paper on Local Government, 1998 (RSA, 1998a)

The White Paper on Local Government, 1998 (RSA, 1998a:20), considers, as key to service delivery, a proper establishment of the institutional, political and administrative systems of local government. This is pointed out as the reason for the existence of municipalities (Thornhill, 2008:727). To give effect to the guidelines, outlined in the White Paper on Local Government, 1998 (RSA, 1998a:20), the following policies were enacted. This was to ensure that the mandate of achieving socio-economic development within local communities are met, as it is prescribed by the Constitution, 1996 (RSA, 1996) and advocated by the White Paper on Local Government, 1998 (RSA, 1998a).

2.3.1.5 Municipal Finance Management Act 56 of 2003 (MFMA), (RSA, 2003a)

The Municipal Finance Management Act, 2003 (hereinafter referred to as the MFMA), (RSA, 2003a) made an urgent clarion call to all categories of municipalities in South Africa to use allocated resources effectively, efficiently and economically to address the needs of citizens. The municipal council is furthermore assigned the responsibility to ensure sound financial and performance management within a municipality (RSA, 2003a; & Pillay, 2006:60). In line with the above assertions, Section 19 (1) of the MFMA, 2003 (RSA, 2003a) obligates municipalities to use financial resources effectively and efficiently to support capital projects initiated within the municipality. A condition that directs the aforementioned obligation is that such projects have to be appropriated in the municipal capital budget and have to be prioritised in the IDP (RSA, 2003a).

Chapter 11 of the MFMA, 2003 (RSA, 2003a) calls upon municipalities to acquire and procure services from service providers through policies which are “fair, equitable, transparent, competitive and cost effective”. The municipality should ensure that necessary precautions are in place to avoid fruitless and wasteful expenditure in the implementation of projects undertaken by the municipality (RSA, 2003a). Fruitless and wasteful expenditure is futile and should be avoided by mechanisms to curb them (RSA, 2003a).

2.3.1.6 The Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000)

The Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) was formulated in 2000 to regulate municipal organisational, planning, participatory and service delivery systems. The main objective of the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) is to ensure a democratic, accountable and developmental local government as prescribed by the Constitution, 1996 (RSA, 1996). The Local Government: Municipal

Systems Act 32 of 2000 (RSA, 2000:2) maintains that the council of a municipality has a right to govern the municipality's affairs within a system of cooperative government. The Act also calls on the municipal council to exercise executive and legislative authority, thereby respecting the rights of citizens within the municipality, as outlined in the Constitution, 1996 (RSA, 1996).

The Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000:2) furthermore mandates municipal councils to consult and inform local communities on services which the municipality offer. The municipality should use allocated resources in the best interest of the community and provide services in an equitable and financially viable manner with an ultimate goal of responding to the needs of the community (RSA, 2000:2 - 3). In order to achieve the developmental goals of local government, the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000:6) obligates municipalities in South Africa to develop an IDP, which serves as an inclusive and strategic plan that outlines the development of the municipality. Furthermore, the municipality must ensure, enable and enhance community participation in municipal processes such as the development of the IDP, performance management, municipal budgeting, and strategic decision-making on the delivery of municipal services (RSA, 2000).

The IDP should take into consideration all the plans of the municipality and ensuring that the resources such as the budget and capacity of the municipality are in line with the implementation of the IDP (RSA, 2000:7). In order for the municipality to ensure the achievement of developmental goals and improved service delivery, the municipal council should establish a performance management system (RSA, 2000:11). Section (f) of the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000:11) indicates that such a system, developed by the municipal council, should outline the priorities, objectives, indicators and targets as indicated in the IDP of the municipality. The inclusion of the above mentioned indicators in the performance management system will ensure that the community can hold the municipality accountable for the priorities outlined in the IDP, and that the municipality's performance can be monitored, evaluated and measured against clear indicators (RSA, 2000:11).

The Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000:2) has also allocated rights to members of the community. These rights include the right to participate in the decision-making processes of the local municipality, the right to use and enjoy facilities located at the local municipality, and the right to information and access regarding the services provided by the municipality (RSA, 2000:2). By prescribing participation in decision-making processes, the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000:2-

3) endowed members of the community with the right to make recommendations; raise complaints and expect a prompt response on their concerns from the municipality, as well as the right to demand that the Municipal Council act in a transparent and impartial manner. The rights of the local community in terms of service delivery are also linked to their duties. In as much as local communities should utilise services from the local municipality, they also have a duty to pay service fees, rates and taxes (RSA, 2000:3).

2.3.1.7 The Municipal Infrastructure Grant Programme, 2007, (CoGTA, 2007)

The MIG was established in the Department of Provincial and Local Government (DPLG), currently (2014) known as Department of Cooperative Governance and Traditional Affairs (CoGTA). This Programme is aimed at fulfilling the demands of the Intergovernmental Relations Act, 2003 (RSA, 2003b) by ensuring that there is coordination and cooperation between national, provincial and municipal strategic plans and budgets in the implementation of service delivery projects at local government sphere. It is therefore incumbent upon the national government to ensure that municipalities have the capacity to monitor project management for the use of the MIG funds (CoGTA, 2007; Sebola & Modipane, 2012:398). The MIG intends to improve service delivery at local government level for household services, public municipal facilities, and institutions other than public municipal facilities (CoGTA, 2007). The MIG Guide (CoGTA, 2007:7) further urges municipalities to establish Project Management Units (PMUs) at either local, or district municipal level, to help manage MIG funds for the improvement of service delivery at local municipal level. The utilisation of the funds for the MIG, therefore, serves as a catalyst for the application of the basis theory of “management by projects” at municipal level (CoGTA, 2007:6).

Considering the drivers outlined above, that directs a local government organisation, the following local government, strategic agenda priorities are observed and included into this study.

2.3.2 The Five Year Local Government Strategic Agenda/Priorities, 2006

The Department of Cooperative Government and Traditional Affairs (CoGTA), adopted a Five Year, Local Government Strategic Agenda (RSA, 2006b) in order to strengthen and improve municipal governance, performance and accountability. According to this Agenda, all categories of municipalities are expected to improve service delivery to the local citizens by achieving its goals in the following Key Performance Areas (hereinafter referred to as KPAs), (RSA, 2006b):

“KPA1: Municipal Transformation and Organisational Development;
KPA 2: Basic Service Delivery;
KPA 3: Local Economic Development;
KPA 4: Municipal Financial Viability and Management, and
KPA 5: Good Governance and Public Participation.”

In line with the abovementioned priorities, included in the local government Five Year Strategic Agenda, the next sub-section will investigate the strategic goals and objectives required by local government to achieve its developmental role.

2.3.3 Strategic goals and objectives

Knipe, Van der Waldt, Va Niekerk, Burger and Nell (2002:4) defines strategy as “the process whereby certain policies, strategies and resources are used to achieve the main objectives of the institution.” Knipe *et al*. (2002:4) conceptualise a strategy in the context of “environmental volatility”. This entails a process to ensure that the most suitable plan is put in place to achieve organisational objectives, despite changing environments. Morris and Pinto (2007:116) define a strategy as “the organisation’s response to external or internal pressure to change”. This definition by Morris and Pinto (2007:116) is in line with the definition of a strategy as set out by Knipe *et al*. (2002:4). Both definitions emphasise the importance of environmental scanning in the process of strategic management.

Furthermore, Morris and Pinto (2007:116), in support of the earlier work done by Mintzberg and Waters (1985:257), distinguish deliberate and emergent poles as two ends of a continuum within which real world strategies can be located. According to Morris and Pinto (2007:116), deliberate strategy is a planned strategy that is subjected to a formal process of analysis, design and planning, whereas emergent strategy is an unplanned strategy used by managers to respond to unplanned inputs from both external and internal environments. In the continuum of strategy formulation, where the opposite poles are deliberate and emergent, Mintzberg and Waters (1985:257-269) outlines different types of strategies that either take a format of a deliberate, emergent strategy, or a combination of the two, depending on what the organisation wishes to achieve. Subsequently some of the different types of strategies are expounded below:

- Planned strategy occurs when intentions are properly formulated and followed by planning, budgets and schedules which will help realise the implementation of the intentions (Mintzberg & Waters, 1985:261). This type of strategy is commonly used at municipalities by implementing the MIG projects and other service delivery initiatives

that are prioritised in the IDP. This is done through consultative meetings with communities and the allocation of resources by the municipal council (RSA, 2000).

- Entrepreneurial strategy is mainly found in entrepreneurial firms that are fully controlled by the owner. These strategies come into being when an individual in control of personnel dictates his/her vision onto the organisation, as well as the orientation and direction it should take.
- Ideological strategy is when individuals have a common vision with which they identify and which they pursue as an ideology (Mintzberg & Waters, 1985:262). An example of such strategies are mainly found in the formulation of policies for political parties, responding to a need in the external environment and which ultimately find their expression in the political party's manifesto during election campaigning (ANC, 2007:17).
- Umbrella strategies are found where members in an organisation are allowed to operate or behave according to certain general guidelines and within clear boundaries (Mintzberg & Waters 1985:263).
- Process strategy occurs when the leadership in an organisation indirectly influences the process of strategy-making while allowing individuals to decide the content of the strategy (Mintzberg & Waters, 1985:262).
- Unconnected strategy is found where subunits in an organisation are given the liberty of pursuing their strategies, which are independent of other units in the same organisation (Mintzberg & Waters, 1985:265).
- Consensus strategy occurs when members in an organisation discuss alternative methods and agree on the best possible method that will yield the intended results (Mintzberg & Waters, 1985; 267).
- Imposed strategy is found where the external environment, or a person with great influence, can impose a strategy upon the organisation by restricting the available options (Mintzberg & Waters, 1985:268).

As mentioned above, Morris and Pinto (2007:66), argue that strategic management has two interrelated elements namely: strategic planning and strategic implementation. In line with this view, Gray and Larson (2006:24), and Aubrey, Hobbs and Thuillier (2007:329) further argue that the main reason why strategies fail in many organisations is the lack of integration between strategy formulation and implementation as well as between strategy and projects. With this in mind, Gray and Larson (2006:24) suggest the following activities of a strategic management process: reviewing and defining organisational mission. This process entails scanning both the external and internal environment of the organisation, setting long-range goals and objectives, analysing and formulating strategies, and implementing strategies through projects.

This strategic management process by Gray and Larson (2006:24) also corresponds with the process as outlined by Knipe *et al.* (2002:43), except that the latter include strategy and evaluation in their design as the last step of the process. Building on the strategic management process, outlined above by Gray and Larson (2006:24) as well as Knipe *et al.* (2002:43), a municipality such as the MHLM is required to develop strategic objectives in line with the strategic directives of the Millennium Development Goals (see paragraph 2.3.1.1), the Constitution (see paragraph 2.3.1.2), the NDP (see paragraph 2.3.1.3), and the Five Year Local Government Strategic Agenda/Priorities (see paragraph 2.3.2).

The effective implementation of the strategic objectives requires a public service organisation such as MHLM to create a suitable structure that grounds "management by projects" as expounded below.

2.3.4 Public organisation programmes

A programme is conceptualised as: "a framework for grouping existing projects (McElroy, 1996:328; Pellegrinelli, 1997:141), or "a collection of change actions (projects and operational activities) (Morris & Pinto, 2007:118); or "a group of projects managed in a coordinated manner (PMBOK; 2000:6); or "the organisational capabilities implemented through a series of interrelated projects (Williams & Parr, 2006:31). With this in mind a programme in the context of the South African government is defined as "a set or group of related projects, which collectively deliver on a strategic objective of a department or government" (RSA, 2010c:23). A shared element in these definitions of a programme is that it includes a group of projects with a common objective and the management of which provides synergy and greater benefits than individual projects would.

The definitions above were preferred in the study seeing that they suggest a link between objectives of an organisation and a group of projects in a programme as will be indicated in paragraph 2.4.1. This view is supported by McElroy (1996:328), who adds that a programme has an unlimited time-frame with many objectives that serves as links between strategy and projects. This notion is further supported by Lycett, Rassau and Danson (2004:289), pointing out that a programme is a way of closing the gap between project delivery and organisational strategy.

In addition to the programmes briefly mentioned in Chapter 1 such as the RDP, ASgiSA and GEAR, some of the programmes that the South African Government also embarked on include "Water and Electricity, Telecommunications, Housing, School Nutrition, Support to

Small, Medium and Middle Enterprises (SMMEs) and job creation as well Taxi Recapitalisation" (RSA, 2010c:17).

Programmes are demarcated or configured into portfolio, goal-oriented or heartbeat programmes on the basis of their advantages, range and diversity as explained below (Pellegrinelli, 1997:142).

2.3.4.1 Conceptualisation of a portfolio programme

A Portfolio programme is the grouping of projects which have a common theme such as physical resources, technology or human resources, but which are relatively independent of one another (Pellegrinelli, 1997:143). A portfolio programme is considered for its effective and efficient use of resources and skills (Pellegrinelli, 1997:143). The following NDP priorities can be classified as portfolio programmes: (8) human settlements; (9) improving education; innovation and training; and (10) promoting health (RSA, 2011a:233-294). These programmes would require similar assistance such as skilled human resources, and physical and financial resources from the South African government, to achieve their goals respectively.

2.3.4.2 Conceptualisation of a Goal-oriented programme

A goal-oriented programme entails the grouping of projects to handle a situation of uncertainty and gathering information to achieve an objective or goal. It can also be used in a situation where the final outcome is unknown or the process of implementation is not known beforehand (Pellegrinelli, 1997:143). The following are examples of goal-oriented programmes implemented by the South African government to address specific goals:

- GEAR was pioneered in 1996 to increase growth and stimulate job creation (Leibbrandt, van der Berg & Bhorat 2001:16; Adato, Carter & May, 2006:227; & Berk, 2007:online);
- ASgiSA was launched to halve poverty and unemployment by 2014 through infrastructure projects (RSA, 2006a; Basset & Clarke, 2008:online),
- The New Growth Path was launched to stimulate economic growth (Van Aardt *et al*., 2011:1).

2.3.4.3 Conceptualising a heartbeat programme

Heartbeat programmes are those programmes that allow for the regular and gradual improvement of existing systems, processes and infrastructure in order to ensure a functional public service organisation (Pellegrinelli, 1997:143-144). Examples of a heartbeat programme in the context of South Africa are the White Paper on the Transformation of the Public Service (WPTPS), (RSA, 1995b), the *Batho Pele* document (RSA, 1997), and the MIG (RSA,2007). In accordance with the above definition of a heartbeat programme the MIG, for example, is used to expand service delivery to poor households and to alleviate poverty in the local government sphere, guided by the Division of Revenue Act (DoRA) (CoGTA, 2007:31).

The next section will explain the critical role of a local government organisational structure that grounds "management by projects" in a public service organisation.

2.3.5 A local government organisational structure that grounds "management by projects"

Literature on project management describes various organisational structures in which people can be organised to work on projects (Clements & Gido, 2006: 390; Aubrey, Hobbs & Thuillier, 2007.330). In this sense, Chapter seven (7) *f, g and h* of the Local Government Municipal Systems Act, 2000 (RSA, 2000) directs a local authority to arrange its "political structures, political office bearers, managers and other staff members" into administrative units and departments which are "operationally effective" in responding to the developmental roles of local government as stipulated in the Constitution, 1996 (RSA, 1996). Thereby, municipalities can create organisational structures and mechanisms, or institutional frameworks. These include organograms that create links between strategic management, programmes and projects to support efficient project management as directed by the Local Government: Municipal Planning and Performance Management Regulations (RSA, 2001); Knipe *et al*. (2002:43); and Gray & Larson (2006:24).

Possible organisational structures suggested by authors of project management are: functional organisational structure, project type organisational structure or organisation by projects, and lastly a matrix organisation (Clements & Gido, 2006:390; Aubrey, Hobbs & Thuillier, 2007:330). The matrix organisational structure can be subdivided further into a weak, balanced or strong matrix structure depending on the balance of influence between functional and project-type of organisational structures (Clements & Gido, 2006:390; Aubrey,

Hobbs & Thuillier, 2007:330). The following section will, outline the different subdivisions of organisational structures:

2.3.5.1 The Functional Organisational Structure

The functional organisational structure consists of individuals with the same skills or expertise, who are located in the same functional component within the same organisation such as engineers, marketers, manufacturers and those responsible for procurement (Clements & Gido, 2006:391). The project work is, therefore, performed and managed within the normal hierarchy of an organisation (Gray & Larson, 2006:56). Meredith and Mantel (2010:191) further argue that in a functional organisation, the project can be allocated to a functional component which can help to ensure that the project is delivered. However, certain segments of the project are allocated to different components that have relevant skills and expertise as required to complete the project successfully (Gray & Larson, 2006:56). The project manager has authority over the project but the technical and administrative authority over the human resources, assigned to the project will always remain with the functional manager (Clements & Gido, 2006:393). A functional organisational structure in government will exclude a PMU, which will be responsible for all projects in the organisation. Instead, projects are carried out as part of the normal functional structure as pointed out by Gray and Larson (2006:56).

Meredith and Mantel (2010:191-192) argue that the functional organisation allows for flexibility in the use of staff and expertise in different projects as well as knowledge and experience. The coordination of projects is, however, complex and lead to additional time (Kerzner, 2003:93). The client or customer in a functional organisation is not the primary focal point, seeing that the components have to focus on their functional duties as well (Kerzner, 2003:93; Meredith & Mantel, 2010:193).

2.3.5.2 The Project-type Organisational Structure

Project-type organisational structures are also called Project Based Organisations (hereinafter referred to as PBO) or “management or managing by projects” as stated by Aubrey, Hobbs and Thuillier (2007.330). According to Hobday (2000:874), a PBO is “one in which the project is the primary unit for production, innovation and competition”. Projects are managed parallel and are therefore conducted as a mini-organisation (Clements & Gido, 2006:393). In a project- based organisational structure, each component is assigned a programme manager who maintains overall authority of the project. This function include allocation of resources, as well as reporting and communication with members of the project

(Hobday, 2000:875; Kerzner, 2003:99; Gray & Larson, 2006:60; Meredith & Mantel. 2010:194).

In some instances the interface between the parent organisation and the project team may vary in administrative and financial control over the project (Gray & Larson, 2006:60). The main disadvantage of project-based organisational structures is that it is costly to maintain. The reason is that these structures do not allow sharing of officials and their expertise between a number of projects, which can lead to duplication of functions (Kerzner, 2003:101; Meredith & Mantel, 2010:194). According to the National School of Government Programme and Project Management Study Guide (RSA, 2010c:36), project-type organisational structures in government will consist of a dedicated PMU that will have access to resources and whose project manager will have authority over the project. Such a structure will consist of functional units or directorates that provide support to different programmes and projects (RSA, 2010c:36).

2.3.5.3 The Matrix Organisational Structure

Gray and Larson (2006:63) describe a matrix structure as "a hybrid organisational form in which a horizontal project management structure is overlaid on the normal functional hierarchy". The purpose of introducing a matrix structure is to combine and maximise the advantages of both the pure functional structure and the PBO structure (Kerzner. 2003:102; Meredith & Mantel. 2010:196; PMBOK Guide. 2010:29). A matrix structure can be sub-divided into three types that differ in the degree of the project manager's authority over resources and project activities (Meredith & Mantel, 2010:196; PMBOK Guide, 2010:29). According to Gray and Larson (2006:56), the matrix organisational structure can be further divided into the following forms: weak, balanced and strong. These types of matrix structures are discussed below to explain their unique features and differences.

a) Weak matrix structure

The weak matrix resembles a functional organisational structure (PMBOK Guide, 2010:29), except that a project manager is in place to coordinate the activities of a project while the functional managers are responsible for their portion of the project (Tomczyk, 2005:56; Gray & Larson, 2006:65; Meredith & Mantel, 2010:196; PMBOK Guide, 2010:29). In a weak matrix, functional managers have more authority over resources and the pace at which the project is completed than what the project managers have (Tomczyk, 2005:56; Meredith & Mantel, 2010:196).

b) Balanced matrix structure

In a balanced matrix the project manager sets schedules and plans for the project (Gray & Larson, 2006:65-66; Meredith & Mantel, 2010:197). This manager determines and monitors the progress (Gray & Larson, 2006:65-66; Meredith & Mantel, 2010:197). On the other hand, the functional managers' concern is to carry out their project activities according to schedules provided by the project manager (Tomczyk, 2005:56). The technical and operational decisions of the project are agreed upon by the project and functional managers (Gray & Larson, 2006:65-66; and Meredith & Mantel, 2010:197).

c) Strong matrix structure

The strong matrix resembles a project team within a functional setting where the project managers make the overall technical and operational decisions on the project. On the other hand, the functional managers have control over their human resources (Gray & Larson, 2006:65-66; Meredith & Mantel, 2010:197; PMBOK Guide, 2010:29).

According to Aubrey, Hobbs and Thuillier (2007:329), project management is a means to implement organisational strategy. Van der Waldt (2009b:3) also maintains that project management is increasingly used in the public service to implement service delivery initiatives. Aubrey, Hobbs and Thuillier (2007:329) further assert that some organisations are unsuccessful in establishing a link between projects and strategy. In view of the organisational structures outlined above, the question remains how organisations should succeed in using project management as a means to implement organisational strategy and improve services to communities. Or: Which structure type will be most appropriate to be used by organisations in the public service to employ "management by projects" for service delivery improvements?

Andersen and Jessen (2003:457) maintain that project-based structures must be introduced gradually in organisations to be successful. Van der Waldt (2009a:43) supports this assertion by emphasising that institutions should gradually introduce project-based practices into organisational structures to ensure a smooth transition into a project-based organisation. Organisations should establish a link between strategy and projects as suggested by Pellegrinelli (2002:229). In view of this, Andersen and Jessen (2003:457) as well as Aubrey, Hobbs and Thuillier (2007:329), advise that organisations should employ a "project management maturity matrix" to ensure that projects are utilised successfully. According to Van der Waldt (2009a:43), project maturity refers to "the fact that an institution gradually becomes conditioned to successfully dealing with all projects".

According to Andersen and Jessen (2003:457), organisations can follow a “ladder” of project maturity which includes the following three levels:

- **Level 1:** Project management – organisations focus on applying principles and processes of project management and produce team efforts to implement individual projects (Andersen & Jessen, 2003:457).
- **Level 2:** Programme management – an organisation uses the skills and competencies learned in level 1 to manage effectively a collection or a group of related projects within a program, which may entail a process of restructuring in an organisation (Andersen & Jessen, 2003:457).
- **Level 3:** Portfolio management – the third level entails a simultaneous implementation or management of projects that do not necessarily share the same objectives and goals, but still help contribute to achieve the organisation’s overall strategy and objectives (Andersen & Jessen, 2003:457).

In line with the “project management maturity matrix”, proposed by Andersen and Jessen (2003:457), Modig (2007:807-814) uses a sliding scale to depict how organisations can move towards project maturity with stationery organisations on the left and temporary organisations on the right. According to Modig (2007:807-814), stationery organisations are those relying on “well established organisational structures” and temporary organisations are those focusing on specific projects. The maturity matrix follows an evolutionary process, which consists of the following stages: functional structure, project-based organisation, matrix organisation, mature matrix, and lastly “beyond the matrix” (Modig, 2007:807-814). Van der Waldt (2009a:39) further advocates for an alignment between projects, programmes and organisational structures. Such alignment can be achieved through the following interfaces:

- **Organisational interface:** where different components, segments or directorates within an organisation communicates, report or provide formal and informal feedback to one another through employing relevant resources to the project (Van der Waldt, 2009a:39; RSA, 2010c:38).
- **Technical interface:** where officials from different segments and components or programmes with specialised skills and expertise interact to solicit assistance on those skills needed to complete the project (Van der Waldt, 2009a:39; RSA, 2010c:38).
- **Interpersonal interface:** where officials from different projects and programmes interact formally and informally to share best practice (Van der Waldt, 2009a:39; RSA, 2010c:38).

Keeping the above information in mind, Gareis and Huemann (2000:712) suggest the inclusion of certain variables as pivotal in a project-based organisation: “organisational structure (temporary and permanent); culture (project management), and strategy

('management by projects')". Knodel (2004:49) cautions that a silo approach and disconnection, as well as poor alignment in the implementation and management of projects are the main contributing factors for uncompleted projects. The silo approach in government occurs when departments lack the aforementioned "ladder" of project maturity as proposed by Andersen and Jessen (2003:457), and fails to implement interfaces (Van der Waldt, 2009a:39; RSA, 2010c:38). A silo approach can also appear when senior management fails to provide an oversight role and support to all programmes in an organisation (Nel, 2001:611). In accordance with this view, Fraser-Moleketi (MPSA, 2003:6) argues that the public service in South Africa should ensure that project management becomes integrated in the government approach to the extent that it develops into an organisational culture in all spheres of government.

Knodel (2004:49) concurs with the scholars cited above that projects should be governed as programmes and portfolios as this will ensure the sharing of scarce resources, best practices and skills. A classic example in local government is a lack of integration into the local municipal IDP of projects and plans of the District municipality, Provincial and National departments (RSA, 2003b; CoGTA, 2007:9). This would result in duplication of functions and projects, which do not reach their fruition or live up to the expectations of local communities (RSA, 2003b; McEwan, 2003:473; CoGTA, 2007:9).

Building on assertions by Gareis and Huemann (2000:712), Andersen and Jessen (2003:457), Knodel (2004:49), Modig (2007:807-814), as well as Van der Waldt (2009a:39), states that the success of efficient project management in organisations would also require specialised skills and competencies by project leaders to ensure improvements in service delivery. The next sub-section, therefore, investigate a project governance structure (PMU) that aid the successful application of the basis theory "management by projects".

2.3.6 Project Management Unit (PMU)

The establishment of a dedicated Project Support Office (PSO) is regarded as a strategic directive supporting "management by projects" in public service organisations (Van der Waldt, 2007:255). The MIG document (CoGTA, 2007) maintains that local municipalities can establish a Project Management Unit (hereinafter referred to as the PMU); while Thiry and Deguire (2007:654) mention a Project Management Office as a structure that supports project management. However according to Van der Waldt (2009a:36), all the above structures support "management by projects".

The successful application and implementation of “management by projects” would require public organisations to create the right platforms and structures to support such an endeavour (Van der Waldt, 2009a:36). According to Thiry and Deguire (2007:654), public organisations can make use of a Project Management Office (PMO) to ensure that projects are successful and delivered in time, within an allocated budget and according to clearly stipulated quality requirements. The PSO is perceived as a central structure that offers expertise, skills and support to all projects managed by different departments and directorates in a public service organisation (Aubrey, Hobbs & Thuillier, 2007.329).

A municipality is required to establish a PMU to manage MIG (CoGTA, 2007). Such a PMU should include the following personnel for it to be fully capacitated to implement projects within the public service organisation: Project Manager; Engineer; Technician; Secretariat; Financial personnel; Legal personnel; Administrative personnel; Occupational Health & Safety personnel; Data Capturers; Information Technology personnel; and Community officer/communications personnel (CoGTA, 2007).

Thiry and Deguire (2007:654) caution that PSO/PMO’s or PMU’s role should not only be limited to “monitoring, reporting, standardising processes and procedures” as far as “management by projects” is concerned, instead PMOs or PMU’s should be seen as a link between organisational strategy and projects, to which extent the PMO or PMU’s become governance structures that supports “management by projects”. Van der Waldt (2009a:36) adds that the following structures would also create interfaces between organisational structure and projects: “Steering Committees, Project Directors, Project Sponsors and Project Coordinators”. Therefore the above structures outlined by Thiry and Deguire (2007:654) as well as Van der Waldt (2009a:36), are necessary mechanisms that supports efficient “management by projects” at local municipal level

The next sub-section, investigates governance, leadership, management and capacity that aid the successful application of the basis theory “management by projects”.

2.3.7 *Governance, leadership, management and capacity*

Governance, leadership, management and capacity are significant elements for consideration in the basis theory of “management by projects”. The following sub-sections will elaborate further on each of these concepts.

2.3.7.1 Governance

Governance is a contemporary concept used in the public service to ensure that the needs of clients, customers, citizens and stakeholders are met by means of "accountability, transparency and measuring performance in the implementation of policies" (Crawford & Helm, 2009:73). Governance can be defined on many levels, e.g. globally (United Nations, Organisation for Economic Co-operation and Development), regionally (African Union) and locally (South Africa), as well as a combination of private and public governance (Klakegg *et al*., 2008:S27). In the sub-Saharan African countries, governance is measured by means of the Ibrahim Index of African Governance, sponsored by the Mo Ibrahim Foundation with the aim of advocating good governance in Africa (Farrington, 2009:251; McFerson, 2009:261; Delapalme, 2011:1).

The Ibrahim Index assesses and analyses governance by focussing on Basic Categories (hereafter referred to as BC) (Farrington, 2009:251; McFerson, 2009:262; Delapalme, 2011:2) which can be compared with the features of governance mentioned by other scholars of governance and as indicated in **Figure 2.1** below.

Figure 2.1: Comparison of the features of governance (**Source:** Klakegg *et al*., 2008:29; Farrington, 2009:251; McFerson, 2009:262; and Crawford and Helm, 2009:73).

According to the scholars cited in Figure 2.1 above, a state that espouses good governance should show the following attributes: “accountability, transparency, responsibility, have rules and laws that embrace human rights, systems, tools and processes, and organisational structures that encourages participation of citizens” (Klakegg *et al.,* 2008:29; Farrington, 2009:251; McFerson, 2009:262; Crawford & Helm, 2009:73; Delapalme, 2011:2; Aliza *et al.,* 2011:1932;). In terms of these features, governance can be defined as “the formal and informal arrangements that determine how public decisions are made and how public actions are carried out, from the perspective of maintaining a country’s constitutional values in the face of changing problems, actors and environments” (Klakegg *et al.*, 2008:S28). Aliza *et al.* (2011:1930) defines governance as “a non-hierarchical form of steering, where state and non-state actors participate in the formulation and implementation of public policy”. The definition of governance by Aliza *et al.* (2011:1930) emphasises an interaction between the government and its citizens in the formulation and implementation of policies, which means that concepts of accountability and transparency are implied in the interaction, as spelled out by the definition advanced by the OECD (Klakegg *et al.*, 2008:28).

Good governance in the context of South Africa is advocated through the promulgation of the Constitution 1996, (RSA, 1996) and the White Paper on Transformation of the Public Service, 1995b (hereinafter referred to as the WPTPS), (RSA, 1995b). In view of the features and definitions discussed above, good governance in the context of South Africa finds expression in Section 195(1), Chapter 10 of the Constitution, 1996 (RSA, 1996), which calls for the public service to be accountable and uphold a high standard of professional ethics. The Constitution, 1996 (RSA, 1996) further encourages participation of citizens and community based organisations in the affairs of government. This is regarded as one of the means to hold government officials accountable for the distribution and use of government resources for improvements in service delivery (Pillay, 2004:591). To strengthen good governance, Chapter 9 of the Constitution, 1996 further prescribes institutionalised mechanisms such as the Public Protector, the Auditor General and the Constitutional Court, to ensure high levels of accountability by the state (RSA, 1996; Pillay, 2004:591).

The WPTPS (RSA, 1995b) was introduced to transform service delivery in South Africa towards a citizen based approach, anchored in the implementation of the *Batho Pele* principles of “consultation, service standards, access, courtesy, information, openness and transparency, redress and value for money” (RSA,1997). Over and above implementing the mentioned *Batho Pele* principles, government institutions are required to formulate a Service Delivery Improvement Programme (SDIP) indicating how service delivery will be improved (Fourie, 2005:679). The SDIP should be incorporated into the strategic plan of local government institutions and should establish the service standards which will provide a basis

for judging performance by the public service as well as provide an opportunity for citizens to be informed about the type of services and the quality they should expect from the public service in their community (RSA, 1997; RSA, 2005a:5).

Governance at local government level is anchored in a system of participatory governance (RSA, 1998c; RSA, 2000). Participatory governance ensures the participation of local communities in the affairs of the municipality through IDP processes as entrenched in the Constitution, 1996 (RSA, 1996), the Local Government Municipal Structures Act, 1998, (RSA, 1998c) and the Local Government: Municipal Systems Act 32 of 2000, (RSA, 2000). The governance features and principles as espoused by the Constitution, 1996 (RSA, 1996), the WPTPS, 1998 (RSA, 1998c), the Local Government Municipal Structures Act, 1998 (RSA, 1998c) and the Local Government: Municipal Systems Ac 32 of 2000 (RSA, 2000) are therefore in line with the features of governance as outlined in **Figure 2.1**.

A governance framework is a mechanism to ensure that government is held accountable for services rendered to communities (Fraser-Moleketi, 2000:3 Pillay, 2004:589). Such a mechanism will help to promote the improvement of people's lives (Fraser-Moleketi, 2000:3 Pillay, 2004:589) as expected from the Constitution, 1996 (RSA, 1996), and simultaneously ensure the achievement of local government's developmental goals (Fraser-Moleketi, 2000:3; McEwan, 2003:472; Pillay, 2004:589). Governance is also regarded as the main factor contributing to projects success (Klakegg *et al*., 2008:27; Simpson & Rayner, 2011:59). The Association for Project Management (APM) (APM, 2002:3) and Naidoo (2005:114) maintain that a governance framework that holds features such as outlined in **Figure 2.1** are pivotal in the planning, management and implementation of projects, and therefore leads to effective service delivery. The following section will narrow the viewpoint down and document governance in the context of projects.

a) Project governance

Klakegg *et al*. (2008:29) and Bekker and Steyn (2009:81) respectively maintain that the application of the concept of governance in other management disciplines such as project management, received attention only recently, unlike in the case of corporate governance that has been in use for over a decade. Project governance, according to Bekker and Steyn (2009:84-85), was used as a result of the failure of the concept of corporate governance to address issues of accountability in managing large engineering and construction projects. Klakegg *et al.* (2008:S29) defines corporate governance as "a set of relationships between an organisation's management, its board, its shareholders, and other stakeholders. It provides the structure through which the objectives of the organisation are set, and the

means of attaining those objectives and monitoring performance are determined". Aliza *et al.* (2011:1929) define project governance as "a subset of corporate governance focussing on the areas of corporate governance related to project activities, including: portfolio direction, project sponsorship, project and program management and efficiency, and disclosure and reporting".

Bekker and Steyn (2009:81) argues in favour of the assertion by Crawford *et al.* (2008:S43) that a lack of support and sponsorship role by top management of organisations, as well as an increased focus on corporate governance, contributed to a failure of many projects.

In addition to these mentioned definitions, Crawford and Helm (2009:77), and Van der Waldt (2010:251) highlight certain features of project governance in a public service context. These features are provided in **Table 2.1** below.

Table 2.1: Features of project governance

Crawford & Helm (2009:77)	**Van der Waldt (2010:251)**
• "accountability; and transparency; • control and compliance; • risk management; • consistency in delivery; • value for money; and • engagement of stake holders."	• "resource allocation; • authoritative decisions; • performance monitoring; • oversight; • Accountability; and • powers of the project manager."

(**Source**: Crawford & Helm (2009:77; Van der Waldt, 2010:251)

Considering the features of project governance as outlined by Crawford and Helm (2009:77) and Van der Waldt (2010:251), Klakegg *et al.* (2008:S29) asserts that effective governance of projects should ensure that the right projects are selected and delivered in an efficient and sustainable manner by avoiding resource wastage and achieving the objectives of an organisation. The features of project governance as listed in **Table 2.1** are similar to those of governance depicted in **Figure 2.1**, except that Crawford and Helm (2009:77), and Van der Waldt (2010:251) emphasise two aspects: the powers and authority that should be allocated to the project manager, and the management of risks when implementing a project. The assertion by Klakegg *et al.* (2008:29) is relevant for the South African government in view of the Constitution, 1996, (RSA, 1996); the MFMA, 2003, (RSA, 2003a); and the PFMA, 1999, (RSA,1999) stating that public servants should handle scarce resources in an effective and efficient and thereby seriously address service delivery backlogs.

Project governance in the context of government's policies refers to "the rules, processes and behaviour that affects the way in which powers are exercised in programmes and projects, particularly regarding openness, participation, accountability, effectiveness and coherence" (RSA, 2010c:63). The features of project governance, outlined above, are also in line with the definition of project governance in the context of the government's practice, which emphasises the authority and powers allocated to the project manager over the projects (RSA, 2010c:63). In support of the above assertion, project governance therefore ensures that the project manager is held responsible by the project stakeholders due to his or her responsibility to ensure that the right projects are selected; delivered efficiently and are effectively sustained at operational level (Knodel, 2004:45; Aliza *et al.,* 2011:1930-1932). On the basis of the above features of project governance, the following section will explain characteristics and qualities of "management by projects" leadership.

2.3.7.2 Leadership

Van der Waldt (2010:255) defines leadership as "the capacity of an individual to rally other people to a common purpose, to achieve a result through people, and having a character which inspires confidence". Taylor (2006:61) asserts that the basic responsibilities of a project leader are to ensure that a project is completed within the budget, in line with a specified schedule and according to the quality requirements of the users of the product. Leadership and management within projects should direct the following project role-players: "the project team, external stake holders, project clients, host organisation management, internal suppliers, regulators, end users, and external suppliers" as explained by Orr (2004:162) and Cobb (2012:137-142). At local municipal level the focus of project leadership and management should be on the following stake holders: the community as the primary stakeholder, the PMU, contractors and service providers, as well as the officials of the municipality responsible for the implementation of the projects as outlined in the municipal IDP (RSA, 2003b; McEwan, 2003:473; RSA, 2007:6). Cobb (2012:143) further advices that project leaders should take cognisance of political role-players within the host organisation who may influence the project.

A project leader is therefore expected to be "honest, competent, forward looking and inspiring" to all role-players in a project (Taylor, 2006:65-67). Cobb (2012:172) proposes that "situational leadership theory" advocates different kinds of leadership that could be used as team members in a project grow and gain experience through different stages or phases of a project. In that case the project would require different leadership styles during its life-cycle and the leadership and management style of a project leader may depend on the stage of a project according to its life-cycle (Cobb, 2012:172). These styles may include "directive

leadership, selling leadership, participative leadership and delegative leadership" Cobb (2012:17). Taylor (2006:65-67) and Cobb (2012:137-142) states that in relation to external role-players, a project leader would be required to assume the following roles in different stages of the project life-cycle: "figurehead, liaison and monitor, champion and negotiator, and controller", whereas for internal stakeholders different roles would be needed: "a planner, coordinator, problem solver and above all a team leader" (Taylor,2006:65-67; Cobb,2012:137-142).

In addition to these management and leadership attributes of a project leader, the concept of maturity as explained by Andersen and Jessen (2003:460) can be applied to project leadership and management. Andersen and Jessen (2003:460) outline three dimensions of maturity within an organisation as follows: a total "sum of action (ability to act and decide), attitude (willingness to be involved), and knowledge (an understanding of the impact of willingness and action)". Naidoo (2005:103) adds that leadership in the public service should be able to respond faster to the needs of the immediate communities they serve, and should be knowledgeable about how "management by projects" can be employed successfully. The aim would be to address service delivery backlogs, using scarce resources in an effective, efficient and economical way to achieve the developmental objectives of local government (Fraser-Moleketi, 2005:6).

The following sub-section will explain strategic management attributes required by the public service organisation to support "management by projects".

2.3.7.3 Strategic management

Strategic management is a continuous process of decision making that considers two main foci as the external and internal environments. The external and internal environments of an organisation are explained as follows:

- The external environment of government refers to the analysis or assessment of the threats and opportunities that exist in the immediate environment of a government and which may pose challenges for government to reach its objectives and goals on a political, socio-economic, technological level, including the natural and international environments (Rossouw, le Roux & Groenewald, 2003:31-57). The external environment of a municipality such as the MHLM will include the global arena, the provincial and national spheres of government and the community that it has to serve.
- The internal environment refers to the assessment of strengths and weaknesses of the public service organisation, such as resources, capacities, skills and expertise (Rossouw, le Roux & Groenewald, 2003:31- 57). The internal environment of a

municipality such as the MHLM will include, *inter alia,* the local municipality's strengths and weaknesses in terms of a well defined strategic direction and strategy, organisational structure, governance, leadership, management and capacity, systems and processes.

The assessment of both environments is conducted to improve the competitive position of an organisation and to ensure the organisation's ability to achieve its objectives (Knipe *et al*., 2002:5; Gray & Larson, 2006:22; Morris & Pinto 2007:66). The achievement of organisational strategic goals and objectives will be realised through the integration between strategic management as strategy formulation and implementation, and strategy and projects (Gray & Larson, 2006:24, Aubrey, Hobbs & Thuillier, 2007:329; Morris & Pinto, 2007:66). Knipe *et al.* (2002:43) and Gray and Larson (2006:24) highlight that the reviewing and defining of an organisational mission are important strategic management processes. Such processes entails scanning both the external and internal environment of the organisation, setting long-range goals and objectives, analysing and formulating strategies, and implementing strategies through programmes and projects.

The analysis of the internal environment of a public service organisation outlined above should, in addition consider the capacity as required by a public service organisation which will be explained below.

2.3.7.4 Capacity

The NDP (RSA, 2011a:365) envisions that by 2030 South Africa should be a state that is able to "implement its developmental role with public institutions at all levels of government that are effectively managed and coordinated by a highly skilled and capacitated workforce which is able to deliver services of high standard to communities". This vision of the NDP (RSA, 2011a:365), has long been advocated by Section 195(1) (h) of the Constitution, 1996 (RSA, 1996), namely that the state should have "good human resource management and career development practices", which would ensure the correct skills and capacity of local government staff. In this regard the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) maintains that the capacity of municipal staff should be enhanced to a level where they are able to carry out the developmental role of local government in an effective, efficient, economical, and acceptable manner. This assertion is further supported by Maserumule (2008:441) who states that the human resources at local municipalities should have skills and capacities that are equal to the developmental tasks of local government.

To achieve these results, the senior managers of the municipality, which include the Municipal Manager (or MM) and the managers accountable to the MM should possess the following managerial competencies according to Notice 347 of 2007 in terms of the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000): "strategic capability and leadership, programme and project management, financial management, change management, knowledge management, service delivery innovation, problem solving and analysis, people management, client orientation and customer focus, communication and accountability, and ethical conduct".

Furthermore, the implementation of local economic development requires senior managers in the municipality with skills such as "project development and management, development and economic planning, monitoring and evaluation" (Koma, 2010: 65-66). The National Capacity Building Framework (NCBF), (CoGTA, 2008) and Maserumule (2008:441) envisage that the local government should have the following categories of capacity to respond effectively to its developmental roles:

- Strategic capacity – the ability of the local government to provide leadership and direction, and encourage communities to use programmes in order to reach developmental goals (CoGTA, 2008; Maserumule, 2008:441)
- Organisational capacity – the efficiency and effectiveness of systems, structures and processes within the organisation to accomplish developmental goals (CoGTA, 2008; Maserumule, 2008:441).
- Technical capacity – the ability of the local government to convert the strategic objectives of the developmental local government into programmes and projects (CoGTA, 2008; Maserumule, 2008:441).

To help provide the above-mentioned competencies and capacities required by public service managers, the National School of Government (NSG) was launched on 21 October 2013 to ensure that the South African government continues to professionalise the public service through human resource development in requisite skills as indicated above (RSA, 2013a:2). By applying these skills the government aims to realise its developmental goals through sustainable growth, development and effective service delivery (Sisulu, 2013:3; Mokgoro, 2013:6; RSA, 2013a:2).

The vision of the NDP (RSA, 2011), is elaborated further and unpacked in terms of the competencies, skills and capacities public service managers should possess. This vision is echoed by Notice 347 of 2007 in terms of the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000). The NCBF (CoGTA, 2008), and Koma (2010:65-66), emphasise the

use of programmes and projects as a technical skill that strengthens the ability of government institutions in all spheres in delivering quality services to the citizens of South Africa (RSA, 2010a:12).

The following section will expound on the systems and processes required by a public service organisation in order to support “management by projects”.

2.3.8 Systems and processes of organisational “management by projects”

An earlier version of the PMBOK Guide (2000:29) defines a process as “a series of actions bringing about a result”. A later version (2008:37) defines process as “a set of interrelated actions and activities performed to achieve a pre-specified product, result, or service”. In line with these definitions, Burke (2010:62) understands a process as “a linear sequence of steps which are carried out to achieve defined objectives”. When applying these definitions to a project it refers to those actions which are performed by a project team and are critical to implement the project successfully in order to achieve a particular goal (PMBOK Guide, 2008:37).

Processes are outlined differently depending on whether the focus is on management in general, or on project management in particular. Management processes and project management processes can be conceptualised according to two designs (Burke, 2010:63-66):

- Fayol’s management process: “planning, organising, commanding, directing, and controlling”, and
- Eastonian Process: “Input, process, and output”.

The APM document outlines the following stages in such a process: starting and initiating, defining and planning, monitoring and controlling, learning and closing (Burke, 2010:63-66). The PMBOK Guide (2008:40) delineates the following project process: initiating, planning, executing, monitoring and controlling, closing.

It is worth noting that the PMBOK uses the structure of the Eastonian process as “input – output” or “input-process-output” (Burke, 2010:66). The Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) and the Local Government Municipal Planning and Performance Management Regulations (RSA, 2001) assert that, in line with the performance management system, a municipality should set input, output, outcome and impact indicators according to the priorities outlined in the IDP. This assertion implies that municipalities’ actions or processes of performance management are in accordance to the Eastonian

process. The only difference is the inclusion of the outcome and impact processes for municipalities.

The research will confine itself to the project management process groups as outlined in the PMBOK Guide (2008:43). These process groups should not be seen as phases or stages of a project life-cycle. Rather the processes that repeat themselves, *i.e.* they are “iterative”. This means that an output of a process would serve as an input for the next process and so forth. However, the process groups as such are performed in the same order (PMBOK Guide, 2008:43).

The activities taking place in each process group can be summarised in terms of the overall function or output of the particular process, as indicated below (PMBOK Guide, 2008:43; Burke, 2010:66):

- **Initiating** – Start off the process by developing a project charter and conducting a feasibility study (PMBOK Guide, 2008:43-65; Burke, 2010:67-72).
- **Planning** – Begin by defining the project scope and outlining all activities of the project; this will culminate in the development of the project-management plan, which outlines the order of activities, costs, resources, aspects of project quality and possible risks (PMBOK Guide, 2008:43-65; Burke, 2010:67-72).
- **Executing:** Implement the project activities as outlined in the project-management plan (PMBOK Guide, 2008:43-65; Burke, 2010:67-72).
- **Monitoring and controlling:** The performance monitored of the project’s team members in terms of the project-management plan, changes are identified and effected as well as the risks and quality aspects of the project (PMBOK Guide, 2008:43-65; Burke, 2010:67-72).
- **Closing:** The project is formally closed by returning resources to the parent organisation, project report is presented to internal and external stake holders and the project is handed over to the clients or beneficiaries (PMBOK Guide, 2008:43-65; Burke, 2010:67-72).

The above “management by projects” systems and processes assist in ensuring the successful implementation of projects. However the systems and processes alone will not ensure the success of a project. Project performance, monitoring, evaluation and reporting mechanisms within organisations contribute significantly to the success of projects. The following subsection will document performance, monitoring, evaluation and reporting mechanisms for efficient project management.

2.3.9 Performance reporting, monitoring and evaluation mechanisms that support the notion of "management by projects"

Monitoring of a project entails gathering, capturing, analysing, recording and reporting the relevant project information to the stakeholders (Crawford & Bryce, 2003:366; RSA, 2005c:4; Portny *et al.*, 2008:317). This aspect of the process, therefore, focuses on the efficiency of the project, *i.e.* "doing the things right" (Crawford & Bryce, 2003:366). On the other hand, evaluation is an assessment process that takes place periodically to learn and make adjustments. This aspect focuses on effectiveness*,* i.e. "doing the right thing" (Crawford *&* Bryce, 2003:366). Crawford and Bryce (2003:366), and Portny *et al.* (2008:318) also point out that monitoring is more concerned with cost, time and quality of the project, i.e. how the inputs are converted into outputs, whereas evaluation focuses on the justification, worthiness or validity of the project.

Crawford & Bryce (2003:363) go on to state that project performance is about "balancing demands for efficiency and effectiveness". Project performance is, therefore, about communicating information on the status of a project to all stakeholders in a verbal or written format. This is done through meetings, stakeholder engagements by comparing the progress of the project against the project expectations (Wideman, 2007:3; Thompson *et al.,* 2007:197).

In line with the above assertions, municipalities are obligated to develop a system for performance management in consultation with the community. Such a performance management system requires: clear Key Performance Indicators (KPIs) addressing the priorities set out in the IDP (RSA, 2000; and RSA, 2001). Following the project-management systems and processes outlined in paragraph 3.8 above, the monitoring of a project's performance can be conducted at the following levels within a project life-cycle:

- **Input:** Monitors the use of resources in a project such as budget, personnel (RSA, 2000; RSA, 2001; RSA, 2005a:8).
- **Activity:** Focuses on activities of a project during the implementation phase and the fact that they are carried out according to a specified schedule (RSA, 2000; RSA, 2001; RSA, 2005a:9).
- **Output:** The monitoring of services or results, i.e. the translation of inputs into outputs (RSA, 2000; RSA, 2001; RSA, 2005a:9).
- **Impact:** – Monitors the objectives of the project, i.e. whether the project achieved its objectives and has developmental impact on the beneficiaries (RSA, 2000; RSA, 2001; RSA, 2005a:9).

- **Assumption/risk:** Focuses on external factors to the project and related risks (RSA, 2000; RSA, 2001; RSA, 2005a:9).

Project performance, and monitoring and evaluation should be in "line with the priorities, objectives, indicators and targets" as outlined in the IDP of the municipality (RSA, 2000). This implies that it remains the municipal council's responsibility to ensure that developmental programmes and projects are identified and implemented according to set targets and indicators. Where performance is not on target, corrective measures should be set up (RSA, 2000). Performance reports should be discussed with the municipal council, officials, political structures and staff, in other words, all stakeholders to the programme and project. The municipality should put in place proper mechanisms and systems to ensure that the community is involved in reviewing the municipality's performance in this matter (RSA, 2000).

In line with the project monitoring levels indicated above, the next section will present the critical success factors that contribute to the success of public service organisation "management by projects".

2.3.10 The Critical Success Factors

Many authors of project management in different fields point out that Critical Success Factors (hereinafter referred to as CSFs) of projects is an area that did not receive much attention in the early periods of research on project management (Diallo & Thuillier, 2005:237; Khang & Moe, 2008:72; Ika *et al.,* 2012:105). Muller and Jugdev (2012:758) distinguish that the two components of project success, are conceptualised by Morris and Hough (1987), Wateridge (1998) and Turner (1999) cited in Muller and Jugdev (2012:758) as follows:

- Project success factors – "the elements of a project which, when influenced, increase the likelihood of success and are therefore referred to as independent variables" (Muller & Jugdev, 2012:758).
- Project success criteria – "are the measures used to judge on the success or failure of a project, are therefore regarded as dependent variables" (Muller & Jugdev, 2012:758).

Fortune and White (2006:53) refer to the conceptualisation of CSFs as "the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for an organisation". Muller and Jugdev (2012:761) revisit the original definition of project success as outlined in the first edition of the PMBOK Guide (PMBOK, 2000), which conceptualised it as "meeting or exceeding stakeholder needs and expectation by balancing competing demands among scope, time, costs, quality, stakeholders with different needs and

expectations, identified requirements (needs) and unidentified requirements (expectations)". Furthermore, Westerveld (2002:412) cautions scholars of project management about a narrow perception that criteria for project success means satisfying the time, cost and quality constraints.

Yu and Kwon (2011:889) contend that the identification and understanding of CSFs in a project will aid the monitoring and control of a project assignment effectively. As the nature of project types differ, it becomes difficult to enlist and apply the same CSF across all project types. The CSFs will depend on the project type and size, as well as the complexity and environment of the project (Westerveld, 2002:412; Gudiene *et al.,* 2013:25). Muller & Jugdev (2012:758) assert that some CSF's can, however, be applied to different project types that have a commonality.

Literature on project management has suggested different lists of CSFs depending on the type of the project (Westerveld, 2002:412; Cook-Davies *et al*., 2009:117; Muller & Jugdev, 2012:761; Ika *et al.*, 2012:107). According to Ika *et al*. (2012:112) and Westerveld (2002:412), some authors list CSFs relating to the project, project manager and team, organisation and external environment. Ika *et al. (*2012:105), referring to research done by Pinto and Slevin (1988) cited in Morris and Pinto (2007:118), listed the following as CSFs: "project mission, top management support, project schedule, client consultation, personnel, technical tasks, client acceptance, monitoring and feedback, communication". Westerveld (2002:412) refers to criteria for project success as result areas, and to CSFs as organisational areas. He further uses a model for project excellence to outline the following organisational areas: "leadership and team, policy and strategy, stakeholder management, resources contracting and project management" (Muller & Jugdev, 2012:761).

A review of the literature above indicates the importance of understanding CSFs. This helps to ensure success of a project and allocating the correct resources to the project. Scholars pointed out that the success of a project cannot only be measured in terms of the cost, time and quality constraints, due to external factors also influencing the project (Westerveld, 2002:412; Cook-Davies *et al*., 2009:117; Muller & Jugdev, 2012:761; Ika *et al.*, 2012:107).

In view of these assertions, the study adopts the conceptualisation of CSFs that extend beyond the narrow definition of the management of time, cost and quality. The success of a project will, therefore, depend on project managers being fully aware of the broader definition CSFs. Such a definition includes: competing demands among scope, time, costs, quality, project mission, support from top management, project schedule, client consultation, personnel, technical tasks, monitoring and feedback, communication, as well as stakeholder

needs and expectations as outlined by Pinto and Slevin (1988) cited in Morris and Pinto (2007:118); Westerveld (2002:412); Ika *et al.,* (2012:112;); and Muller and Jugdev (2012:761). This definition of CSFs should enable managers in the public service and particular in local government to put in place remedying mechanisms and strategies to ensure the delivery of projects in organisations.

This sub-section outlined features of efficient "management by projects" that are critical at strategic level. The following sub-section will examine the features of such "management by projects", which are critical at tactical level to ensure successful delivery of projects.

2.4. FEATURES OF "MANAGEMENT BY PROJECTS" AT THE TACTICAL LEVEL OF A LOCAL GOVERNMENT ORGANISATION

The following section will present features of "management by projects" that are critical to consider at the tactical level of a public organisation such as the MHLM.

2.4.1 Translating strategy into programmes and programmes into projects

According to Morris and Pinto (2007:114) and the NSG's Programme and Project Management Study Guide (RSA, 2010c:29), programme management occurs at "strategic level" whilst project management occurs at "tactical and operational" levels. This section of Chapter 2 will attempt to determine whether there is a connection between strategic management and programmes (strategic level), programmes and projects (tactical level) and projects (operational level).

The process of strategic management as outlined by Knipe *et al.* (2002:43) and Gray and Larson (2006:24) in paragraph 2.3.3 and 2.3.7.3, emphasise the existence of a strong link among vision, mission, goals, objectives, strategy and implementation. The implementation of strategies as explained by Gray and Larson (2006:24) is achieved through actions and tasks which are represented by projects. In this sense projects serve as vehicles or tools to implement organisational strategies, which in turn would ensure that organisational objectives are achieved. This follows the assertions by Klakegg *et al.* (2008:27), Cooke-Davies, Crawford and Lechler (2009:111), as well as Patanakul and Shenhar (2011:5). The link between strategic management and projects as demonstrated by Knipe *et al*. (2002:43), as well as by Gray and Larson (2006:24), is illustrated in **Figure 2.2**.

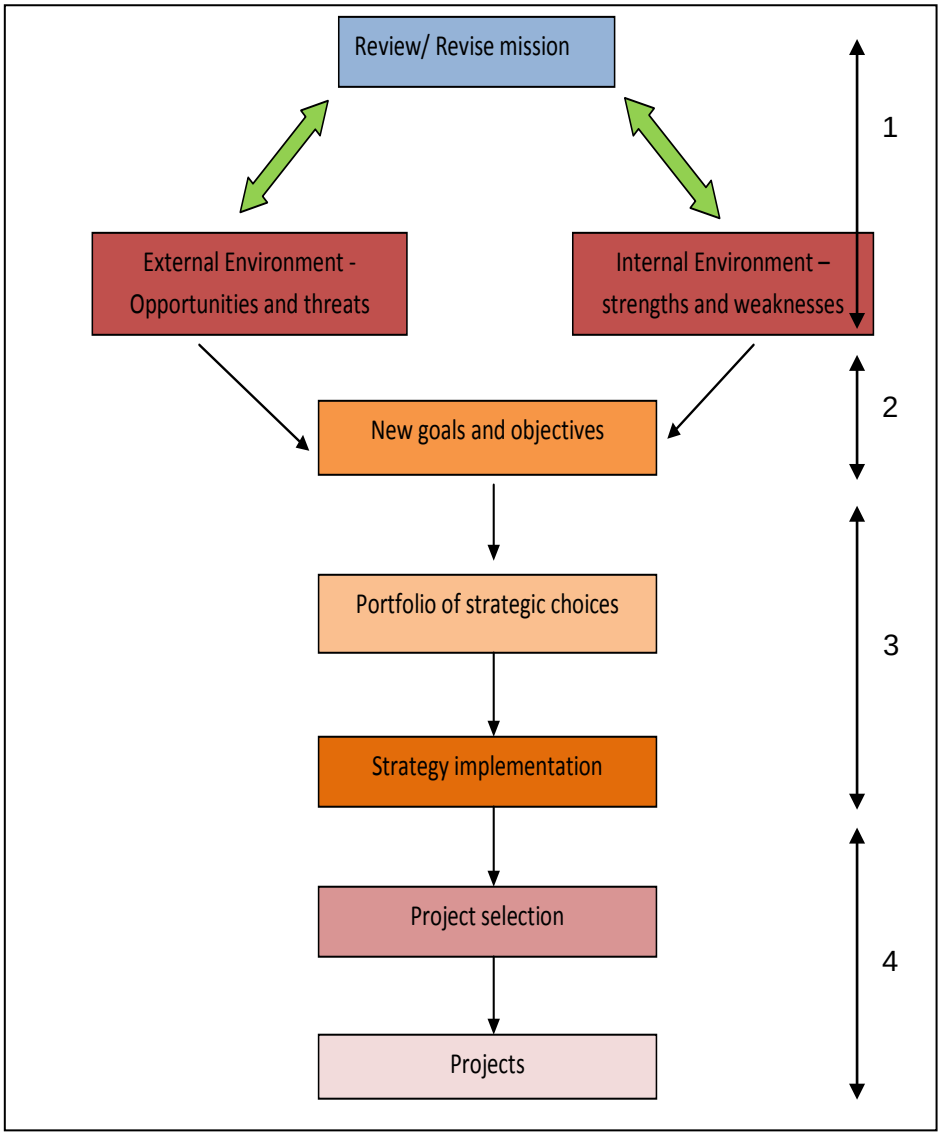

Figure 2.2: The link between strategic management and projects (**Source:** Gray and Larson, 2006:24).

Figure 2.2 above indicates the connection between strategic management and projects from phases 1 to 4. These phases indicate a sequence of activities undertaken by managers at different levels of strategic management as elaborated upon below (Gray & Larson, 2006:23). In the case of the public service in South Africa, a similar structure as depicted in Figure 2.2 link the three levels of strategic management with the policy level that is led by the Minister/MEC and the Director General (DG) (RSA, 2010a:14). These phases denote the following processes:

- **Phase 1 and 2:** reviewing and crafting of organisational mission as well as setting long-range goals and objectives at strategic level (Gray & Larson, 2006:23). In the case of the government the strategic level is managed by the Director General and Chief Directors responsible for a portfolio of programmes (RSA, 2010a:14).

- **Phase 3:** analysing, formulating and packaging strategies into programmes to achieve objectives at the tactical level of strategic management (Gray & Larson, 2006:23). This tactical level in the case of the government involves the management of programmes controlled by Directors or the Deputy Director (RSA, 2010a:14).
- **Phase 4:** implementing strategies through projects at the operational level of strategic management (Gray & Larson, 2006:23). Projects at operational level in government serve as tools to implement governmental strategies managed by Deputy Directors, divisional heads or supervisors together with their respective units or divisions (RSA, 2010a:14).

Furthermore, **Figure 2.2** illustrates the argument by Nel (2001:608-609) that local municipalities should view service delivery as a policy packaged in programmes that are further sub-divided into projects for the purpose of implementation. Classic examples of South African government policy implemented through programmes and projects are the RDP, GEAR, AsgiSA, NGP and NDP (RSA, 1994; Leibbrandt, van der Berg & Bhorat, 2001:16; Adato, Carter & May, 2006:227; RSA, 2006a; Berk, 2007:489; Van Aardt *et al*., 2011:1; RSA, 2011a). The diagram in **Figure 2.2** in addition demonstrates a link between policy, programme and projects. This entails the implementation of policy through a programme approach and turned into action through projects, as argued by Nel (2001:608-609) and Knipe *et al*. (2002:43) and illustrated by Gray and Larson (2006:24). This process of implementation is further included in the White Paper on Local Government, 1998 (RSA, 1998a). The White Paper on Local Government, 1998 (RSA, 1998a) makes reference to IDP as a strategic plan that ensures the achievement of developmental projects at local government level.

From the above scholarly arguments and the illustration in **Figure 2.2**, it can be inferred that the strategic management of a municipality, in terms of the link between strategic objectives and programmes (strategic level), programmes and projects (tactical level) and projects (operational level), should be demarcated into the following three levels:

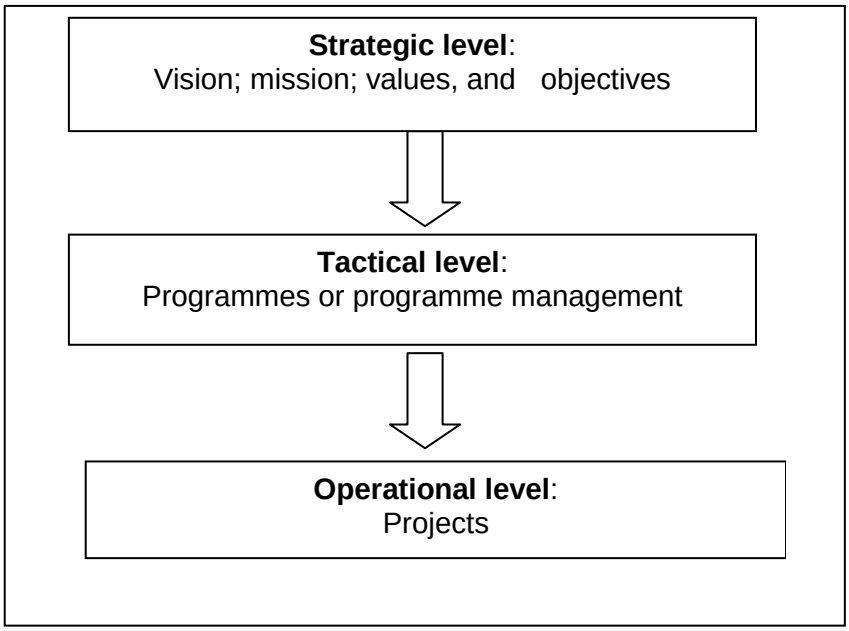

Figure 2.3: inferred strategic levels of a municipality (**Source:** Researcher's own compilation)

Figure 2.3 represents the inferred levels of strategic management in the municipality as explained below:

Strategic level: Crafting of the vision, mission and strategic objectives of the municipality in line with the drivers at national, provincial and local level as indicated in Section 2.3.1 of this chapter.

Tactical Level: Strategic objectives are demarcated further into programmes on the basis of unique features (cf. Pellegrinelli, 1997:143).

Operational level: The implementation of projects through Project Life Cycle phases and modalities.

The connection between strategic management and programmes (strategic level), programmes and projects (tactical level) and projects (operational level), as established above, is key to ensure that public service managers at strategic level are able to direct programmes and projects and provide oversight support to managers at the tactical level of a public organisation and officials at the operational level. This is done to ensure that departmental objectives are achieved and services are delivered to communities in an effective and efficient manner through projects used as implementation tools (RSA, 2010c:29). The government of South Africa acknowledged that in order to achieve an effective transition between policy and implementation of projects in South Africa, it will take on the responsibility of sustaining a "golden nexus" between the aspects of policy, programme and project (DPSA, 2003). In addition to the link between strategic objectives,

programmes and projects established above, the next Section will expand on the ten knowledge areas within a project.

2.4.2 Project Knowledge Areas

The process of “management by projects” and its related ten knowledge areas are critical to ensure that service delivery “outputs” are achieved at operational level (Muller & Jugdev, 2012:761). This sub-section will therefore examine the ten knowledge areas or features more closely.

2.4.2.1. Project human resource management and team structures

The project human resource management is a knowledge area that entails the skills and ability to select, form, manage and lead the project team (Tomczyk, 2005:56; and Burke, 2010:316). The PMBOK Guide (2008:216) asserts that managing and leading a project team includes being able to influence the team positively and making sure that the team members uphold professional and ethical behaviour that contributes to the success of the project. The inclusion of a project team is critical as the project success also depends on the project’s human resources (Tomczyk, 2005:57). A project team can be seen as “a number of people working together to achieve a shared common goal” (Burke, 2010:317). It is, therefore, the municipality’s responsibility to ensure that the duties and roles of political officials, political office bearers, managers and other staff are aligned with the priorities and developmental projects as prescribed in the IDP of the municipality (RSA, 2000). The municipality is further required to submit the details and qualifications of personnel who are delegated to serve in a PMU, depending on where the PMU is located (local or district municipality) (CoGTA, 2007:8). The following processes that support project human resource management should be instituted in order to achieve the alignment mentioned above (PMBOK Guide, 2008:215):

- Develop the human resources plan – the project leader should outline the roles, responsibilities and skills required to execute the project successfully. The process should also include the reporting mechanisms that are envisaged, depending on the type of the organisational structure (PMBOK Guide, 2008:215). This process should culminate in the development of the staff-management plan.

- Acquisition of the project team – the project leader should acquire human resources that can form part of the project team according to the skills, roles and competencies that are required and necessary to complete the project (PMBOK, 2008:215).

- Develop a project team – the project leader should build and harness skills of individual members to match the tasks required by the project (PMBOK, 2008:215). In line with the definition of a project team, Burke (2010:317) alerts to the fact that it is the project leader's duty to ensure that team members are fully aware of their roles and responsibilities and how they are expected to contribute to the overall achievement of the project success. Tomczyk (2005:64-65) and Burke (2010:324) point out that the project leader can ensure good working relations and interaction among team members by a team development process, consisting of the following phases: "forming, storming, norming and performing".

- Manage the project team – the team leader is expected to manage and monitor the performance of individual members, ensuring interaction among members, as well as effecting changes to the project or managing these changes (PMBOK, 2008:215).

The above mentioned human resource processes should be managed in line with the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) as explained in paragraph 2.3.1.6 in this chapter. Furthermore the municipality can establish a PMU leader by a suitably qualified person or an engineer (professional or technical) depending on the nature of the project (CoGTA, 2007:7) in line with paragraph 2.3.1.7 in this chapter.

2.4.2.2 Project scope management

A Project scope management is a process of outlining the different activities of the project, including the needs of the customers, the processes involved in achieving the product and its impact on the customers (Burke, 2010:114). The PMBOK Guide (2008:103) and Burke (2010:115) are in agreement that the management of a project scope includes the following processes:

- Collecting requirements: This is achieved by outlining customer needs and the expectations of the project (PMBOK Guide, 2008:103; Burke, 2010:115).
- Scope definition: Involves the project outline and the expected product (PMBOK Guide, 2008:103; and Burke, 2010:115).
- Developing WBS: Entails the process of unpacking and pacing all project activities on a WBS (PMBOK Guide, 2008:103; Burke, 2010:115).
- Scope verification: Producing clear project deliverables (PMBOK Guide, 2008:103; Burke, 2010:115).
- Control scope: Monitor project activities and effecting changes to ensure that the expected product is delivered (PMBOK Guide, 2008:103; Burke, 2010:115).

2.4.2.3 Project time management

Time management for a project entails a process of indicating the overall time requirements to complete the project (Burke, 2010:146). The successful completion of the project within time specifications include the following actions (PMBOK Guide, 2008:129-168): listing the different project activities; pacing the activities; specifying the necessary resources to complete each activity; estimating the time to complete each activity; developing the project schedule; lastly arranging control mechanisms to monitor the project schedule (PMBOK Guide, 2008:148).

2.4.2.4 Project cost management

The creation of a financial plan or budget will be done according to the type and quantity of resources, as specified on the Resource plan as well as the WBS (PMBOK Guide, 2000:83, 87; Wideman, 2007:4). Abdomerovic (2012:3190) asserts that the purpose of the financial plan or budget is to ensure that the client or organisation can afford the costs involved. The financial plan should, therefore, detail the total cost of labour, equipment and materials that the project would require (Cobb, 2012:47; Wideman, 2007:4). Cobb (2012:47-48), Lientz and Rea (2002:182), and Portny *et al*., (2007:122) distinguish two ways of estimating and developing a project's financial plan or budget:

- Top-down or analogous estimating: The method uses as a baseline the estimates of previous similar projects on resources, time and costs to develop a budget for the current project through adjustments (Lientz and Rea, 2002:182; Portny *et al.*, 2007:122; Cobb, 2012:47-48). Cobb (2012:47-48) and Portny *et al.* (2007:122) argue that the method can be performed in a very short time, provided that the records of previous projects are available. The disadvantage of this method is that the needs and conditions, or circumstances of projects differ, which may cause many issues relating to the current project to be overlooked (Portny *et al*., 2007:122; Cobb, 2012:47-48).

- Bottom-up estimating: The method analyses each task and activity as outlined in the WBS and Gantt chart to make estimations of resources, time and cost from a "zero base" (Lientz & Rea, 2002:182). These estimates are then rolled up for the entire project (Cobbs, 2012:47-48; Lientz & Rea, 2002:182; Portny *et al.*, 2007:122). Cobb (2012:48) and Portny *et al.* (2007:123) point out that the method allows a more accurate estimate of the budget, but takes much longer. Portny *et al.* (2007:122) further argues in favour of bottom-up budgeting as it allows for participative management by

project sponsors, project leaders, as well as general and operational managers involved in the project.

The total budget of the project should be laid out to all stake holders, in particularly the clients, before the project is implemented, (Abdomeric, 2012:193; Cobb, 2012:47-48; Lientz & Rea, 2002:182; Wideman, 2007:4). In view of this insight, Matsiliza (2012:446) argues in favour of participatory budgeting (PB) at local governmental level. PB would allow the broader community to assist the municipality in terms of information and capabilities for programmes and projects. In turn this participation would ensure that these projects are completed effectively (Matsiliza, 2012:446; CoGTA, 2007:49). Calculating the project cost or financial plan, should be followed by setting up the project's quality plan. Of critical importance is that all budgetary processes and project expenditure should take place as required by the MFMA, 2003 (RSA, 2003a) and as outlined in paragraph 2.3.1.5 of this chapter and the Preferential Procurement Policy Framework, 2005 (RSA, 2005b).

2.4.2.5 Project quality management

To ensure that a project's deliverables are achieved and to address customer's expectations, a quality plan should be implemented for the project. The quality plan should define the concept of quality for the project. Knipe *et al*., (2002:227) and Turner (2009:141) are in agreement that the quality of a project output should include the following aspects: "meet the customer's requirements or satisfies the customer, meet its specifications, the project should be fit for its purpose and the resources should be used efficiently in the design and operation of the output or project product" (Knipe *et al.*, 2002:227; Turner, 2009:141).

Therefore, to achieve quality output for the project or product, the project team should employ the following processes to manage project quality (PMBOK Guide, 2000:95; Turner, 2009:146-148):

- Quality planning: Helps to identify quality standards and targets for the various deliverables in a project (PMBOK Guide, 2000:95; Turner, 2009:146-148).
- Quality assurance: Assess how the project performs on an on-going basis to ensure that it will meet the standards as identified in the quality planning (PMBOK Guide, 2000:95; Turner, 2009:146-148).
- Quality control: Helps project teams to monitor and control the project's results and ensure compliance with quality standards as identified in the quality planning (PMBOK Guide, 2000:95; Turner, 2009:146-148).

2.4.2.6 Project communication management

The project's quality plan is followed by a communications plan. This plan ensures a constant communication between project team, beneficiaries, customers and the various stakeholders (Wideman, 2007:3). It allows the stakeholders to reflect on the project's progress and performance and to identify problems and strategies to counter risks (PMBOK Guide, 2000:117). The Local Government: Municipal Systems Act 32 of 2000, (RSA, 2000) requires municipalities to communicate to the stakeholders the mechanisms, procedures and processes of community involvement and participation, the rights and duties of community, as well as the issues on which community participation is expected (RSA, 2000). The following methods of communication apply to different types of projects. It can also be used during different phases of a project to inform stakeholders about the progress made and the challenges and risks that might hinder the completion of the project according to schedules. This communication can be oral, written, graphical, numerical and electronic (RSA, 2001:610; Knipe *et al.*, 2002:110-113). At municipal level communication with the community can be done through a notice in a newspaper circulated in the community, or through broadcasting over community radio (RSA, 2000).

2.4.2.7 Project risk management

The communication plan should be followed by compiling a plan for risk management. Knipe *et al.,* (2002:320) defines risk as "the expected losses (economic, time, infrastructure or resources) that a particular phenomenon might cause". Cobb (2012:87) views risk as "some probability that a problem will emerge in a project and have a negative impact on it." Kerzner (2003:653) typifies risk as "a measure of the probability and consequence of not achieving a defined project goal". The Risk Management Framework (RSA, 2004) defines risk as "an unwanted outcome, actual or potential, to the Institution's service delivery and other performance objectives, caused by the presence of risk factor(s)."

In light of the definitions above, the view of Lientz and Rea (2002:240) can be mentioned: the purpose of the risk-management plan is, therefore, to identify and enlist all possible risks which can be associated with the project; outline strategies to prevent or mitigate these risks. In this sense, Abdomerovic (2012:193) maintains that the purpose of a risk-management plan is to be proactive in identifying, recognising and managing possible eventualities in the internal, external environments or in the project itself, which might make the project not as effective. The risk-management plan thus allows project leaders to be proactive in their approach to identify and respond to risks associated with their projects (Cobb, 2012:87). In line with the above assertions, Sections 62(1) (c)(i) and 95(c)(i) of the MFMA, 2003,

(RSA,2003a) requires the Accounting Officers to ensure that their municipalities have and maintain effective, efficient and transparent systems of risk management.

A risk-management process thus helps project leaders to deal effectively with risks (Gray & Larson, 2006:208). The following actions and steps were identified for a risk-management process: risk identification, assessment, risk response plan, monitoring and review (Cobb, 2012:87). Kerzner (2006:662) identifies the following steps: risk planning, assessment, risk handling and risk monitoring. Gray and Larson (2006: 209) outlines the following steps of such a process: risk identification, assessment, risk response plan and risk response control, and Turner (2009:209) the following steps: risk identification, assessment, prioritisation, analysis, response plan, and risk management. These steps for the process of risk management are almost identical except that Turner (2009:209) includes risk prioritisation, which allows the project team to further categorise the steps to impact on the project.

The risk-management process identified above is in line with the process prescribed to municipalities by the Risk Management Framework (RSA, 2004): “risk identification, assessment, response, communication and reporting, and lastly risk monitoring”.

The identification and analysis of risks is critical to ensuring that a project is delivered according to schedule, cost and performance requirements (Tarr & Carr, 2001:837). The project will only be delivered successfully regarding cost, quality and time if possible risks to the project are identified from the initial to the final stage of the project (Gray & Larson, 2006: 208). These risks should include impediments to quality, performance, health and safety, financial, commercial, management and the company’s or organisation’s image (Tarr & Carr, 2001:837). The project leader should ensure that identified risks are monitored and their impact on the project minimised. This can be done by drawing up contingency plans and allocating contingency funds to curb the effects of the minimised risks (Abdomerovic, 2012: 319). In the process, a management plan to counter project risks will be followed by a plan to management procurements for the project. The Risk Management Framework (RSA, 2004) requires municipalities to set up risk mechanisms and processes, which would ensure that their service delivery is sustainable and reliable.

2.4.2.8 Project procurement management

Procurement is defined as “the acquisition of goods and services and involves two parties with different objectives who interact in a given market segment” (Kerzner, 2006:812). The plan to manage procurements functions as follows: it identifies all the goods and services required by the project from external suppliers. This plan should be drawn up in accordance

with the relevant policies of the organisation that outline its tender processes. The plan should also be in line with the procurement processes, contracts with the suppliers and service level agreements (Knipe *et al.*, 2002:289; Kwak & Ibbs, 2002:153; Kerzner, 2006:812-813; Wideman, 2007:6).

The procurement policy in the local sphere of government in South Africa adheres to the values and principles of the Constitution, 1996, (RSA, 1996), Local Government: Municipal Finance Management Act 56 of 2003, (RSA, 2003a) and the Preferential Procurement Policy Framework, 2005, (RSA, 2005b). Knipe *et al.* (2002:289–290) assert that a procurement policy should bear the following principles in its design features: “Fairness, Equity, Accessibility, Transparency and Accountability” (Knipe *et al.*, 2002:289–290).

Procurement planning is followed by the requisition cycle according to which sources of goods are analysed and confirmed, (Kerzner, 2006:812-813; Kwak & Ibbs, 2002:153). Solicitation is carried by getting quotations or proposals from potential suppliers (PMBOK Guide, 2000:147; Javed, Manzil-E-Maqsood & Durrani, 2006:8). The prospective suppliers will be selected by negotiating and will be awarded the contracts (Kerzner, 2006:812-813; Kwak & Ibbs, 2002:153). The Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) directs municipalities to decide on mechanisms that can be used to provide services to communities in an equitable and transparent manner. This should be done by considering both the internal (municipality) and external (service providers) mechanisms. If services are provided through external service providers, which may be a municipal entity, another municipality, organ of the state, or a community based organisation. In that case the municipality should enter into a service-level agreement with such a service provider according to Section 76(b) of the Local Government: Municipal Systems Act 32 of 2000, (RSA, 2000).

The municipality can also decide to provide services to the community through agreements on service delivery. This would involve competitive bidding (RSA, 2000), in which case the objects of the Preferential Procurement Policy Framework, 2005, (RSA, 2005b) would apply. Services in the public service should be contracted through competitive bidding and in line with the tendering process and procedures which include: “determination of requirements; preparation of tenders; publication, closing and opening of tenders; evaluation of tenders; recommendation and approval of tenders; and acceptance of tenders” (RSA, 1968).

The provision of services to communities through external mechanisms and external service providers involving competitive bidding does not exonerate the municipality from its developmental role. The municipality should still ensure that these services are provided in

an effective, efficient and economic manner, and in line with the priorities of the municipal IDP and the objects of relevant legislative underpinnings. The Local Government: Municipal Systems Act 32 of 2000, (RSA, 2000) directs municipalities to create mechanisms that involve local communities and let them participate in the affairs of the municipality. Thus, it is important for municipalities to create mechanisms in which relevant stakeholders of projects that are prioritised in the IDP are effectively and efficiently identified, involved and managed. The next subsection will focus on managing project stakeholders.

2.4.2.9 Project stakeholder management

Project stakeholders are defined by El-Gohary, Osman and El-Diraby (2006:595) as "individuals or organisations that are either affected by or affect the development of the project". Cleland and Ireland (2010:134), and Newcomb (2003:843) view project stakeholders as "a party who has a claim or stake regarding a project". Thus, from these definitions it can be deduced that project stakeholders include individuals, interest groups, project owner, service providers, organisations, institutions or agencies that stands to benefit from the project or its outcome (Wang & Huang, 2006: 254; Cleland & Ireland, 2010:134). Project stakeholders can be categorised into primary and secondary stakeholders as explained below (Hillman & Keim, 2001:126; Newcomb 2003:843):

- Primary stakeholders have a contractual or legal obligation to the project. They are, for example, project managers, employees, creditors, shareholders, unions, organisational managers, communities, users and the government,

- Secondary stakeholders have no contractual obligation to the project, for example the media, social organisations, or tourists (Hillman & Keim, 2001:126; Newcomb 2003:843; Cleland & Ireland, 2010:134).

Newcomb 2003:843) further categorises the primary stakeholders into those found inside the project such as "designers and contractors," and those found outside the project such as "users and the community". According to the definition above, the following groups can be classified as primary stakeholders at local municipal level: the municipal council, municipal manager and other managers, officials working in the municipalities, IDP Representative Forum, PMU, the local community including people who cannot read or write, people with disability, women and disadvantaged groups, social groups, and contractors (RSA, 2003b; McEwan, 2003:473; RSA, 2007:6; Van der Waldt, 2010:258).

The successful implementation of a project requires project teams to help manage the stakeholder process, which entails: “identifying stakeholders, gathering information on stakeholders, identifying stakeholders mission, determining stakeholder strengths and weaknesses, identifying stakeholder strategy, predicting stakeholder behaviour, and lastly implementing stakeholder management strategy” (Cleland & Ireland, 2010:134). At local municipal level the process to manage project stakeholders should correspond with the process drafted by the IDP. This will include consulting with the local community through IDP processes on its developmental needs and priorities for service delivery, and identifying provincial, national and district plans to be considered for inclusion in the local municipal IDP (RSA, 2003b; McEwan, 2003:473).

The stakeholder-management process is critical to project managers to understand the needs and expectations, and also the power and influence the stakeholders can exert on the overall project and its objectives (Olander, 2006:277). Such a process is also critical in ensuring that the project is successfully implemented within the allotted project time and cost, and according to quality constraints. It should also be meeting the needs and expectations of the users and communities as these variables are salient features of CSFs adopted in section 2.3.10 of this chapter (Olander, 2006:277). The success of stakeholder management will largely depend on constant communication with stakeholders and if the goals, objectives and priorities of the project are clearly defined for all stakeholders (Yang *et al.*, 2009:337). At local municipal level this project management manifests in a form of community participation and awareness (CPA) (CoGTA, 2007). The CPA ensures a link between the project team and the community. This also gives the community the opportunity to participate in the implementation, monitoring and evaluation of the project, which helps ensure sustainable service delivery to local communities.

2.4.2.10 Project integration management

Project integration is defined as “a process of bringing people, activities and other things together to perform effectively” (Burke, 2010:53). The structure for managing project integration entails the following aspects: “project management process, project management plan and project life cycle” (Burke, 2010:53). The process of project-integration management as such consists of: “the project charter, management plan, project execution, project monitoring and control, integrated change control and finalising of the project” (PMBOK, 2008:215). At municipal level it remains the responsibility of the PMU to ensure that the project is integrated with the following components: Infrastructure Investment Framework (IIF), the IDP, inputs from other departments, the Provincial Growth and Development Strategy, as well as priorities outlined in the NDP (RSA, 2011a:9).

This section outlined features of “management by projects” that are critical at tactical level. The following section will investigate the implementation of projects at operational level.

2.5. FEATURES OF “MANAGEMENT BY PROJECTS” AT THE OPERATIONAL LEVEL OF A LOCAL GOVERNMENT ORGANISATION

The implementation of a project follows a particular cycle called project life-cycle, consisting of different phases that follow a chronological order from conceptual/Initiation phase to termination phase of a project (Nel, 2001:610). The project life cycle is underpinned by the perspective of the Department of National Treasury explained below.

2.5.1 National Treasury’s perspective on project management

In the State of the Nation Address (hereinafter referred to as SoNA), (RSA, 2003c) by a former President of South Africa, Mr Thabo Mbeki, he emphasised the critical role played by the local government in discharging key service delivery initiatives to communities. President Mbeki urged the national and provincial spheres of government to support local government in efforts to improve its managerial, administrative and technical capacity, and by appointing project managers to implement service delivery projects. At the occasion of the International Quality and Productivity Centre conference (IQPC), held on the 26 November 2003 in Johannesburg, the former Minister of Public Service and Administration acknowledged the role that project management can play in helping the public service to be more effective in service delivery by ensuring that scarce resources are not wasted or underutilised (DPSA, 2003).

In this regard, the Department of National Treasury, assisted by departments within the Presidency, as well as the DPSA and CoGTA, were tasked to develop a framework on how the public service can utilise project management to implement government projects (DPSA, 2003). The effective use of project management in the public service through collaboration of departments that are directing the implementation of the MIG will enhance service delivery results as envisaged by the Department of National Treasury (RSA, 2012a). National Treasury has therefore developed a programme and project management tool-kit to enhance the use of “management by projects” in the public service. The main purpose of such a tool-kit is to focus on policy implementation, which is referred to as an “outward focus” (RSA, 2012a). This entails a strategic focus on the following tenets of project management: “increased efficiency, accountability, transparency and democratisation of government operations; decentralisation of authority; and improved resource management” (RSA, 2010a:11; RSA, 2012a).

In addition, the Department of National Treasury (RSA, 2007:1) has also developed an information document on the framework for managing programme performance. The framework (RSA, 2007:1) helps the government to collect information on performance. This information will measure the public service's use of resources to deliver services to the communities (RSA, 2007:1). This should be done through proper management of the following features of "management by projects" (RSA, 2007:1): planning, budgeting and implementation, monitoring and reporting. In order to measure the extent of service delivery to communities, the information on performance should be classified in terms of the inputs, activities, outputs, outcomes and impacts as elaborated below (RSA, 2007:6):

- Inputs – the resources used to render services to communities.
- Activities – the actions undertaken by public service managers to translate the inputs into outputs.
- Outputs – the services rendered to communities.
- Outcomes – the intended goals of the government
- Impacts – the effects of an outcome to the beneficiaries.

In line with the National Treasury's perspective on project management, all categories of municipalities are required to achieve the priorities or agenda of local government through project life cycle expounded below.

2.5.2 Project life-cycle

All projects undergo phases known as project life-cycle phases (Petrick & Brent, 2000:4). The number of phases within a life-cycle, as well as the terminology of phases, differs from one project to another (Kerzner, 2001:76; Labuschagne & Brent, 2004:162). The Project Management Institute (PMBOK Guide) (2000:192) defines a project life-cycle as "a collection of generally sequential project phases whose name and number are determined by the control needs of the organisation or organisations involved in the project". Turner (2009:9) defines project life-cycle as "the process that takes us from vision to reality," while Hewagamage and Hewagamage (2011:98) views it as "a collection of generally sequential and sometimes overlapping project phases".

A project life-cycle helps project leaders to define and identify, at an early stage, the aspects of the project such as technical skills needed, risks, resources and human resource roles and responsibilities. They are also enabled to identify a failing project in time and avoid fruitless and wasteful expenditure (Kloppenborg & Patrick, 1999:8), in other words, expenditure which was incurred without deliverables, or money spent for no purpose. Reasonable steps should be taken in future to avoid this expenditure (RSA, 1999:7; RSA. 2003a:16).

Phases of a project life-cycle vary and are classified according to the type of project (Gomes, Yasin & Small, 2012:316). Life-cycle phases can be sequential, overlapping or spiral. Sequential and overlapping models are commonly used in many projects to achieve organisational objectives, whilst a spiral model is used mainly in software development and projects regarding information systems (Patanakul, Lewwongcharoen & Milosevic. 2010:46). A Sequential project lifecycle occurs when project activities are carried out in sequence until satisfactory results are achieved from the last function before continuing with the next activity of the project (Yazdani & Holmes, 1999:27). The spiral model follows a cyclic process in which a project is defined and implemented, while simultaneously minimising risks which may affect the success rate of the project (Boehm & Hansen, 2001:4).

In terms of Government Technical Advisory Centre of the Department of National Treasury, the government project phases consist of concept, definition, planning, implementation and close-out (RSA, 2012a:online). The Infrastructure Delivery Improvement Programme (hereinafter referred to as IDIP) of the Department of National Treasury (RSA, 2012b:online) outlines governmental infrastructure projects according to the following phases: “planning, Design, Works, and Close-out”. The NSG Programme and Project Management Study Guide (RSA, 2010c:95) describes the following as phases of a project: “Initiation, planning, implementation and termination”, while Turner (2009:235) outlines the project life-cycle as: “concepts, feasibility, design, execute and close”. Hewagamage and Hewagamage (2011:98) chart the following as phases of a project life cycle: “project starting, project planning, project executing and project closing.” Uppal & Kul, (2009:3) indicates the following as phases of a project life cycle: “Conceptual, Analysis, Definition, and Evaluation”. Wideman (2007:2) delineates the following as phases of a project life cycle: “Initiation, Planning, Execution and Closure”, while Patanakul, Lewwongcharoen and Milosevic (2010:46) proposes the following as phases of a project life cycle: “conceptual, planning, execution and termination. At the local government sphere in South Africa the MIG projects follow certain project life-cycle phases (CoGTA, 2007:39): “planning; design; implementation; operations, maintenance and mentoring; and monitoring and evaluation”.

There is striking similarities between the phases outlined by Wideman (2007:2) and Patanakul, Lewwongcharoen and Milosevic (2010:46) respectively, except that the former starts with the initiation phase, and the latter with the conceptual phase. The research will therefore focus on an integrated model for project life-cycle phases as proposed by the MIG infrastructure projects (CoGTA, 2007:39); Wideman (2007:2), Patanakul, Lewwongcharoen and Milosevic (2010:46), and Hewagamage and Hewagamage (2011:98). The present study focuses on the designs of project life-cycle phases from the latter scholars, seeing that these phases are used extensively and are also listed in the PMBOK document (PMBOK, 2000;

PMBOK, 2005; and PMBOK, 2008). From these designs the study will select the five most prevalent project life-cycle phases and examine them subsequently, by unpacking and outlining the modalities implied in each phase respectively: “initiation/conceptual; planning; execution; closure/termination, and operation, maintenance and mentoring phase.

2.5.2.1 Conceptual/initiation phase and modalities

The project conceptual phase entails the identification of the problem or opportunity and defining possible solutions to the problem through brainstorming sessions (Kerzner, 2003:383). The problem to be identified could be the needs and desires of the customers, beneficiaries or users of project deliverables (Kloppenborg & Patrick, 1999:9; Clements & Gido, 2006:7).

In terms of Section 153 of the Constitution, 1996 (RSA, 1996), local municipalities are obligated to set up the necessary governance structures to utilise available resources and thereby give priority to and address the needs of the community, as directed by government laws and policies and imposed by public pressure (Kwak & Anbari, 2010:9; McEwan, 2003: 471). The prescripts of the Constitution, 1996 (RSA, 1996) are explained in paragraph 2.3.1.2 in this chapter. The municipalities in the local government as explained in paragraph 2.3.1.6 should prioritise the needs of the community in the IDP. This should be done through consultative forums convened by the IDP representative forum and the IDP steering committee.

The IDP is seen as a strategic plan that aligns all resources at local government to reach developmental goals as espoused by the Constitution of South Africa (RSA, 2000; McEwan, 2003:472). Furthermore, the needs of communities can be identified through ward committee meetings and public meetings convened by ward councillors (Van der Waldt, 2010:258). Portny *et al.* (2008:77) and Mian and Dai (2005:42) further argue that to initiate a project, the following options should be thoroughly considered: the feasibility of a project, the resources required by the organisation to undertake the project, and the benefits of the project that should always exceed the cost for the project to be undertaken, as well as the risks involved. In Government, particularly in the local government sphere, projects are determined by priorities as outlined in the IDP and the needs of communities. These needs are prioritised and outlined in the respective IDPs of the local municipalities (RSA, 2000; RSA, 2011a).

The actions mentioned above can be summarised as the development of a business case or business plan (Wideman, 2007:2). A business case in government implies a need or idea that is identified by the community within a municipality and converted into a formal project

proposal (Nel, 2001:611). The White Paper on Local Government, 1998 (RSA, 1998a) stipulates that the formulation of IDP should consider the following steps (similar to the formulation of a business case) as proposed by Nel (2001:611):

- Assess the immediate environment of the municipality.
- Identify community needs through IDP consultation forums.
- Identify and audit of the resources required to address community needs.
- Prioritise community needs.
- Create structures or frameworks and goals to achieve the needs.
- Set strategies with clear time frames.
- Implement strategies through projects.
- Project monitoring systems and mechanisms.

The business case or project proposal should lead to a definition using a statement on the preliminary scope of the project as a project management tool and technique (PMTT) (Patanakul *et al.,* 2010:46).

The development of a business case, or in the case of Government a project proposal, should be followed by a feasibility study. This is needed to assess the benefits of the alternative solutions, the costs involved and to determine how acceptable the risks are (Mian & Dai, 1999:42; Wideman, 2007:3; Bangalore & Srinivasan, 2009:32). In the case of municipalities the IDP's Representative Forum should therefore support the municipal council in appointing a feasibility study committee to establish the need of the project (Van der Waldt, 2010:258). The feasibility study report for MIG projects at local municipality should outline the following critical aspects: identity of the project stakeholders and means of communication with them; description of the problem or need; different options to address the problem (technical, level of service and service provider); the best option to address the problem, and lastly, the capital and operational budget of the project and the support required (CoGTA, 2007:41).

Kloppenborg and Patrick (1999:9) and Mian and Dai (1999:42) assert that the goals of the project should be aligned to the objectives of the organisation. This implies that a municipal district's goals, as reflected in its IDP, should be in line with the priorities and goals in the local municipality's IDP as the communities identified it through public participation and consultation (RSA, 2000). The vision, objectives, scope and deliverables of the project should be defined and thereby contribute to the overall vision of the organisation or the local municipality. In other words, they establish the term of reference of the project (Wideman, 2007:3). The South African government has a reported vision of continuing to address the

triple challenges of poverty, unemployment and inequality towards 2030 has outlined the following projects for implementation through the NDP (RSA, 2011a): “Economy and employment; Improving education; innovation and training; human settlements; transforming society and uniting the country; building a capable state and promoting health”.

The establishment of the terms of reference should outline the funding, risks, constraints and resources needed for the project to commence (Wideman, 2007:3). The terms of reference of the project should be followed by appointing a project team and setting up of a project office (Bangalore & Srinivasan, 2009:35; Wideman, 2007:3). In the case of the local government sphere in South Africa, municipalities are obligated to establish a project management unit (PMU) according to their capacity as explained in paragraph 2.3.1.6 and 2.3.1.7 in order to manage the Municipal Infrastructure Grant (MIG) for implementing infrastructural projects (CoGTA, 2007:6). The PMU will remain accountable to the MM, and will either be established at a district municipal level “shared services model” or within a particular municipality (CoGTA, 2007:7).

The deliverable for this phase is a project charter which seeks a common understanding among all stakeholders on what the project entails (Bangalore & Srinivasan, 2009:31; Kloppenborg & Patrick, 1999:9). A project charter should describe the business need the project was created for and the product it seeks to achieve (PMBOK, 2000:54). At municipal level, the PMU should then complete the project’s registration form which must be submitted to the national sphere of government to ensure compliance to the MIG requirements, get approval by the MM, and receive funding for the project (CoGTA, 2007:42). The modalities listed above should be considered at the end of the conceptual/initial phase before moving on to the planning phase.

2.5.2.2 Planning-design phase and modalities

The charter developed in the conceptual/initial phase serves as an input to the activities in the planning phase (Kloppenborg & Patrick, 1999:9; Cooke & Tate, 2005:42). In the planning phase processes of the project should be put in place (Mian & Dai, 1999:42). In the case of a municipality different project designs should be considered on the basis of technology, operation and maintenance costs, the main reason being that a more labour intensive design should be considered as long as it is cost effective, yet aiming at poverty alleviation within the municipality (CoGTA, 2007:44). The design should detail all the activities, and tasks are outlined, sequenced, scheduled and consolidated into a Work Breakdown Structure (hereinafter referred to as the WBS) (PMBOK, 2000:42; McGhee & McAliney, 2007:58; Wideman, 2007:3). The WBS should therefore culminate in a Gantt chart which schedules all

activities of a project indicating the starting and completion dates of each activity (Van der Waldt & Knipe, 2002:74). The WBS should be followed by the creation of a resource plan which outlines resources needed in the project in terms of labour, material and equipment (PMBOK Guide, 2000:42; Bangalore & Srinivasan, 2009:38). The above tasks should be followed by the procurement documentation and procurement processes which should outline the method that will be used to assess proposals and tenders such as preferential procurement procedures (CoGTA, 2007:44). The PMU at municipal level will therefore submit the above information through the office of the MM who remains to be the Project Sponsor, to the municipal council for approval (Van der Waldt, 2010:261).

At the end of the planning phase a review should be conducted to ensure that all the activities have been included in the project plan. The project plan should then be presented to the project sponsors for approval before the actual work of the project commences during the implementation or execution phase (Kwak & Ibbs, 2002: 153).

2.5.2.3 Execution/Implementation and modalities

Project execution phase involves the implementation of all activities identified and outlined during the planning phase (Kwak & Ibbs, 2002: 154; and Wideman, 2007:8). In the case of municipality procurement of services for the delivery of the project by a relevant department would ensue through tender processes as per the Local Government: Municipal Finance Management Act 56 of 2003 (RSA, 2003a). The department responsible for procurement processes will then recommend the most suitable service provider to the MM for approval, upon which the activities as outlined on the WBS and the Gantt chart would be kick-started (Van der Waldt, 2010:260).

The activities in the phase involve the actual construction of project deliverables. The creation of project deliverables is achieved through monitoring and controlling of management processes such as time management, risk management, change management, cost management, quality management, procurement management, change management, acceptance management and communication management (Van der Waldt & Knipe, 2002:82; Kwak & Ibbs, 2002:154; Kerzner, 2003:70; Wideman, 2007:8). During the implementation phase it is imperative for the municipality to ensure community participation and awareness (CPA) through a special structure created for this purpose or ward committees (CoGTA, 2007:45). The purpose of the CPA is to inform the community about the progress of the project, recruit labour through a subcommittee and allow the community to assess and evaluate project performance, and to ensure sustainable service delivery mechanism (CoGTA, 2007:45). The PMU at municipal level will be responsible for

conducting site visits for monitoring the progress, quality as well as compiling project progress reports (CoGTA, 2007:22). The purpose of monitoring is to check the project progress according to pre–determined milestones, and implement corrective measures in time if the project is not on course (Nel, 2001:619).

A phase review is undertaken at the end of the phase to reflect on whether the project deliverables have been achieved as planned (Mian & Dai, 1999:42).

2.5.2.4 Termination/Closure and modalities

Project termination or closure is about formally announcing the end of the project to all stakeholders, releasing all resources and terminating contracts with service providers (Kwak & Ibbs, 2002:154; Wideman, 2007:8-9). In the case of municipalities, it remains the responsibility of the MM as the project sponsor together with the PMU to conduct a meeting on the site of the project in order to inspect the project and ensure its specifications and quality is as stipulated on the service level agreement, then handover from the service provider to the municipality will be formally done (Van der Waldt, 2010:264). Finally a reflection is made on whether the project deliverables have been met as well as releasing the project product or deliverable to the beneficiaries, the resources are also released to the mother organisation (Mian & Dai, 1999:42). A report on the closure of the project is submitted to the project sponsor and all stake holders, and the phase is concluded by reviewing the project to identify areas of development and best practices for future projects (Kwak & Ibbs, 2002:154). At the completion of the project it remains the responsibility of the municipality to complete a certificate of completion for submission to the MIG national management unit as an undertaking that the project was completed according to MIG conditions (CoGTA, 2007:46).

2.5.2.5 Monitoring and evaluation

The process of monitoring and evaluation (hereinafter referred to as M & E) will differ from situation to situation in a project, however in general terms it will include the following steps (RSA, 2005a:11-12; Shapiro, 2006:7): establish the purpose and scope for monitoring and evaluation; identify performance questions and indicators; establish M & E functions and assign responsibilities; gather and organise data; analyse the data and prepare an evaluation report; distribute the findings and recommendations; lastly, learn lessons from the M & E process (RSA, 2005a:11-12; Shapiro, 2006:7).

Monitoring and evaluation of projects should take place in line with the project performance levels as explained in paragraph 2.3.8 in this chapter. Monitoring and evaluation of project performances will help municipalities to intervene at the right time in situations where the project is not implemented according to set targets and quality standards. Such intervention will, therefore, ensure that service delivery projects are implemented effectively (CoGTA, 2007:38).

2.5.2.6 Operation, maintenance and mentoring phase and modalities

In the case of MIG projects related to construction, the purpose of this phase is to ensure that the service provider conduct mentoring sessions to the users of the project and to identify problems that need repairs as well as maintaining the project for a specified period (CoGTA, 2007:46).

The purpose of the use and implementation of the project life cycle by the PMU will ensure that all the tasks and activities related to projects are identified, scheduled and properly budgeted for, as well as identifying possible risks that may arise during the project implementation and put in place mitigation strategies to ensure successful completion of projects for sustainable service delivery at local municipal level (CoGTA, 2007:39; Sebola & Modipane, 2012:399).

The above section outlined project life cycle phases and modalities within each phase. All the above sections have laid a solid foundation in concretising the argument supporting “management by projects” in an organisation from a strategic level down to an operational level.

2.6. CONCLUSION

Chapter 2 documented literature that clarifies the basis theory that grounds “management by projects” on strategic, tactical and operational levels of a public organisation on local government level. Based on the nature of the context of this study, recognised as local government within the public service, the chapter, in addition paid attention to the legislative guides and policies that directs this sphere of government. The chapter outlined features of “management by projects” at strategic, tactical and operational levels. These features will guide the process of data collection in Chapter 3 and 4.

Chapter 3 will document “management by projects” in Maquassi Hills Local Municipality (MHLM): The Case of the Wolmaransstad Waste Water Treatment Plant Upgrading project (WWWTPU).

CHAPTER 3: "MANAGEMENT BY PROJECTS" IN MAQUASSI HILLS LOCAL MUNICIPALITY (MHLM): THE CASE OF THE WOLMARANSSTAD WASTE WATER TREATMENT PLANT UPGRADING PROJECT (WWWTPU)

3.1 INTRODUCTION

Chapter 2 outlined literature that offered aspects of the basis theory that grounds "management by projects". The chapter defined the basis theory, and presented the "management by projects" features at strategic, tactical and operational levels. Chapter 2, in addition, paid particular attention to legislation that directs the strategic intention of public organisations on local government level.

Chapter 3 focuses on the case study that will be compiled to elaborate on the Wolmaransstad Waste Water Treatment Plant Upgrading Project (WWWTPU). The chapter will briefly outline four general types of case studies, and then select and motivate a specific type of case study, suitable to this particular research initiative. The methodology of this case study will then be examined by outlining a case study research design. An analysis strategy, in line with the research design, will be employed to analyse the selected WWWTPU case study. From the empirical findings, certain deductions and inferences will be drawn, followed by the conclusion of Chapter 3.

In the following section a research methodology and design with specific reference to case studies will be discussed to ascertain the extent to which features of "management by projects" are applied in the implementation of the WWWTPU project.

3.2. RESEARCH METHODOLOGY AND DESIGN

In documenting the case of the WWWTPU project, an interpretive type of case study, done through qualitative inquiry, was adopted to support a part of the empirical investigation to this study. Qualitative inquiry allows the in-depth collection of data in the form of language or observations, which are further analysed by identifying themes emerging from the collected data (Terreblanche, Durrheim & Painter, 2009:47). In selecting a case-study research design, the researcher was aware of the unique features of such a design as explicated by Yin (2003:12) and that it depends on multiple sources of data, thus allowing for the convergence of collected information through triangulation.

Case studies generally are classified in terms of the explanatory; exploratory; descriptive and improving types (Runeson & Host, 2009:135). The four types of case studies are categorised according to their respective purposes as follows:

- **Exploratory:** Investigates situations, as well as insights into a phenomenon as a prelude to another research. This is done by employing flexible and inductive approaches with participants who are pivotal to the matter investigated (Baxter & Jack, 2008:548; Runeson & Host, 2009:135; Terreblanche, Durrheim & Painter, 2009:44).

- **Descriptive:** Depicts or portrays an event within its context (Baxter & Jack, 2008:548; Runeson & Host, 2009:135; Terreblanche, Durrheim & Painter, 2009:44).

- **Explanatory:** Investigates a phenomenon through causal explanations between the independent and dependent variables (Baxter & Jack, 2008:548; Runeson & Host, 2009:135; Terreblanche, Durrheim & Painter, 2009:44).

- **Improving:** Seeks to perfect some features of an incident that was studied previously (Runeson & Host, 2009:135).

According to Baxter & Jack (2008:548), Runeson and Host (2009:1350) and Terreblanche, Durrheim and Painter (2009:44) a case study should reflect an investigation of situations and insights typical to the phenomenon under investigation. In line with the purpose of documenting the case of WWWTPU project, an exploratory case-study type was preferred as will be explained in sub-section 3.2.1.

3.2.1 Exploratory case-study design

In accordance with the primary objective of this study, an exploratory case-study design was preferred as it allowed the study to explore the use of features of “management by projects” in the case of WWWTPU project. This will also allow triangulation of the analysed data against the findings of the entire study. An exploratory case-study research design in general attempts to understand a situation or phenomenon through respondents’ interpretations of the situation in its natural setting (Noor & Baharein, 2008:1602; Runeson & Host, 2009:135).

Riege (2003:82), Yin (2003:12), Noor and Baharein (2008:1602), as well as Runeson and Host (2009:135) provide insight on exploratory case studies in particular. In line with their insight, the researcher documented the WWWTPU project in order to increase the validity and reliability of the study. An exploratory case-study investigates and explores the

implementation of cases such as the WWWTPU project in order to produce ideas, insights that support the findings of the study as a whole (Runeson & Host, 2009:135).

The WWWTPU project case was selected as a case-study type whose focus is not the case itself (Baxter & Jack, 2008:549) but the primary objective of the entire study. Such a case study type usually explores and details the activities of the case to find an external significance for the entire study (Baxter & Jack, 2008:549). This external significance is the primary objective of the main study. The objective was to determine to which extent the features of "management by project" at the various levels within the organisation were employed to help improve service delivery by MHLM within its area of responsibility.

The exploration of the WWWTPU project's implementation through this case-study method is done to achieve a triangulation between the findings from the literature study and the empirical findings (case study, interviews and a focus-group session) that supports the larger study. The following sections will unpack aspects relevant to a case-study research design.

3.2.1.1 Frame of reference of the WWWTPU case study

The problem statement to the main study, as presented in Chapter 1, was to determine if there are organisational (strategic, tactical and operational) "management by projects" improvements that may be identified and suggested to initiate and sustain enhanced service delivery within the Maquassi Hills Local Municipality's operational area. Therefore, the exploration of the events and activities of the WWWTPU project will be focused to address the problem statement. Inferences will be drawn and recommendations made by testing the use of features of "management by projects" at the mentioned levels within the MHLM.

3.2.1.2 The Unit of analysis for the WWWTPU case study

The unit of analysis for the WWWTPU project was identified as the MHLM, in particular the officials from the Engineering Services Directorate and the Supervisor of the Wolmaransstad Waste Water Treatment Plant. The Engineering Services consists of officials such as the Director Engineering, the PMU Manager and support staff. The Supervisor of the treatment plant was included as a key informant relevant to the study, as guided by the exploratory case study design (elucidated upon in paragraph 3.2.1 above). The officials from the Engineering Department of the MHLM were selected intentionally to participate in the data collection due to their core responsibilities of ensuring the implementation of infrastructure projects. A total of three officials participated in the data-collection process to populate information that supports the case study.

3.2.1.3 Empirical investigation

To explore the case of the WWWTPU project, empirical data was collected through semi-structured interviews held with the following individuals: the Director of Engineering, the Manager of the PMU and the Supervisor of the Waste Water Treatment Plant. Semi-structured interviews (see paragraph 1.6.2.2(b) of Chapter 1) were preferred as instruments because it allowed the researcher to explore, and follow up on emergent ideas and impressions. In this way the researcher gained an in-depth understanding of the experience, thoughts, emotions and meanings that participants attached to the features of "management by projects" employed in the WWWTPU project (Fossey *et al*., 2002:727; Tong, Sainsbury & Craig, 2007:351; Whiting, 2008:35). Furthermore, semi-structured interviews gave enough flexibility to interact differently with diverse participants while covering the same scope of data collection (Noor & Baharein, 2008:1604).

3.2.1.4 Framework for empirical investigation

The features of "management by projects" at strategic, tactical and operational levels (see paragraph 1.6.4 in Chapter 1) provided a framework for the semi-structured interviews. These features were included to test the extent to which the MHLM did structure the MHLM according to the basis theory and features of "management by projects" whilst implementing the WWWTPU project. The following sub-section will outline the sources used to collect the data.

3.2.1.5 Data sources

In addition to the semi-structured interviews outlined in the previous Section, the researcher analysed documentary data sources such as the MHLM 3rd Generation IDP (MHLM, 2012 – 2016), as well as the MHLM Service Delivery and Budget Implementation Plan (SDBIP) (MHLM- SDBIP, 2014 – 2015). Furthermore, the researcher visited the site at the Wolmaransstad Waste Water Treatment Plant in order to get a sense of the geographical site within which this project is located.

These data sources will be considered in Chapter 3, as well as in Chapter 4. This is to ensure that the triangulation of data is achieved succesfully. Such a research strategy is in line with the directions of various researchers that consider multiple sources of data that enhances construct validity and reliability of the study (Johnston, Leach & Liu, 1999:208; Riege, 2003:82; Gibbert, Ruigrok & Wicki, 2008:1466; Noor & Baharein, 2008:1604; Runeson & Host, 2009:136). In addition, Noor and Baharein (2008:1602) point out that the

examination of documents support the researcher's inquiry during interviews. The use of multiple sources (interviews and documentary) to collect the empirical data in the manner outlined above is typical of a case-study research (Baxter & Jack, 2008:554). The following section will provide insight into the WWWTPU project case-study database.

3.2.1.6 The WWWTPU case-study database

As indicated above, the data for this case study was compiled from both documentary sources and semi-structured interviews. In developing a database that could support the case study, the following supportive material were considered,

- tape recordings of the interview proceedings;
- MHLM 3rd Generation IDP (2012 – 2016);
- MHLM-SDBIP document of (2014 – 2015);
- WWWTPU Implementation programme by NEP consulting engineers; and
- Photos of the Wolmaransstad Waste Water Treatment Plant.

This supportive material for the WWWTPU case study was kept for autonomous inspection and to enhance the reliability of the WWWTPU case study, as proposed by Baxter & Jack (2008:554); and Runeson & Host (2009:148). The following sub-section will explicate the process of data analysis.

3.2.1.7 Data analysis

Data analysis in a case-study research is considered flexible due to the fact that analysis takes place parallel to the process of data collection (Baxter & Jack, 2008:555; Runeson & Host, 2009:151). To ensure that more accurate interpretation of the data could occur, prior approval was obtained to use a recording device to record interviews and the discussions. Questionnaires that supported the interviews and discussions were guided by a framework (features of "management by projects") as explained in paragraph 1.6.4 of Chapter 1. The discussions were then transcribed, after which direct interpretations and verbatim quotations of the raw data were drawn, in order to write a case-study report (see section 3.3 of this chapter). The empirical findings in report format were then analysed by using an interpretive data-analysis strategy as discussed in paragraph 1.6.3.1 in Chapter 1. In analysing the empirical findings, the researcher considered the following suggestions of scholars on case-study research designs on what the analysis should consider:

- all relevant sources of data (refer to paragraph 3.2.1.5 above) to ensure convergence of evidence to support the triangulation of the data (Johnston, Leach & Liu, 1999:208; Rowley, 2002:24; Noor & Baharein, 2008:1604);

- diverging views, opinions and interpretations on the use of the features of "management by projects" in the implementation of the WWWTPU project, which should be explored further (Rowley, 2002:24); and

- unbiased and objectively how the findings from the empirical data, portray the use of these features. From this data the researcher can make deductions and inferences (Rowley, 2002:24).

Processes to ensure validity and reliability, whilst engaging in the WWWTPU case study, was put in place to support data collection and analysis and will be explained in the following sub-section.

3.2.1.8 Validity and reliability of the WWWTPU case study

In order to ensure the validity and reliability of the WWWTPU case study, the study provides the following detailed aspects relevant to the research as recommended by Baxter and Jack (2008:556):

- The problem statement to be researched was outlined in paragraph 1.2 of Chapter 1.
- The research design of the case study was outlined and the strategies used to collect data systematically. This was done by comparing various sources to the features based on the theory to be tested. A recording device was used to ensure the validity and correctness of the empirical data.
- The database of the case study (see paragraph 3.2.1.6 of this chapter) is safely kept for independent inspection if needed.
- According to the interpretive study type for qualitative research design, an interpretive data-analysis strategy was followed in analysing the empirical findings. This was done unbiased and objectively to draw certain inferences and conclusions.

3.2.1.9 Ethical considerations

In conducting a case study, with reference to the implementation of the WWWTPU project, the researcher ensured that the ethical considerations, as explained in paragraph 1.8 of Chapter 1, was upheld. Following the considerations for case studies, the following section will present the case study of the WWWTPU project.

3.3. "MANAGEMENT BY PROJECTS": THE CASE OF WOLMARANSSTAD WASTE WATER TREATMENT PLANT UPGRADING PROJECT (WWWTPU)

The section below will present a background to the Wolmaransstad Waste Water Treatment plant.

3.3.1 Background

Dr. Kenneth Kaunda District Municipality (hereinafter referred to as KKDM), (KKDM, 2014: online), located in the North-West Province of South Africa consist of four local municipalities namely: Tlokwe City Council; City of Matlosana; Maquassi Hills and Ventersdorp. The District Municipality conjoins the Gauteng province on its South-West border and is situated 65 km from Johannesburg (KKDM, 2014:online). The Dr. Kenneth Kaunda District Municipality hosts famous gold mines such as AngloGold Ashanti and also serves as a corridor, by means of the N12 National Road, to connect the Northern Cape; Western Cape and Gauteng Provinces (KKDM, 2014:online). The N12 National Road passes through the MHLM. As mentioned in Chapter 1 of this study, the MHLM, consists of the following towns: Wolmaransstad; Leeudoringstad and Makwassie, with the main municipal offices located in Wolmaransstad (KKDM, 2014:online).

According to the Southern District Municipality Information (SDMI, 2011:online) there are two waste water treatment plants in MHLM, that of Leeudoringstad and Wolmaransstad. The Leeudoringstad Waste Water Treatment Plant, treats waste water from Leeudoringstad town and Kgakala Township, whilst the Wolmaransstad Waste Water Treatment Plant processes waste water from Wolmaransstad town, Tswelelang Township, Makwassie town and Lebaleng Township. The Wolmaransstad Waste Water Treatment Plant (hereinafter referred to as the WWWTPU) is strategically based in portion 7 and portion 10 of the Roodepoort farm, located 8km outside Wolmaransstad town, along a local road between Makwassie and Wolmaransstad towns (SDMI, 2011:online).

Waste water is recognised to be a mixture of liquid and solid waste that reaches a waste-water treatment plant from different sites such as households, institutions, factories and organisations. When this mixture accumulates and is not treated chemically, it becomes septic. It may then produce gasses posing severe health risks to human beings and the environment (Nagulapally *et al*., 2009:82). In order to remove toxic components, waste water is subjected to a chemical treatment. Such a treatment of the waste water ensures that the effluent complies with certain regulatory requirements before it is released back into the environment (Nagulapally *et al*., 2009:82). The aim of this treatment is naturally to protect the

public and the environment from health risks (Nagulapally *et al*., 2009:82). The process of rehabilitating the waste water is therefore performed in treatment plants of which the WWWTPU is a typical example. The next section will outline how WWWTPU was conceptualised as a project in the MHLM.

3.3.2 The project

The WWWTPU project is informed by Section (195 (1) (b and c) of the Constitution, (1996), (RSA, 1996) as presented in paragraph 2.3.1.2 in Chapter 2. In addition to the constitutional mandate, the National Development Plan: Vision for 2030 (RSA, 2011a:154) expresses a vision for South Africa, based on an economic infrastructure programme. This is to ensure that, before 2030, all citizens will have access to safe water and hygienic sanitation. The WWWTPU project is subsequently a strategic priority for the Department of Water and Sanitation (DWS, 2011b).

The North-West Provincial Government and the Dr. Kenneth District Municipality are mandated to align all resources towards a Five Year Local Government Strategic Agenda, which includes water and sanitation (RSA, 2006b). Municipalities are further required to perform their developmental role by striving towards the achievement of the Five Year Local Government Strategic Agenda (RSA, 2006b) which is in line with the Key Performance Areas of Municipalities (see paragraph 2.3.2 in Chapter 2). It can therefore be inferred that the WWWTPU project is linked to national priorities. These priorities in turn are identified to sustain development within South Africa with a specific linkage to Key Performance Area 2, the provision of basic services and infrastructure development.

In light of the mentioned strategic link between the WWWTPU and national priorities and the importance that this project functions well, the WWWTPU came under pressure in 2011 (DWS, 2011b). This pressure came to the fore after a new township was initiated by the KKDM. Seeing that the WWWTPU was required to service a larger area, sewer blockages occurred in the Makwassie town and Lebaleng townships. A need was identified, in line with the MHLM 3rd Generation IDP (MHLM, 2012 – 2016:15-18) to develop a plan to manage main sewer blockages by the 1st term, (2012 – 2013); to connect main sewer lines at wards 2, 7, 3 and 9; and to increase the capacity of the WWWTPU.

Figure 3.1 and **Figure 3.2** below contains photos of the WWWTPU. **Figure 3.1** display the water plant and the effects of the overflow when it occurs, and **Figure 3.2** shows the site earmarked for the upgrading of the waste water treatment plant. The photos also give

evidence of contractors who were on site on 15 October 2014 to commence with the first deliverables of the WWWTPU project.

Figure 3.1: Picture of the WWWTPU: effects of overflow (Source: Researcher's own archive)

Figure 3.2: Site earmarked for the WWWTPU (**Source**: Researcher's own archive)

The risk is evident that if the WWWTPU is not upgraded, it has the potentials to cause serious health and safety hazards such as environmental pollution and diseases for the communities of Makwassie Town and Lebaleng Township (DWS, 2011b:18; personal interview, October 14, 2014). The aforementioned risk highlighted will occur due to the fact that the pump system will not be able to pump sewer from these areas, and the sewer will flow to the households of Makwassie Town and Lebaleng Township (personal interview, October 14, 2014). The consequences of an overloaded water treatment plant will be sewer blockages (personal interview, October 14, 2014). These blockages have already resulted in sewer spillages towards the end of 2012 and the beginning of 2013 at Lebaleng Township (personal interview, October 14, 2014).

Another risk to consider is that a delay in the upgrading of the treatment plant will lead to overloads of waste in the sewer system and impede sewer and sanitation services rendered

to new township establishments in the MHLM (DWS, 2011b:18; personal interview, October 14, 2014). A third risk, why the project remains a high priority, is the fact that the effluent, treated from the WWWTPU is not compliant with the minimum health and safety standards (SDMI, 2012 personal interview, October 14, 2014). The latter problem was further exacerbated by an overload of waste water from new township establishments within the MHLM.

Table 3.1 below indicates the WWWTPU's green drop status of which the status itself and the risk rating is a matter of concern.

Table 3.1: Green drop status of the WWWTPU within the MHLM

Water Services Authority:	**Maquassi Hills Local Municipality**	
Municipal Green Drop Score:	16.9%	
Performance Area / *Systems*	Leeudoringstad	Wolmaranstad
Process Control, Maintenance & Management skills	5	28
Monitoring Programme	0	20
Credibility of Sample Analyses	0	35
Submission of Results	0	0
Wastewater Quality Compliance	10	10
Failure Response Management	0	28
Bylaws	15	15
Treatment & Collector Capacity	0	15
Asset Management	0	0
Bonus Scores	40	40
Penalties	0	0
Green Drop Score (2011)	**10.2% (↑)**	**20.5% (↑)**
Green Drop Score (2009)	NA – 0%	NA – 0%
Treatment Capacity (Ml/d)	2.45	4.5
Operational % i.t.o. Capacity	NI (assume >100%)	NI (assume >100%)
Cumulative Risk Rating (CRR)	17	17
% i.t.o. Maximum Risk Rating	94.4% (↑)	78.7% (↑)

NI - No information
NA- Not assessed

(**Source:** Southern District Municipality information (SDMI), *www.ewisa.co.za*)

The information detailed in **Table 3.1** indicates a low green drop status (16.9%) in MHLM, due to the low quality of effluent that is released back into the environment (SDMI, 2011:online). The risk rating of the WWWTPU is also moving from a high risk space (78.7%) towards critical risk space, whilst Leeudoringstad has already reached a critical risk space (94.4%) (SDMI, 2011:online). Furthermore, **Table 3.1** display areas where the municipality registered low percentage performance for the maintenance and management of the treatment plants and the effluent from the plants in MHLM (SDMI, 2011:online). As a result, the WWWTPU was, in addition to its national priority linkage, identified as a priority project

and noted as such in the MHLM 3rd Generation IDP (MHLM, 2012 – 2016:84). A report of the WWWTPU project will be presented below.

3.3.3 The report of WWWTPU project

The WWWTPU project in MHLM was identified and implemented in accordance with the water and sanitation priority within the MHLM, which is also linked to a strategic priority of the Department of Water and Sanitation (DWS,2011b)). The strategic objectives of the MHLM are informed by the Constitution, 1996 (RSA, 1996); the NDP (RSA, 2011a:154); Five Year Local Government Strategic Agenda (RSA, 2006b) as was indicated in paragraph 3.3.2 above. The MHLM has five strategic objectives (MHLM 3rd Generation IDP (MHLM, 2012 – 2016:60) of which the provision of basic services and infrastructure development is of significant importance to the WWWTPU project.

In addition, specific programmes are linked to the strategic objectives of MHLM. These programmes are managed through the Expanded Public Works Programme (EPWP). The programmes include poverty alleviation and job creation; the development of small medium and micro enterprises (SMMEs). The SMMEs are considered in projects through procurement processes. With reference to paragraph 2.4.1 in Chapter 2 as guided by Knipe *et al.* (2002:43) and Gray and Larson (2006:24), there must be a strong link between strategic objectives, programmes and projects within an institution such as the MHLM.

Furthermore, the strategic objectives of an institution, such as the MHLM, should be demarcated into portfolio, goal-oriented or heartbeat programmes on the basis of the advantages, range and diversity of projects, as indicated by Pellegrinelli (1997:142; see also paragraph 2.3.4 in Chapter 2). This is also proposed by Knipe *et al.* (2002:43) and Gray and Larson (2006:24). After an analysis of the MHLM 3rd Generation IDP (MHLM, 2012 – 2016: 74-93) and the MHLM-SDBIP (MHLM, 2014:17-33) it was established that the strategic objectives of the MHLM are not cascaded into programmes and in turn into projects according to their unique features. Thus, it can be inferred that the MHLM's strategic objectives were not demarcated into specific programmes and projects that would further the effective and efficient implementation of the organisation's strategic objectives.

In order to support programme management, the MHLM is using "a standard organisational structure" (personal interview, October 14, 2014). A standard structure is a functional organisational structure. The organisational structure represented in the MHLM 3rd Generation IDP (MHLM, 2012 – 2016:33-41) and the MHLM-SDBIP (2014 – 2015:7-8) resembles features of a functional organisational structure as outlined by Clements and Gido

(2006:391, see paragraph 2.3.5.1 in Chapter 2). According to this view, such an organisational structure is based on individuals with the same skills and who are located in the same directorate – which is the case in the MHLM's organisational structure. It has been established that a functional organisational structure is not desirable to support programme management (see paragraph 3.5.1 in Chapter 2). The problem is that there are complexities in coordinating the project management, as well as the additional time needed for functional duties against project-related duties (Kerzner, 2003:93; and Meredith & Mantel, 2010:193). According to Hobday (2000:874), Clements and Gido, 2006:393), and Aubrey, Hobbs and Thuillier (2007.330), a desirable structure to support programme management is a project-based organisational structure or a strong matrix organisational structure (as discussed in paragraph 2.3.5.2 and 2.3.5.3 in Chapter 2).

The management and leadership structures within the MHLM to support programme management, is the Director: Engineering and the Manager: Project Management Unit (PMU). Scholarly efforts offered by Thiry and Deguire (2007:654), and Van der Waldt (2009a:39) indicate that the establishment of a dedicated PMU in public service organisation is a strategic directive supporting "management by projects". This assertion is further supported by the MIG document (CoGTA, 2007) (see paragraph 2.3.6 in Chapter 2). There is no official PMU within the organisational structure of the MHLM as it was only introduced in April 2014. The operations of the PMU's are performed from the Municipal Infrastructure Grant, i.e. 5% of the allocation of the grant that is used for the PMU (CoGTA, 2007:29; personal interview, October 14, 2014).

In line with the above scholarly efforts, as well as the assertion by Thiry and Deguire (2007:654) and (Aubrey, Hobbs and Thuillier, 2007.329), a PMU should be strategically located in a public service organisation to support all directorates and departments in the successful implementation of projects across the organisation (see paragraph 2.3.6 in Chapter 2).

The PMU, as a management and leadership structure, that supports programme management in the MHLM is located in the office of the Director: Engineering. The main reason why the PMU was recently established is that funders or sponsors of capital projects (such as DWS) deemed the municipality's capacity insufficient to support project management sufficiently. Such funders and sponsors have to be comfortable that their financial investment in the municipality is properly taken care of. Thus, if the PMU is not properly capacitated, funders and sponsors won't allocate funding to the MHLM, but rather to the district, so that the project is managed on District level. It was originally intended that the WWWTPU project would be managed by the MHLM. However, there was a lack of capacity

and the MHLM experienced problems with procurement. Therefore, the DWS as sponsor, appointed Sedibeng Water Board as the implementing agent. As a result, the MHLM became a beneficiary of the WWWTPU project, and ceded NEP Consulting Engineers to Sedibeng Water Board. The PMU needed the following personnel as capacity to implement projects within the MHLM (CoGTA,2007:8; also see paragraph 2.3.6 and 2.3.7.4 in Chapter 2): project manager; engineer; technician; secretariat; financial personnel; legal personnel; administrative personnel; occupational health and safety personnel; data capturers; Information Technology personnel; and community officer/communications personnel. In noting the establishment of the PMU within the MHLM, it can be inferred that the PMU does not yet have the full capacity to manage and lead projects of the magnitude such as the WWWTPU project.

The organisational systems and processes used to support programme management in MHLM include “design; specification, quality of material and procurement” (personal interview, October 14, 2014). According to the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) and the Local Government Municipal Planning and Performance Management Regulations, 2001 (RSA, 2001, also see paragraph 2.3.8 in Chapter 2), a municipality, in line with the performance management system should establish the input, output, outcomes and impact indicators related to the priorities as outlined in the IDP. The findings of this study reveal that the systems indicated above are classified in terms of input and output levels. Furthermore, the only organisational process for which the MHLM is currently taking responsibility is the initiating process. The reason is that the WWWTPU project was initiated by the municipality, but implemented through the Sedibeng Water Board as the implementing agent, as well as NEP Consulting Engineers. The MHLM assumed the role of a beneficiary but did not have the capacity to manage the WWWTPU project from within. The MHLM 3rd Generation IDP (MHLM, 2012 – 2016:84) does not outline the systems and processes of the WWWTPU project, in line with the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) and the Local Government Municipal Planning and Performance Management Regulations, 2001 (RSA, 2001). The systems and processes that are identified, define the roles and duties of “management by projects” within the MHLM where the MHLM is directly involved and thus responsible which is only that of the project initiation phase.

Performance management systems in the MHLM are used to support programme management, which need managers appointed in terms of Section 56 of Local Government: Municipal Systems Act 32 of 2000, (RSA, 2000). These managers are required to sign performance agreements in line with targets set in the MHLM SDBIP (RSA, 2000). Managers set targets that are monitored and reviewed on a quarterly basis (RSA, 2000). Currently the

MHLM is not at a stage where performance agreements “are signed with lower level employees” (personal interview, October 14, 2014). Targets set by Section 56 Managers are discussed with lower level employees as they are expected to achieve them as well. Managers who are not appointed in terms of Section 56 “do not have performance contracts and as a result do not receive performance rewards” (personal interview, October 14, 2014). On the basis of the above findings and scholarly efforts obtained from the literature captured in this study, the MHLM does not have a performance management system for all the officials employed within the MHLM.

The MHLM is using the following modalities to monitor the performance of programme management: project schedule; planning; procuring the contractor and execution. According to the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000), the Local Government: Municipal Planning and Performance Management Regulations, 2001 (RSA, 2001), and the National Treasury Regulations, 2005 (RSA, 2005a), project performance monitoring should be conducted at the following levels within a project life cycle: input monitoring, activity monitoring, output monitoring, impact monitoring and assumption/risk monitoring (see paragraph 2.3.9 in Chapter 2). Regarding the modalities mentioned above the findings show that the MHLM is monitoring project performance at input, activity and output levels. No modalities were identified for impact monitoring and assumption/risk monitoring. This finding is indicative of the fact that performance monitoring of projects in the MHLM does not cover all the levels in the project life cycle mentioned in Chapter 2. In the case of the WWWTPU project, the MHLM is only responsible for input monitoring, while the appointed consultant and the implementing agent are responsible for activity and output monitoring.

In evaluating programme success, the MHLM considers the following as Critical Success Factors (CSFs): socio-economic factors of job creation, participation goal for contracts, wherein the MHLM calculates how much the fiscal value of WWWTPU project will benefit the locals. This is calculated in terms of the following aspects: purchasing the material or using their vehicles to transport the material or the local labour force, the number of households on which this project will impact, and whether the project is delivered within the specified time line.

According to Westerveld (2004:412), Cook-Davies *et al*. (2009:117), Muller and Jugdev (2012:761) and Ika *et al*. (2012:107), the successful implementation of a project relies on institutions’ ability to identify and outline projects’ CSFs that exceeds the narrow definition of time, cost and quality, to include other external factors (see paragraph 2.3.10 in Chapter 2). CSFs ensure that a project is completed in line with community needs, and should

simultaneously cover the following aspects: scope, time, cost, quality, project mission, top management support, project schedule, client consultation, personnel, technical skills, monitoring and feedback, communication, as well as stakeholder's needs and expectations (Morris & Pinto, 2007:118; Westerveld, 2003:412; Ika *et al.,* 2012:112; Muller & Jugdev, 2012:761). The findings showed that the CSFs in the MHLM's projects do not include all the factors in the project, the organisation, or external factors.In actual fact, the MHLM was subjected to Section 139 1(b) of the Constitution, 1996 (RSA, 1996) due to a lack of proper governance, institutional capacity, and both poor financial and technical performance, leading to inefficient service delivery (AGSA, 2013:online). The main reason is that the MHLM lacked the following forms of capacity (also see paragraph 2.3.7.4 in Chapter 2):

- **Strategic capacity:** the ability of the local government to provide leadership and direction, and encourage communities to use programmes in order to reach developmental goals (CoGTA, 2008; Maserumule, 2008:441).
- **Organisational capacity:** efficiency and effectiveness of systems, structures and processes within the organisation to accomplish developmental goals (CoGTA, 2008; Maserumule, 2008:441).
- **Technical capacity:** the ability of the local government to convert the strategic objectives into programmes and projects (CoGTA, 2008; Maserumule, 2008:441).

A typical example is that there was only one official appointed in the Technical Department. The PMU Manager was a member of an intervention team, sent into the MHML to administrate the municipality. Towards the end of the intervention period the municipality appointed the PMU manager on a two-year contract, commencing in April 2014 (personal interview, October 14, 2014). This means that the PMU is not currently indicated on the organisational structure of MHLM. The WWWTPU project was thus further delayed due to a lack of capacity in the MHLM as indicated in this example.

The MHLM is mainly implementing infrastructure projects through the MIG, which means "the consultant and the contractor are critical in terms of executing project management knowledge areas due to a lack of capacity in the MHLM" (personal interview, 14 October, 2014). Currently, the Sedibeng Water Board, as the implementing agent, NEP Consulting Engineers and the contractor are responsible for implementing the ten project knowledge areas of the WWWTPU in MHLM. Scholarly efforts made by Muller and Jugdev (2012:761, see paragraph 2.4.2 in Chapter 2) indicate that the processes of project management or the knowledge areas are necessary to ensure that service delivery "outputs" are achieved at the operational level. In addition, the MIG document (CoGTA, 2007) maintains that project management, at municipal level, is the responsibility of the PMU within the municipality. On

the basis of the findings, the following project knowledge areas from the side of the consultant and contractor was recognised and subsequently indicated in **Table 3.2** below.

Table 3.2: Project knowledge areas inferred from the findings on WWWTPU project

Empirical findings/evidence or themes	No	Project knowledge areas	Responsibility
Feasibility study & design	1.	Project scope management	Consultant
Appointing contractor and sub-contractor	2.	Project human resource management	Consultant Contractor
Project scheduling (schedule; daily scope; daily targets; Gantt chart & histograms)	3.	Project time management	Contractor
Specifications and milestones, oversight role	4.	Project integration management	Consultant
Quality assurance	5.	Project quality management	Consultant
Endorsing payments	6.	Project cost management	Consultant; implementing agent and municipality
No data	7.	Stakeholder management	-
No data	8.	Project communication management	-
No data	9.	Project risk management	-
No data	10.	Procurement management	-

(**Source**: Researchers own compilation)

The implementation of projects through its life-cycle phases is the responsibility of the PMU as indicated in the above paragraph. In the case of the WWWTPU project, the MHLM was responsible for the conceptualisation of the project and for approving the design, developed by the consultant. The contractor had the responsibility to execute the project, which includes appointing sub-contractors, scheduling the project by using a Gantt chart and histograms; resource allocation; implementing the scope and daily schedules, and achieving daily targets. The consultant was responsible for the feasibility study, and has an oversight role on the design; quality assurance; specifications and milestones and to endorse payments according to the work done. After closure and hand over of the WWWPTU project, the municipality will be taking over its role again. The MHLM is still using consultants in implementing the WWWTPU project. This is firstly because the project was initiated an extensive period before establishing the PMU; and secondly seeing that the PMU is not fully resourced. The NEP Consulting Engineers are responsible for oversight during implementation of the WWWTPU project. It can therefore be inferred that the MHLM's role in the implementation of project life-cycle modalities is limited to that of conceptualisation and its modalities, due to lack of capacity.

Regarding project life-cycle modalities, the WWWTPU was identified as a community need. This need was communicated through public participation meetings between Ward Councillors and the residents of respective, affected wards during 2011, after the Local Government elections. It was possible to motivate the WWWTPU project due to its strong strategic link to national priorities. According to the MHLM 3rd Generation IDP (MHLM, 2012-2016:15-18), providing services for sewerage or sanitation was identified as a need in five wards (ward 1, 2, 9, 10 and 11) out of the eleven wards. This constitutes 45% of the total population of wards in the MHLM (MHLM, 2014 – 2015:7-8). In answer to the need identified in the five wards, sewerage processing and sanitation (buckets etc.) was identified as a priority within the Department of Engineering Services in the MHLM. Therefore, in addition to the above arguments, sewerage processing and sanitation was identified as a priority project for the period 2012 – 2016 MHLM 3rd Generation IDP, (MHLM, 2012 - 2016:84). The sanitation project was named the Wolmaransstad Waste Water Treatment Plant Upgrading MHLM 3rd Generation IDP, (MHLM, 2012 - 2016:84).

Considering time management, the WWWTPU project is not running on course. It was planned approximately four years ago, according to the implementation programme from the NEP Consulting Engineers as indicated in **Table 3.3**. The contractor should have commenced with the construction on 21 October 2013. However, when the WWWTPU site was visited on the 14 October 2014, the contractor was only about to start the project.

Table 3.3: WWWTPU implementation programme

NO	ITEM	DATE COMPLETED
1	Advertisement	22/7/2013
2	Site Inspection	12/8/2013
3	Tender closure	30/8/2013
4	Adjudication report	13/9/2013
5	Appointment of contractor	27/9/2013
6	Contractor on site	21/10/2013
7	Completion of project	21/11/2015

(**Source:** NEP Consulting Engineers, 2011:1)

3.3.4 Conclusion of the report

At the time of this study (December, 2014) The WWWTPU project was already 18 months overdue. The contractor was appointed, and the project is potentially going to take 18 to 36

months to complete, seeing that it was budgeted for 2014/2015; 2015/2016 MHLM 3rd Generation IDP, (MHLM, 2012 - 2016:84). Costs will escalate because the project is delayed for two years. It is indicated that the total cost is nearing 170 million Rand, where it started at 135 million Rand. Two years ago (2012), the DWS allocated 105 million rand and the MHLM had to commit approximately 35 million rand to the project. With the project about to start, projections are at 170 million rand. These costs remain to be an estimate, seeing that prices are revised every quarter and the costs of the WWWTPU project may still increase above the estimated amount.

The delay in the implementation of the WWWTPU project affected service delivery, and the planning to provide sewerage processing and sanitation to other extensions. An additional problem is environmental pollution because the system is already overloaded. The quality of the effluent that is deposited back to the natural water resource is not specified within the criteria, as stipulated by the DWS and in itself poses serious health issues.

The WWWTPU project is still implemented through the NEP Engineering Consultants and Sedibeng Water Board as the implementing agent, due to a lack of strategic capacity; organisational capacity and technical capacity in the MHLM. The MHLM is still assuming the role of beneficiary for the WWWTPU project. On 14 October 2014, when the waste water treatment plant was visited by the researcher, the contractors were on site and about to commence with the construction of the project, which is already 18 to 24 months behind schedule.

3.4 INFERENCES ON THE WWWTPU CASE-STUDY REPORT

According to the interpretive type of case-study outline (see paragraph 3.2.1.7 of Chapter 3), the researcher employed an interpretive data-analysis strategy on the WWWTPU as case study. The analysis was guided by the features of “management by projects” (see paragraph 1.6.4 in Chapter 1). From the analysis the researcher arrived at the deductions and inferences as set out in **Tables 3.4-3.6** below.

Table 3.4: Features of the WWWTPU at strategic level

NO.	Features from the literature review (Chapter 2)	Features in the case of the WWWTPU project
1	Drivers of “management by projects”.	Strategic objectives of the MHLM are informed by policies, guidelines and priorities of National and provincial departments, and Dr. Kenneth Kaunda District such as the Constitution, 1996 (RSA, 1996); MDGs (UN,2000); the NDP (RSA, 201:154); Five Year Local Government Strategic Agenda (RSA, 2006b).

NO.	Features from the literature review (Chapter 2)	Features in the case of the WWWTPU project
2	Strategic objectives of the MHLM.	There are five strategic objectives in MHLM, e.g. WWWTPU is informed by the water and sanitation strategic objective. In addition the strategic objectives of the MHLM are in line with the Five Year Local Government Strategic Agenda (RSA, 2006b).
3	Programme management.	There are no programmes (programme management) linked to strategic objectives in the MHLM.
4	Link between strategic objectives, programmes and projects.	There is no link between strategic objectives, programmes and projects.
5	Project-type organisational structure or strong matrix structure.	Functional organisational structure.
6	Management and leadership structures.	Project management unit (PMU) was established in April 2014.
7	Project management systems (input; output; outcome and impact) & processes (initiating; planning; executing; monitoring and controlling; closing).	Project management systems that are used are at input and output levels and a process used is only initiating process.
8	Performance management system.	Performance management system is not in place for all employees, only for Section 56 managers.
9	Project performance modalities at input monitoring; activity monitoring; output monitoring; impact monitoring; assumption/risk monitoring.	Performance monitoring takes place at input level by the MHLM and at activity and output by the consultant.
10	Critical Success Factors (CSFs) which are inclusive of factors within the project, organisation and beyond (external).	CSFs are not inclusive of factors within the organisation and beyond (external). Some factors within the project are considered.

(**Source**: Researcher's own compilation).

Table 3.5: Features of the WWWTPU at tactical level

NO.	Features from the literature review (Chapter 2)	Features in the case of the WWWTPU project
1	**Project knowledge areas** • Human resource management • Integration management • Scope management • Time management • Cost management • Quality management • Communication management • Risk management • Procurement management • Stakeholder management	"The consultant and the contractor are critical in terms of executing project management knowledge areas due to lack of capacity in MHLM"
2	Implementation of projects at operational level	Project implementation is done by the Sedibeng Water Board as the implementing agent, the NEP consulting engineers and the contractor

(**Source**: Researcher's own compilation)

Table 3.6: Features of the WWWTPU at operational level

NO.	Features from the literature review (Chapter 2)	Features in the case of the WWWTPU project

NO.	Features from the literature review (Chapter 2)	Features in the case of the WWWTPU project
1	**Project life-cycle phases:** • Conceptual/initiation • Planning/design • Execution/implementation • Termination/closure • Operation, maintenance and mentoring	**Project life-cycle phases:** In the implementation of the WWWTPU project, the MHLM was responsible for the conceptual/initiation phase. The implementing agent (Sedibeng Water Board) and the consultant (NEP engineering consultant) were responsible for planning /design phase, while the implementation as well as termination/closure phases of the project is the responsibility of the contractor. The operation, maintenance and mentoring is the responsibility of the contractor to ensure that the beneficiary, in this case the MHLM, is mentored on how to operate and maintain the upgraded waste-water treatment plant. The implementing agent and the consultant were employed due to a lack of capacity in the MHLM
2	**Modalities of project life-cycle phases:** **Conceptual/Initiation** • Ward/community meetings • Needs identification • Needs analysis • Needs prioritisation • Projects identification • Adoption of IDP • Development of SDBIP • Feasibility of the study • Project proposal • Project terms of reference • Project charter	**Modalities of project life-cycle phase:** **Conceptualisation** The MHLM was only responsible for the following modalities under the conceptualisation phase: convening IDP meetings with communities to identify the needs of the community; classify and prioritise needs as projects in the IDP document. The feasibility study under the conceptual/ initiation phase is done by the consultant, therefore the project proposal, terms of reference and charter are also done by the consultant
	Planning/design • Project design • Project activities • Work breakdown structure • Gantt chart • Project time frames • Resource plan • Procurement • Appointment of a contractor	**Planning/design** The consultant and the implementing agent (Sedibeng Water Board) are responsible for the modalities in the planning/design phase

NO.	Features from the literature review (Chapter 2)	Features in the case of the WWWTPU project
	Execution/implementation • Creating project deliverables • Implementation through work-breakdown structure and Gantt chart • Monitoring and controlling the following management processes: time; risk; change; cost; quality; procurement; acceptance; communication • Project steering committee	**Execution/implementation** The contractor will be responsible for the implementation of the project, while the consultant and the implementing agent are monitoring the progress of the implementation
	Termination/closure • Final inspection of the project • Releasing resources • Terminating contracts • Project handover • Project report • Project review • Certificate of completion	**Termination/closure** The project will be inspected by the consultant and the implementing agent (Sedibeng Water Board), certificate of completion of the project will be issued by the consultant, after which the implementing agent will release funds of the project to the contractor, and the project handed over to the beneficiary – the MHLM
	Operation, maintenance and mentoring: - Mentoring sessions - Maintenance of the project for a specified period	**Operation, maintenance and mentoring:** Mentoring will be conducted by the contractor of the project. The beneficiary, MHLM will be mentored on how to operate the project (Wolmaransstad waste water treatment plant).

(**Source**: Researcher's own compilation)

The following section concludes with empirical observations that supported an exploratory case study, documented as Chapter 3.

3.5 CONCLUSION

Chapter 3 investigated the analysis of "management by projects" in the MHLM by means of an interpretive case study type to document the WWWTPU. The main purpose of Chapter 3 was to explore the extent to which features of the basis theory of "management by projects" were applied to the implementation of the WWWTPU project.

In order to achieve the purpose of Chapter 3, an exploratory case study was done on the WWWTPU project. The research provided empirical data, through semi-structured interviews and documentary data sources. By employing an exploratory case study research design, Chapter 3 examined aspects that increased the validity and reliability of the case study.

In line with the requirements of an exploratory case study, empirical data was collected and presented as a case study report. The report was processed by applying the interpretive data-analysis strategy to data collected from semi-structured interviews. Conclusions were drawn on the application of the basic features for "management by projects" on strategic,

tactical and operational levels as obtained from the literature study and compared with data collected to populate the case of the WWWTPU project.

Inferences about the extent to which features of the basis theory of “management by projects” were employed in the WWWTPU project, will be considered in Chapter 5. Chapter 4 will present the empirical findings of semi-structured interviews and a focus groups session that were conducted to complete the empirical findings of this study.

CHAPTER 4: "MANAGEMENT BY PROJECTS" IN PRACTICE: THE MAQUASSI HILLS LOCAL MUNICIPALITY

4.1. INTRODUCTION

In Chapter 3, an exploratory case study type was used to analyse the application of the features of "management by projects" as used in the implementation of the WWWTPU project. This was done by employing an interpretive data-analysis strategy to arrive at conclusions and inferences.

Chapter 4 will present "management by projects" in the MHLM through semi-structured interviews and a focus group session as qualitative research inquiry in order to determine the extent to which features of "management by projects" may suggest possible service delivery improvements by the MHLM in its area of operation. The empirical data were collected through semi-structured interviews at strategic and tactical levels, and by a focus-group session at operational level. An interpretive analysis strategy was employed to analyse empirical data in order to arrive at inferences and conclusion of the findings. The next section discusses a qualitative research methodology employed during data collection process of this study.

4.2. THE QUALITATIVE-RESEARCH METHODOLOGY

The research adopted an interpretive case study type through a qualitative research methodology in order to determine the extent to which features of "management by projects" were applied in the entire MHLM (Terreblanche & Durrheim & Painter, 2009:7). The qualitative research methodology, as asserted by Maxwell (1996:17); Fossey *et al*. (2002:717); Flick, von Kardorff and Steinke (2004:18); de Vos *et al. (*2005:75); and Jarbandhan and Schutte (2006:672), allowed the researcher to collect detailed and in-depth data through semi-structured interviews at strategic and tactical levels, and by means of a focus group session at the operational level, in order to determine the extent to which features of "management by projects" at strategic, tactical and operational levels within the organisation were employed to expedite service delivery improvements by MHLM within its area of responsibility.

A research design is a "blueprint" that expounds the plan of action that supports a research endeavour with the sole purpose of ensuring and enhancing the validity of the research findings (Terreblanche, Durrheim & Painter, 2009:35). The research design followed in this

study was identified and described in paragraph 1.6 of Chapter 1 as a qualitative inquiry. According to Auriacombe and Webb (2006: 597), Mouton, Auriacombe and Lutabingwa (2006:580), and Boeije (2010:32) a qualitative research methodology permit an examination of happenings and events from the viewpoint of a phenomena being studied. It allows researchers to provide an in-depth and detailed construction of phenomena, and lastly, a qualitative research methodology allows the researcher to investigate a phenomenon holistically without isolating it from its context. It employs data collection strategies that are unstructured and open such as semi-structured interviews, focus group sessions and document analysis. Qualitative research methods encompass the following research designs: case studies, ethnographic field studies, discourse and conversation analysis, and life history studies (Auriacombe & Webb, 2006:597). The next paragraph will outline the frame of reference guiding the process of empirical findings supporting this study.

4.2.1 The frame of reference

The frame of reference of the study is the theory that sustains “management by projects” through its features at strategic, tactical and operational levels of a particular organisation within the local government sphere of the South African Public Service. The data collection process will be guided and converged with reference to the problem statement and the primary objective of the study, by the features of “management by projects” as outlined in paragraph 1.6.4 in Chapter 1.

4.2.2 The unit of analysis

Chapter 1 delineated the Unit of analysis with reference to “management by projects” in practice: the MHLM as managers at strategic, tactical and at an operational level within the MHLM. The unit of analysis identified and selected from the MHLM to support this particular research consists of 12 managers, two managers at strategic level, three managers at tactical level and seven managers at operational level. The managers were theoretically sampled as they are suitable to “the research question, theoretical position and account which is developed by the study” (Auriacombe and Mouton, 2007:450). Theoretical sampling means “constructing a sample which is meaningful theoretically, because it builds in certain characteristics or criteria which helps to develop and test your theory and explanation” (Auriacombe and Mouton, 2007:450). The officials were theoretically sampled as they were relevant to the research topic and problem statement. In this study the officials are responsible for project management at different levels of strategic management in MHLM, hence their relevance in the research study and selection to participate as unit of analysis

that supports this study. The next section will outline how relevant data to the study was collected.

4.2.3 Empirical investigation

This study followed a qualitative research design which included a literature review as discussed and motivated in paragraph 1.6.2.1 in Chapter 1. A literature review is important in research because it positions the study in a particular context with factual data and guides the process of data collection (Majam & Theron, 2006:604). The literature review was followed by collection of empirical data through semi-structured interviews and a focus group session as discussed in the next section.

4.2.4 Semi-structured interviews and questionnaires

The semi-structured interviews allowed the researcher to explore, and follow up on specific ideas and impressions, to create an understanding of the in-depth experience, thoughts, emotions and views of participants as documented in paragraph 1.6.2.2 in Chapter 1 (Fossey *et al*., 2002:727; Tong, Sainsbury & Craig, 2007:351; and Whiting, 2008:35).

The semi-structured interviews were conducted with officials at strategic and tactical levels of the organisational structure. Two sets of questionnaires were prepared based on features of "management by projects" at strategic and tactical levels respectively. The main objective of the two questionnaires was to respond to both the research objectives and questions by an in-depth inquiry into the application of these features at the mentioned levels and to enquire about a potential link between programmes, projects and strategic management at all levels of strategic management in the MHLM. These features were used to construct questions aimed at the different levels respectively. The questions posed at the different levels are discussed below.

The interviewees at strategic level responded to the following questions:

- Which drivers (legislation, strategic documents, national and provincial priorities) are considered in developing the strategic goals and objectives for service delivery improvements in Maquassi Hills Municipality?
- What are the strategic goals and objectives informing strategic management for service delivery improvements in Maquassi Hills Municipality?
- Which programmes are strategically linked with goals and objectives for service delivery improvements in Maquassi Hills Local Municipality?

- What type of organisational structure is used to support programme management in Maquassi Hills Municipality?
- Which management and leadership structures supporting programme management are in place in Maquassi Hills Municipality?
- In which office are management and leadership structures supporting programme management located in Maquassi Hills Municipality?
- What are the organisational systems and processes used to support programme management in Maquassi Hills Municipality?
- To what extent is Performance Management Systems used to support programme management in Maquassi Hills Municipality?
- Which programme management performance monitoring modalities are followed to assess the implementation of programmes in Maquassi Hills Municipality?
- Which are the Critical Success Factors used to evaluate programme success in Maquassi Hills Municipality?
- How are programmes translated into projects for successful implementation in Maquassi Hills Municipality?

The interviewees at tactical level responded to the following questions:

- Which drivers (legislation, strategic documents, national and provincial priorities) are considered in developing the strategic goals and objectives for service delivery improvements in Maquassi Hills Municipality?
- How are programmes translated into projects for successful implementation in Maquassi Hills Municipality?
- How are projects structured together to achieve the objectives of the programmes in Maquassi Hills Municipality?
- Which knowledge Areas do you consider in project planning in Maquassi Hills Municipality?
- How are projects implemented at operational level within the municipality?

The next sub-section will examine how the empirical data was collected at operational level within the MHLM.

4.2.5 Focus-group session

Focus groups as data-collection technique, allows the study to collect data at a greater breadth and depth (Bauer & Gaskell, 2000:44; Langford & McDonough, 2003:22) as documented in paragraph 1.6.2.2 in Chapter 1). Participants are allowed to be flexible while the researcher gains insight into how the participants think and express different opinions on

the topic under discussion (Langford & McDonough, 2003:22). Furthermore, focus groups allow the study to follow up on different impressions and varying views on the basis theory that is investigated (Bauer & Gaskell, 2000:44). The design of the focus group session is explained below:

4.2.5.1 Design and procedure of the focus-group session

Morgan (1996:131) advised that focus-group participants should be provided with focus topics or questions. Participants were provided with topics and questions related to primary and secondary research questions, identified from the literature study within this research. This produced questions based on the features of the basis theory at operational level. Such features included the implementation of projects through the Project Life-cycle phases and modalities in each phase respectively. The features of the basis theory at operational level are outlined in paragraph 1.6.4. in Chapter 1.

The researcher outlined ethical issues to all participants as advised by de Vos *et al., (*2011:117) and Whiting (2008:37) and explained in paragraph 1.8 in Chapter 1. The focus group participants were informed about the importance of the session, the research topic as well as how the topic relates to their strategic management level. The researcher then introduced the topic with a presentation to create a favourable environment for the participants to engage in focus group questions indicated below:

The interviewees at operational level responded to the following questions:

- How are programmes translated into projects for successful implementation in Maquassi Hills Municipality?
- How are projects structured together to achieve the objectives of the programmes in Maquassi Hills Municipality?
- Which management and leadership structures supporting programme management are in place in Maquassi Hills Municipality?
- In which office are management and leadership structures supporting programme and project management located in Maquassi Hills Municipality?
- How are projects implemented at operational level in Maquassi Hills Municipality?
- Which Project life-cycle phases does the municipality follow to implement projects in Maquassi Hills Municipality?

The discussion of these questions by the focus group's participants was facilitated by a knowledgeable, independent facilitator, who was provided detailed notes on the topic under

discussion. This helped the facilitator to probe deeper into the meanings and impressions of the responses by participants.

4.2.6 Ethical considerations

In collecting empirical data with reference to the main study, the researcher ensured the ethical considerations as explained in paragraph 1.8 in Chapter 1.

The next sub-section will outline how empirical data considering the above issues relating to the study was analysed to arrive at conclusion and inferences.

4.2.7 Data analysis

In collecting empirical data on the features of “management by projects” at strategic, tactical and operational levels, permission was granted as indicated under ethical considerations in paragraph 1.8 in Chapter 1 for the researcher to use a recording device. Both the discussions of semi-structured interviews and focus-group session were recorded upon which data analysis strategy was applied as indicated in paragraph 1.6.3.1 in Chapter 1. The next section will explain the validity and reliability aspects which are relevant to the study.

4.2.8 Validity

Validity as documented in paragraph 1.6.7.1 in Chapter 1 is the degree or the extent to which the events as they happened are correctly recorded and presented by the researcher during data collection and analysis (Burke, 1997:282; Oxford Concise Dictionary, 2002:271,304, 895, 1261; Graziano & Raulin, 2004:181; Welman, Kruger & Mitchel, 2005:142). In order to ensure the rigor in data collection and analysis the following tests of validity were applied by the researcher:

4.2.8.1 Construct validity

Construct validity in this study refers to the degree to which the study investigated the extent to which successful, public organisation project management initiatives can suggest possible developments towards sustained service delivery improvements by the MHLM in its municipal area of responsibility, i.e. does the “study investigate what it claims to investigate?” (Gibbert, Ruigrok & Wicki, 2008: 1468). Construct validity in this study was firstly ascertained by documenting a clear strategy or plan that demonstrated how the study traversed a journey from the research questions to the conclusion as indicated in Section 4.2 of Chapter 4. Secondly, how data was collected and analysed through triangulation of data from the case

of application of features of “management by projects” with respect to the implementation of WWWTPU project, the semi structured interviews conducted at strategic and tactical levels, and the focus-group session conducted at operational level as data collection methods (Gibbert, Ruigrok & Wicki, 2008:1466). The chain of evidence indicated above served as a measure of construct validity. The researcher also used different data collection sources such as interview tapes and documents (Riege, 2003:82; Gibbert, Ruigrok & Wicki, 2008:1466). Furthermore, the researcher enhanced construct validity by using verbatim interview transcripts as well as allowing respondents to review final reports of the findings (Riege, 2003:82).The next section outlines how external validity was ensured in this study.

4.2.8.2 External Validity

External validity or “generalisability” in a case study refers to the extent to which the findings of the study can be enlarged or applied to other cases with similar characteristics (Riege, 2003:81; Gibbert, Ruigrok & Wicki, 2008:1468; Runeson & Host, 2009:154). In this study external validity was increased by comparing the empirical findings with the theory that sustains “management by projects” during the data analysis stage. The comparison between empirical findings and the theory that sustains “management by projects” through features of “management by projects” at strategic, tactical and operational levels enabled “analytical generalisation” of the empirical findings of the study. Gibbert, Ruigrok and Wicki (2008:1468) assert that “analytical generalisation” denotes “generalisation from empirical observations to theory and not a population”.

4.2.9 Reliability

Reliability is the expression of replicating the findings of the study by other researchers (Riege, 2003:81; Gibbert, Ruigrok & Wicki, 2008:1468; Runeson & Host, 2009:154). Reliability in the case study can be achieved by keeping the documents, notes, and mechanical recordings of all interviews, as well as a clear documentation of the research procedures (Riege, 2003:81; Gibbert, Ruigrok & Wicki, 2008:1468).

On the bases of all the above considerations, which are in line with the case study type and design, empirical findings noted in Section 4.3 of this study were collected, analysed and inferred to arrive at particular conclusions on the extent to which features of “management by projects” were applied for service delivery improvements by MHLM in its area of responsibility.

4.3. EMPIRICAL FINDINGS

The empirical data was collected at different levels of the MHLM as will be discussed below:

4.3.1 The semi-structured interviews at strategic level

Semi-structured interviews were conducted on the 6 and 20 October 2014 with two participants respectively. The discussions indicated below are the empirical data and findings of the semi-structured interviews based on the features of the basis theory of "management by projects" at strategic level. These are verbatim accounts of interviewees' responses to eleven questions about to the strategic level of a local-sphere public organisation.

4.3.1.1 Which drivers (legislation, plans, and guidelines) are considered in developing the strategic goals and objectives for service delivery improvements in Maquassi Hills Municipality?

Response: Interviewee 1:

"The Municipal systems Act; the Municipal Structures Act, and the Municipal Financial Management Act."

Response: Interviewee 2:

"We currently are using five year strategic document called IDP – Integrated Development Plan which is also aligned to a National Development Plan; Municipal Systems Act, Municipal Development Act, and also with Spatial Development Frameworks. It is a strategic document that is going to lead us for a period of five years. IDP also entails plans of Provincial and National governments."

Deductions/Interpretations:

Considering the contributions of scholars from the literature review in Chapter 2 against the responses above, it can be inferred that the respondents did not indicate all the drivers, which are key for the service delivery focus at municipal level. In addition to the international, national, and provincial drivers (see paragraph 2.3.1 in Chapter 2), the municipality should ensure the achievement of the Key Performance Areas (RSA, 2006b, see paragraph 2.3.2 in Chapter 2) by putting in place effective and efficient internal administrative systems and processes. In addition, Notice 347 of 2007 in terms of the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) outlines the capacity municipalities requires to achieve local governmental developmental goals. The following drivers are also critical to service

delivery at municipal level: The Municipal Infrastructure Grant Programme, 2007, (CoGTA, 2007a); the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000); the Municipal Finance Management Act, 2003 (RSA, 2003a); the Local Government Municipal Structures Act, 1998 (RSA, 1998c); the Local Government Municipal Demarcation Act, 1998 (RSA, 1998b).

4.3.1.2 What are the strategic goals and objectives that inform strategic management for service delivery improvements in Maquassi Hills Municipality?

Response: Interviewee 1:

"There is a lot. You'll find all of them on the SDBIP, per department. Every department has its own SDBIP, which indicate what the strategic goals and objectives of each of those Key Performance Areas are."

Response Interviewee 2:

"The number of strategic goals deals with precisely what is being contained in the Constitution in terms of the provision of water and electricity and other service delivery related to municipalities in the country. So, as we are doing strategic management, we are also dealing with making sure that all those particular goals are aligned with the Millennium Goals, we are able to achieve them as an institution."

Deductions/Interpretations:

According to the literature review documented in Chapter 2, the Five Year Local Government Strategic Agenda/Priorities (RSA, 2006b) outlines the following as the Key performance areas of local municipalities: "Municipal Transformation and Organisational Development; Basic Service Delivery; Local Economic Development; Municipal Financial Viability and Management, and Good Governance and Public Participation."

The respondents were not able to identify the strategic goals and objectives. The researcher was referred to the SDBIP, the Constitution (RSA, 1996) and the Millennium Development Goals. These drivers present the strategic goals and objectives that inform strategic management to enhance service delivery in the MHLM, as indicated below.

International driver: Millennium Development Goals (UN, 2008):

The eight MDGs seek to improve conditions of living and service delivery among member states through "eradicating poverty, provisioning of primary education; promoting gender equality and empower women; reducing child mortality; improving maternal health;

preventing HIV/AIDS, malaria and other diseases; ensuring environmental sustainability and developing a global partnership for development" (Sachs & McArthur, 2005:347; United Nations, 2000; Van Aardt *et al*., 2011:1).

Drivers of the State: The ruling party (ANC's) Election Manifesto:

The ANC's manifesto of 2014 maintains that "together we move South Africa forward" by focusing on the following programmes: "Creation of more jobs, decent work and sustainable; livelihoods for inclusive growth; rural development, land reform and food security; education; health; fighting crime and corruption," and the ANC's commitment to expand access to housing and basic services (ANC, 2014).

National level: Constitution, 1996 (RSA, 1996):

Section 152(c) of the Constitution, 1996, (RSA, 1996) stipulates that the objectives of local government is to "offer a democratic and accountable government to local communities; avail services to communities in a sustainable manner; advance social and economic development; encourage a safe and healthy environment; and support the involvement of local people and organisations in the affairs of the local municipality."

State of Nation Address:

The national and provincial spheres of government should support the local government in ensuring that it improves its managerial, administrative and technical capacity, as well as appointing project managers for the implementation of service delivery projects (RSA, 2003c).

CoGTA (RSA, 2007):

The establishment of the Municipal Infrastructure Grant programme (MIG) is aimed at responding to the challenges of the Intergovernmental Relations Act, 2003 (RSA, 2003b). This is to ensure coordination and cooperation between provincial, national and municipal plans and budgets in the implementation of service delivery projects in the local government sphere. It is, therefore, incumbent upon the national government to ensure that municipalities have the capacity to monitor project management in the use of the MIG funds (CoGTA, 2007). The MIG is aimed at improving service delivery at local government level for household services, public municipal facilities, and institutions other than public municipal facilities (CoGTA, 2007).

Provincial level:

The Provincial Government is required to put in place mechanisms that would ensure that all categories of municipalities within the province improve their service delivery to the local citizens by achieving the mentioned Key Performance Areas (KPAs).

MHLM level:

The MHLM 3rd Generation IDP (MHLM, 2012 - 2016:61- 62) indicates the following as strategic goals of the Maquassi Hills Local Municipality: “Municipal transformation and institutional development; provision of basic services and infrastructure development; local economic development; municipal financial viability, and good governance and public participation.”

It can, therefore, be inferred that the respondents from the MHLM at strategic level are aware of a few basic strategic goals and objectives that directs the Maquassi Hills Local Municipality.

4.3.1.3 Which programmes are strategically linked with goals and objectives for service delivery improvements in Maquassi Hills Local Municipality?

Response: Interviewee 1:

“There are projects as enlisted in the IDP.”

Response: Interviewee 2:

“There are a number of programmes in the municipality that are going to be linked towards service delivery improvement, and mostly those in the SDBIP that normally speaks to the budget itself, e.g. any project – water, sanitation, electricity is going to be contained into a programme called SDBIP. So, all those particular programmes are going to be contained in the SDBIP and form part of the Performance Management System.”

Deductions/Interpretations:

From the literature it became clear that a programme should create a link between organisational objectives, strategy and project (see paragraph 2.3.4 in Chapter 2). This link serves as a structure to assemble projects in terms of common objectives and resources, and to ensure that strategies are implemented successfully (RSA, 2010c:23; see also Knipe *et al.,* 2002:43; Gray & Larson, 2006:24; RSA, 2010c:23 as documented in paragraph 2.4.1 of Chapter 2). It is imperative that there is a strong link between strategic objectives, programmes and projects within an institution, and the MHLM is not exempted from this

directive. Furthermore, the strategic objectives of an institution (e.g. the MHLM) should be demarcated into portfolio, goal-oriented or heartbeat programmes on the basis of the advantages, range and diversity of projects (Pellegrinelli, 1997:142; see paragraph 2.3.4 in Chapter 2).

The respondents could not identify programmes in the MHLM, therefore, it can be inferred that the strategic objectives of MHLM are not demarcated into different types of programmes, which affects service delivery adversely due to disconnection between policy formulation and implementation through programmes and projects as asserted by Nel (2001:608 – 609) and Knipe et al. (2002:43), also see paragraph 2.4.1 in Chapter 2.

4.3.1.4 What type of organisational structure is used to support programme management in Maquassi Hills Municipality?

Response: Interviewee 1:

“The organisational structure is linked to each directorate in the municipality, and each Director is responsible for the implementation of the IDP, which is then informing the SDBIP from the budget.”

Response: Interviewee 2:

“In Maquassi Hills Local Municipality the senior managers are four – the Director for Engineering Services, Director Technical Services; Director Community Services and Director Finances. In most instances most of the programmes are going to be in two Directorates – your Engineering Services where your PMU is located and you’ve got the Director Community Services where some of the projects are also located in terms of your organisational structure. Corporate Services mostly deal with the minutes and agenda taking of the Council, and you’ve also got Finances that are supporting staff across all the departments to provide support in terms of achieving the main objectives.”

Deductions/Interpretations:

According to the Local Government: Municipal Planning and Performance Management Regulations (RSA, 2001); Gray and Larson (2006:24), and Knipe *et al*. (2002:43), municipalities can create organisational structures and mechanisms, or institutional frameworks including organograms that create links between strategic management, programmes and projects to support “management by projects”. Municipalities can use the following organisational structures: functional organisational structure, project type

organisational structure or organisation by projects and lastly matrix organisation (Clements & Gido, 2006:390; Aubrey, Hobbs & Thuillier, 2007:330).

The first respondent to question 4.3.1.4 alluded to the fact that the organisational structure is connected to directorates and departments. This is further supported by the second respondent who outlined the managers responsible for each directorate. The abovementioned descriptions are similar to features of a functional organisational structure outlined by Clements and Gido (2006:391; see paragraph 2.3.5.1 of Chapter 2). They point out that a functional organisational structure is based on individuals with the same skills located in the same directorate. Thus, it can be inferred that the organisational structure in the case of the MHLM is a functional organisational structure.

From the literature it became clear that a functional organisational structure is not desirable to support programme management as it leads to complexities in coordinating project management and the additional time required because the functional duties compete with project-related duties (Kerzner, 2003:93; Meredith & Mantel, 2010:193). According to Hobday (2000:874), Clements and Gido, (2006:393), as well as Aubrey, Hobbs and Thuillier (2007.330), a desirable structure to support programme management is a project-based organisational structure or strong matrix organisational structure, discussed in paragraph 2.3.5.2 and 2.3.5.3 of Chapter 2.

4.3.1.5 Which management and leadership structures supporting programme management are in place in Maquassi Hills Municipality?

Response: Interviewee 1:

“Directors are appointed according to Section 56 of the Municipal Structures Act 117 of 1998 (RSA, 1998c), so the structures consisting in Maquassi Hills are the CFO, Director Engineering Services, Director Community Services, Director Corporate Services, which falls all under the supervision and control of the Municipal Manager.”

Response: Interviewee 2:

“We’ve got a PMU located in the Director for Technical Services and both of them are directly reporting to the Accounting Officer, i.e., the MM and therefore we are making sure that those particular projects and programmes in terms of their reporting lines.”

Deductions/Interpretations:

According to Thiry and Deguire (2007:654), Frame for managing programme performance information (RSA, 2007), Van der Waldt (2009a:36); and MIG document (CoGTA, 2007), the

municipality is required to establish a PMU in order to fulfil the developmental role of local municipal level.

The first respondent identified the following as structures: the CFO; Director Engineering Services; Director Technical Services; Director Community services and the MM, whilst the second respondent identified a Project Management Unit. According to the MHLM 3rd Generation IDP (MHLM, 2012 - 2016:39), the PMU is not indicated on the organisational structure of MHLM, in which case the assertion by the first respondent is justified. Further investigation into the assertion made by the second respondent indicated that the PMU in the MHLM was only established in April 2014.

4.3.1.6 In which office are management and leadership structures supporting programme management located in Maquassi Hills Municipality?

Response: Interviewee 1:

“Mainly in the Director Engineering, has a project management unit under his supervision which deals with all project management. The project used to be done by ourselves now we have got an individual person fully appointed under project management unit.”

Response: Interviewee 2:

“Programmes and management are located in different offices, but to be precise the one that is very critical is the one that is the PMU that deals with the entire project within the institution it is located at the Director: Engineering Services.”

Deductions/Interpretations:

The successful application and implementation of “management by projects” require public organisations such as the MHLM to create platforms and structures that support this design. An example of such a structure is the PMU, which can be located strategically according to the needs of the organisation (Van der Waldt, 2009a:36). The discussion around question 4.3.1.6 confirmed that the management and leadership structures supporting programme management (PMU) is located in the office of the Director: Engineering Services, as the PMU was established in April 2014.

4.3.1.7 What are the organisational systems and processes used to support programme management in Maquassi Hills Municipality?

Response: Interviewee 1:

“Well, on the organisational system, the financial management system of the municipality that falls in project management on the financial side of it. On the technical side I’m not sure; you’ll find that with the interview with that department.”

Response: Interviewee 2:

“We’ve got processes and programmes that are supporting the systems; we’ve got for example for any project that is sitting, a project steering committee; the Community Liaison Officers, your CLO is appointed in order to make sure that they liaise processes into communities, technical steering committee meetings where all officials are going to sit around the table to make sure that everything works according to the budget.”

Deductions/Interpretations:

According to the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) and the Local Government Municipal Planning and Performance Management Regulations, 2001 (RSA, 2001) as discussed in paragraph 2.3.8 of Chapter 2, a municipality in line with the performance management system should set input, output, outcome and impact indicators according to the priorities outlined in the IDP. The following process skills should be inculcated in project implementation: initiating process; planning process; executing process; monitoring and controlling process, and closing process group (PMBOK Guide, 2008:43; Burke, 2010:66). In the responses above the respondents could only identify financial system as the organisational system that supports programme management in MHLM, which is more at input and output levels. Furthermore the MHLM is setting up committees such as “a project steering committee and the Community Liaison Officers” (strategic level interview, 20 October 2014), which are responsible for the initiating process (identify needs and draw up a budget). It can, therefore, be inferred that the MHLM is failing to set indicators at outcome and impact levels; the MHLM is also failing to outline the processes in terms of planning; executing; monitoring and controlling; and closing.

4.3.1.8 To what extent is Performance Management Systems used to support programme management in Maquassi Hills Municipality?

Response: Interviewee 1:

“Maquassi Hills has no project management systems in place. Performance is done basically on a manual system of completing quarterly performance management reports. But there is no electronic system or programme in place that does support on performance. No, no, Municipality does not have a Performance Management System. PMS is only linked to Section 56 appointments. No other officials are under that category of performance management. The lower level officials do not have work plans linked to the Performance Management Systems.”

Response: Interviewee 2:

“Each and every director signs a performance agreement, linked with the SDBIP, in order to make sure that our performance management system is stable and to be able to look into the progress and outcomes achieved in that particular quarter and year. Currently we’ve developed a performance management policy that is still a draft and needs to be adopted by the Council. It speaks directly to the fact that your second level of layer of the municipality called your middle managers/divisional heads are supposed to sign a performance agreement with the director, but we have not yet entered into performance agreements with the middle managers. At this point in time, we are awaiting the Council resolution so that together with labour we are able to cascade down to other levels of management.”

Deductions/Interpretations:

According to the literature (see in paragraph 2.3.8 of Chapter 2), municipalities are obligated to develop a performance management system in consultation with the community, with clear key performance indicators addressing the priorities set out in the IDP (RSA, 2000; RSA, 2001). This is reflected in the systems and processes for project management that were outlined in paragraph 2.3.8 of Chapter 2. The discussion above indicated that the municipality does not have a Performance Management System for all employees, except for the Section 56 managers, who are expected to sign performance agreements with the Municipal Manager. The discussion further indicated that the municipality has developed a draft policy on performance, which is still to be adopted by the municipal council. On the basis of these assertions it can be inferred that the municipality does not have a performance management system, which should contain the performance work plans and agreements for all the officials of the MHLM, except for those agreements signed by Section 56 managers.

4.3.1.9 Which programme management performance monitoring modalities are followed to assess the implementation of programmes in Maquassi Hills Municipality?

Response: Interviewee 1:

“No, we don’t have, No.”

Response: Interviewee 2:

“We’ve got monitoring and evaluation teams in the office of the MM, and also we’ve got the assistance of the manager in the office of the MM, that are driving behind the monitoring to make sure that assessment is being done on quarterly basis to all the section 56 managers, and we are also reporting to Council on quarterly basis in terms of our performance agreement. Monitoring is done from the level of the MM and the mayor.”

Deductions/Interpretations:

On the basis of literature documented in paragraph 2.3.9 of Chapter 2, the monitoring of project performance should take place at the following levels within the project life-cycle phases: input; activity; output; impact, and risk/assumption (RSA, 2000; RSA, 2001; RSA, 2005c:8). In the discussions above the first respondent asserted that the Municipality does not have modalities to monitor performance for programmes, whereas the second respondent indicated that there is performance monitoring for Section 56 managers. The assertion by the first respondent is consistent with the response to question 4.3.1.8 that the Municipality does not have a fully-fledged performance management system and performance monitoring is only limited to Section 56 managers, as the second respondent pointed out. On the basis of the above findings it can, therefore, be inferred that while performance monitoring is conducted for Section 56 managers, it only takes place at input; activity and output levels. This inference is further supported by the MHLM-SDBIP (2014 – 2015:18). This document does not outline levels of modalities for project monitoring at all the different levels indicated above.

4.3.1.10 Which are the Critical Success Factors used to evaluate programme success in Maquassi Hills Municipality?

Response: Interviewee 1:

“All projects are managed and controlled, or supervised through appointed professional engineers, and is monitored basically on a monthly reporting framework from national treasury, governed by provincial government, the treasury on project reporting and also then

a project completion certificates at the end of the project. We also appoint a professional engineer (consultant) to monitor and to control the implementation of the project to supervise the implementation of it, which also works hand in hand with the PMU manager."

Response: Interviewee 2:

"We've got success factors in order to make sure that we are able then to evaluate programmes within the institution. We report on monthly basis to the National Treasury with the fund that they have allocated to the municipality such as MIG; library grants. So, in most instances at the institution when we look at the success factors we look at your programmes and projects are completed on time and we are able to register success in terms of your MIG, you spent hundred percent in all the funds that were given to the institution."

Deductions/Interpretations:

The literature as outlined in paragraph 2.3.10 of Chapter 2, indicate that the successful implementation of a project relies on institutions such as MHLM's ability to identify and outline the CSFs of projects that extend beyond a narrow definition of time, cost and quality, to include other factors outside the project and the organisation (Westerveld, 2004:412; Cook-Davies *et al*., 2009:117; Ika *et al*.. 2012:107; Muller & Jugdev, 2012:761). The success of a project depends on the ability of project managers to be fully aware of the broader CSF definition as proposed by Morris and Pinto (2007:59); Westerveld (2003:412); Ika *et al.,* (2012:112); as well as Muller and Jugdev (2012:761).

The response to question 4.3.1.10 identified the following CSFs used to evaluate programme management in the Maquassi Hills: "Hundred percent spending; project completion certificate; and time." It is evident that the CSFs the respondents listed above do not include factors such as project mission; leadership, technical skills; top management support, and sufficient and skilled personnel. Therefore, the mentioned CSFs do not consider factors within the organisation, or external factors.

4.3.1.11 How are programmes translated into projects for successful implementation in Maquassi Hills Municipality?

Response: Interviewee 1:

"You'll have to consult with the PMU manager on that question."

Response: Interviewee 2:

"There are a number of programmes that automatically would translate into becoming projects on their own, and in most instances those programmes, like I have indicated we've

got programmes in different departments, you go to corporate services they've got a programme in terms of your records-keeping management in order to account to the Auditor General, and at a later stage it becomes a projects on its own because you do it on an annual basis. Because you have to align it to Finance, and Finance must make sure that even the financial system becomes a project".

Deductions/Interpretations:

As was derived from the literature previously, a programme is an assembly of a group of projects to ensure the effective and efficient implementation of strategic objectives of an institution such as the MHLM (McElroy, 1996:328; PMBOK, 2000:6; Williams & Parr, 2006:31; Morris & Pinto, 2007:118; RSA, 2010:23; see paragraph 2.3.4 of Chapter 2). Furthermore, the National School of Government Handbook (RSA, 2010c) asserts that a programme creates a link between organisational objectives, strategy and a project. Thus the link assembles projects according to common objectives and resources, and thereby ensuring the successful implementation of strategies (RSA, 2010c:23). The responses on Question 4.3.1.11 above could not identify particular criteria used by the MHLM to translate programmes into projects. Thus, it can be inferred that there is no clear link between programmes and projects in the MHLM and, as a result projects are not assembled into programmes.

Summary of inferences of questions:

On the basis of the semi-structured interviews above at strategic level, the inferences and conclusions will be summarised subsequently.

- The respondents at strategic level did not indicate all the drivers, which are key for the focus on service delivery at municipal level.
- The strategic objectives of the MHLM are informed by policies, regulations and priorities from other levels of government such as national and provincial government departments. The respondents were not able to identify the strategic goals and objectives of the MHLM.
- The MHLM does not function in terms of programmes (programme management). Therefore there is no strong link between strategic objectives, programmes and projects, as proposed by Pellegrinelli (1997:142; also see paragraph 3.4 and 4.1 of Chapter 2 – an institution's strategic objectives should be demarcated into portfolio, goal-oriented or heartbeat programmes on the basis of the advantages, range and diversity of projects.

- The MHLM uses a functional organisational structure to support programme management instead of a project-based organisational structure or a strong matrix structure.
- The PMU is a management and leadership structure that supports programme management.
- PMU for the MHLM was established on April 2014 and is located in the office of the Director of engineering.
- The organisational systems in the MHLM are working at input and output levels. The processes used to support programme management function only as at the initiation stage (i.e., need identification and drawing up of the budget).
- The MHLM did not outline the modalities to monitor programmes and projects, by focusing on the input; activity; output; impact and assumptions/risk. The reason could be that the respondents are not involved directly with infrastructure projects.
- The CSFs do not include factors within the organisation and beyond (external).
- Strategy is not translated into programmes and programmes are not packaged into projects.

The following sub-section will focus on the data collected at tactical level within the MHLM.

4.3.2 The Semi-structured interviews at tactical level.

On 1 October 2014 the researcher conducted semi-structured interviews with three participants of the Maquassi Hills Local Municipality. The questions were based on the features of “management by projects” at tactical level. The following data represent the empirical findings of the semi-structured interviews and are verbatim accounts of interviewees’ responses to five questions related to the tactical level of a local sphere public organisation.

4.3.2.1 Which drivers (legislation, plans, and guidelines) are considered in developing the strategic goals and objectives for service delivery improvements in Maquassi Hills Municipality?

Response: Interviewee 1:

“The legislation that the municipality considers is the White Paper on Local Government, the SDBIP at the technical level, the Municipal Systems Act.”

Response: Interviewee 2:

“At the municipality we have an IDP document, and guidance from the national goals that are set by the Department of National Government – COGTA, in the province is the Local

Government of Housing. So we take those strategic goals and we try to align with them but through our IDP we align with community needs. We manage this through our SDBIP, i.e. our Service Delivery Budget Improvement Plan. From our IDP, generally as a municipality we have five key objectives, they relate to: good governance, financial management, service delivery, operations, maintenance and development of infrastructure, local economic development, and institutional capacity."

Response: Interviewee 3:

"The first one is the IDP document, which becomes a strategic document for the municipality, and obviously it has to be in line with the NDP, Provincial Development Strategic. IDP is the driver that caters for the strategic goals and objectives for service delivery improvement in our municipality. I would say our objectives are in line with the Constitution, Section 152, which talks about five objectives and gives the municipality a clear mandate as to what needs to be achieved, i.e. to ensure that it promotes democracy and accountability, improves service delivery in a sustainable manner, safe environment, public participation, promotes economic and social development. Those are the driving objectives in as far as our IDP is concerned."

Deductions/Interpretations:

According to the literature investigated in paragraph 2.3 of Chapter 2, the following are the drivers that inform strategic objectives in the MHLM:

National level:
Constitution, 1996, (RSA, 1996); the National Development Plan, Vision 2030 (RSA, 2011).

Provincial level:
The Five Year Local Government Strategic Agenda/Priorities (RSA, 2006), which outlines the Key performance Areas that should be achieved by the municipalities at district and local level.

Local level:
In addition to the national and provincial drivers outlined above, municipalities should consider the following drivers to develop its strategic objectives: The White Paper on Local Government, 1998 (RSA, 1998a); The Local Government Municipal Demarcation Act, 1998 (RSA, 1998b); the Local Government: Municipal Structures Act 117 of 1998 (RSA, 1998c); the Municipal Finance Management Act 56 of 2003 (RSA, 2003a); the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000); The Municipal Infrastructure Grant

Programme, 2007, (RSA, 2007a); Notice 347 of 2007 in terms of the Municipal Systems Act, 2000 (RSA, 2000).

The respondents indicated the following drivers: White Paper on Local Government, the SDBIP at the technical level, the Municipal Systems Act; national goals that are set by the Department of National government – COGTA; the NDP, Provincial Development Strategies; the Constitution. From these responses it can be deduced that the respondents at tactical level know most of the drivers that inform strategic objectives and goals and are aware of the strategic objectives of the MHLM.

4.3.2.2 How are programmes translated into projects for successful implementation in Maquassi Hills Municipality?

Response: Interviewee 1:

“Those key performance indicators are tight to the Municipal Manager. Now, in developing those you take into cognisance the number of the objectives set, Key Performance Areas identified; you then develop performance indicators based on the strategic objectives. Out of that you also set targets for the financial year addressing those, and you would then give your targets and a provision in the PMS is made where the Accounting Officer will have to enter into an agreement with the mayor of the municipality to ensure that they sign a performance agreement, as they agree on it then cascade it to the lower levels to your section 56 managers who we call directors in municipality. St that level it goes down to the operational level.”

Response: Interviewee 2:

“I’ll make an example with the bigger funding programme from national that we have for projects – MIG, but then from our IDP for this financial year, we identified that water and sanitation should take priority from the funds under MIG programme, because we had sewer spillage we identified that water and sanitation should take priority from IDP depending from the need of the community. So, through that need, these funds under MIG programme are used for water and sanitation as a priority project. So we feed them to the funding programme.”

Response Interviewee 3:

“I would say here it has been very difficult for programmes to become, because the municipality was placed under administration, because of the challenges encountered. The unfortunate part is that one has been appointed since from January, so there have never

been concrete programmes that can be translated into projects. All I can say there is a planning process in that regard,"

Deductions/Interpretations:

The literature indicates the need for a strong link between strategic objectives, programmes and projects within an institution such as the MHLM (Knipe *et al.,* 2002:43; Gray & Larson, 2006:24; see paragraph 2.4.1 of Chapter 2). Furthermore, the strategic objectives of an institution (MHLM) should be demarcated into portfolio, goal-oriented or heartbeat programmes according to attributes of the projects (Pellegrinelli, 1997:142; see paragraph 2.3.4 of Chapter 2). It is evident that the respondents could not enlist the programmes which are in place, nor establish a link between strategic objectives, programmes and projects within the MHLM. In addition the programmes are not indicated in the MHLM 3rd Generation IDP (MHLM, 2012 – 2016:61-62, 74-93) and the MHLM-SDBIP (2014 –- 2015:40-53). In view of the above mentioned responses it can be inferred that programmes are not in place in the MHLM. This confirmed by the third respondent that "there have never been concrete programmes that can be translated into projects" (personal interview, 1 October 2014), except for the MIG programme that supports the development of infrastructure in the local government sphere.

4.3.2.3 How Are Projects Structured Together To Achieve The Objectives Of The Programmes In Maquassi Hills Municipality?

Response: Interviewee 1:

"The communities, the ward councillors, collect information or needs from communities and out of that those are classified programmes, because they have to happen at various wards within the municipality. Now, in order for us to be able to address such challenges or needs of the community, projects are developed during the prior stages of the development of IDP. Technocrats and officials of the municipality give more information in order that these projects can be structured in a manner in which they will address the needs of the municipality."

Response: Interviewee 2:

"The council decided that because most of our grant funds went to roads in the last two years, so, now council took a decision to focus on water and sanitation as a project. Even our funding gets priority on water and sanitation projects."

Response: Interviewee 3:

“To be honest with you, we have never had a concretised plan of action, like your strategic documents where the municipality will go and develop a national plan. We never had such, and hopefully will have it maybe next year January because the administration intervention was terminated somewhere in June. We still want each other; we are still trying to find each other. So there has never been a strategic or national plan that concretises all what we want to achieve.”

“We do have projects, e.g. structured projects, but for the holistic municipality there has never been any. Each and every department has got its own way of dealing with these things but there must be a convergence at some point so that they must all be properly managed.”

Deductions/Interpretations:

As was shown from the literature, a programme is combination of a group of projects to ensure an institution’s effective and efficient implementation of its strategic objectives (McElroy, 1996:328; the PMBOK, 2000:6; Williams & Parr, 2006:31; Morris & Pinto, 2007:118; RSA, 2010:23; see paragraph 2.4.1 of Chapter 2). It was also pointed out that Pellegrinelli asserts that the strategic objectives of an institution (MHLM) should be demarcated into various programmes on the basis of the advantages, range and diversity of projects (1997:142; see paragraph 2.3.4 of Chapter 2).

The respondents could not outline how projects are structured together in the MHLM. Thus it is evident that projects are not grouped or structured together under a particular programme on the basis of common resources or features of individual projects.

4.3.2.4 Which knowledge areas do you consider in project planning in Maquassi Hills Municipality?

Response: Interviewee 1:

“The projects that we have are more of a technical nature in terms of your infrastructure. A consideration is on an annual basis made as to whether the municipality has got a technical knowhow of implementing such a project or not. Having done that, the skills and capacity of the municipality in terms of personnel or human resource is taken into consideration. Currently, almost about 90% of our projects are technical or human-resource related and so on; a consideration is made to the effect that in the municipality we do not have sufficient capacity and skill to can be able to implement those projects. During a project planning cycle we normally consider those things, such as finance, human capital, capacity and the skill that we should have in order for us to implement such a project.”

Response: Interviewee 2:

“We don’t have enough project capacity in terms of people with knowledgeable project-management knowledge, so what we do, we utilise consultants, but we give them guidance in terms of initiating projects, in terms of the need, so we plan in line with this need, e.g. water and sanitation is the need which has health and environmental risk. This has subsequently resulted in community uprisings. So, the consultant will go ahead and package the work, scope the work, do cost estimates and we can then look at our funding, from MIG or water affairs, or through whatever funding agent we initiate projects that are related to that. They would go ahead when the funding is approved. Once we have identified the need, at that point we then go on competitive bidding. For the current year we have consultants that have been appointed for a period of two years by the municipality. But in other programmes the funding agent would then appoint the implementing agent, so the agent will deal with project implementation and the municipality would be the beneficiary. It’s simply because of the analysis that there was no internal capacity in the municipality.”

Response: Interviewee 3:

“For this one I don’t think I will have an answer. There may be an answer but, to be honest with you, I know that we have an IDP, we are guided by pieces of legislation, there has never been a way of sitting down and discuss, because I think the question has to do with moving forward in terms of project planning. But for the whole municipality, as I answered when I answered the third question, there has never been a holistic one.”

Deductions/Interpretations:

From the literature Muller and Jugdev (2012:761) indicate that the processes of project management or the knowledge areas are necessary to ensure that service delivery “outputs” are achieved at operational level. In addition, the Municipal Infrastructure Grant document (CoGTA, 2007), maintains that project management at municipal level is the responsibility of the PMU. The responses on question 4.3.2.4 indicate that more projects in the municipality are related to infrastructure. Due to the fact that the MHLM does not have officials with “knowledgeable project management knowledge” and “lack of technical capacity” (tactical interview, 01 October 2014), consultants are appointed to do a feasibility study on the identified needs in order to formulate a project. Furthermore, Respondent 3 alluded to the fact that there has never been “a holistic approach” (tactical interview, 01 October 2014) on project management by the entire municipality, except for the projects that are implemented at directorates or departmental levels respectively. Bases on the directives of the literature and the interviewees’ responses, it can be inferred that the MHLM is not responsible for the implementation of projects through the project knowledge areas.

Furthermore the MHLM is lacking in terms of the following categories of capacity: technical capacity; strategic capacity; and organisational capacity (CoGTA, 2008; Maserumule, 2008:441) as explained in paragraph 2.3.7.4 in Chapter 2. On the basis of the above responses, the municipality is not responsible for the project knowledge areas due to lack of capacity. The consultant and the contractor are responsible for project knowledge areas.

4.3.2.5 How are projects implemented at operational level within the municipality?

Response: Interviewee 1:

“Projects are normally implemented through the memorandum of understanding and the performance agreement that we sign with the service providers, because normally we use service providers to do that and therefore we only do the monitoring and the evaluation of the project through our officials internally for service providers to give their performance in that regard. At operational level what we normally do is to monitor the project. Where the municipality comes in is to ensure that the Director Engineering Services or technical services monitor the implementation of these things if they are correct or not, at that very moment all documentations for the claiming of work done must be accompanied by the certificate or claim forms that the contractor and consultants are submitting to the municipality.”

Response: Interviewee 2:

“At operational level, we do not package our work in terms of projects, we do not. The only thing I can say is the main challenge is the adequate or sustainable income levels. So, we don’t implement them as projects because of that in the main we are more reactive at operational level. We have challenges of staff; aging infrastructure and this have got numerous failures, so, we mostly respond to breakdowns. So, at the level of planned maintenance we really are committing a lot of backlogs. So we are actually reacting. That’s why I say we don’t do as projects. Due to lack of capacity we lack master planning, so that’s why I say we are need driven and somehow we are crisis driven. Wherein we have consultants, it’s not like is an external body, it’s the municipality, consultants report directly to the head of department of engineering. If an external department is the implementation agent, the municipality is the beneficiary, so at that level it means the need has been identified from the municipality side and project has been initiated from the municipal side.”

Response: Interviewee 3:

“To be honest, we have not yet started. I will most of the time refer to the LG SETA approved projects; we have a meeting today to give us an outline. So, Maybe the Divisional Head of

Human Resource from the previous implemented projects can give you the details about that one."

Deductions/Interpretations:

Project implementation including Project Life Cycle is the responsibility of the PMU at municipal level (CoGTA, 2007:38). The literature indicated that projects are implemented at operational level according to certain project life-cycle phases (Wideman, 2007:2; Patanakul, Lewwongcharoen & Milosevic, 2010:46; Hewagamage & Hewagamage, 2011:98). However, the responses to question 4.3.2.5 pointed out the fact that the work at operational level of the municipality is not structured or packaged in terms of projects, due to lack of capacity in terms of human and financial resources; also that the municipality does not "follow a specific project management philosophy" (tactical interview, 01 October 2014). The projects are implemented by consultants and service providers appointed by the municipality. If the MHLM is the implementing agent, monitoring is done jointly by MHLM and the consultant. Therefore it can be inferred that the MHLM is only responsible for the conceptualisation phase of the project life-cycle.

Summary of inferences of questions:

The inferences made on the application of features at tactical level within the MHLM, can be summarised as follows:

- Strategic objectives in the MHLM are informed by policies, regulations and priorities of other spheres of government.
- The MHLM does not operate in terms of programmes or programme management.
- There is no link between strategic objectives, programmes and projects.
- The MHLM is not responsible for project knowledge areas, due to the fact that the "municipality does not have officials with knowledgeable project management knowledge" (tactical interview, 01 October 2014).
- The work at operational level of the municipality is not packaged into projects due to a "lack of capacity" (tactical interview, 01 October 2014) in the municipality, Therefore projects are implemented by consultants and contractors. The MHLM is only responsible for conceptual the phase of the project life-cycle.

The following section will focus on the empirical data collected at operational level through a focus group session within the MHLM.

4.3.3 Focus-group session at operational level

On 2 October 2014 the researcher conducted a focus-group session, facilitated by an experienced official, with participants at operational level of MHLM. Seven participants participated in the discussion of the seven questions. The following data represent the empirical findings of the discussions and are verbatim accounts of interviewees' responses to seven questions related to the operational level of a local sphere public organisation.

4.3.3.1 How are programmes translated into projects for successful implementation in Maquassi Hills Municipality?

Discussion Point 1:

"The programmes in Maquassi Hills are identified by the community through IDP process, and once is listed as programmes on the IDP, we start looking at the financial services to start budgeting for them. They are translated into projects through IDP."

Discussion Point 2:

"The IDP is our wish list now after information is collected from the communities; the council of Maquassi Hills do the priority list which is based on the funding that the municipality have. From there we are making a plan on how we are going to achieve those ideas from the community."

Discussion Point 3:

"When we translate programmes into projects quite correctly yes, during the IDP phase of the municipality, where the strategic document of the municipality is compiled, communities are consulted on the same subject and out of it more information is given by the community as well as their needs. This is followed by the IDP Steering Committee which is chaired by the Municipal Manager, and out of that the second phase would be the analysis phase and out of it programmes are identified. Lastly, for programmes to be realisable we need to develop projects."

Deductions/Interpretations:

From the literature it is clear that there must be a strong link between strategic objectives, programmes and projects within an institution such as the MHLM (Knipe *et al.,* 2002:43; Gray & Larson, 2006:24; see paragraph 2.4.1 of Chapter 2), As also mentioned previously, the strategic objectives of an institution (i.e. the MHLM) should be demarcated into various programs according to the attributes of projects (Pellegrinelli, 1997:142; see paragraph 2.3.4 of Chapter 2). The respondents at operational level refer to needs and programmes

interchangeably. The reason for the confusion could be deduced from the assertion in discussions at tactical level (paragraph 4.3.2.2 interviewee 3; and paragraph 4.3.2.5, interviewee 2) that at operational level the municipality is not packaging the work in terms of projects and programmes. It can thus be inferred that no programmes are used in the MHLM as programmes are not indicated in the MHLM 3rd Generation IDP (MHLM, 2012 – 2016:61-62, 74-93) and the MHLM-SDBIP (MHLM-SDBIP, 2014 – 2015:40-53). Therefore a further inference can be made based on the findings at strategic and tactical levels as well that there is no link between objectives, programmes and projects throughout the levels of strategic management in the MHLM.

4.3.3.2 How are projects structured together to achieve the objectives of the programmes in Maquassi Hills Municipality?

Discussion Point 1:

“Inputs are made by communities, after which the Council is convened to compile a priority list. Then from there we are looking on the ways and means of how we are going to raise funds if there is no budget available. Departments outside the municipality are consulted to assist us with the funds for projects. Now, we will be having the projects identified by the communities, others will be falling under technical services directorates, corporate or community services. So, those different departments put them under their Service Delivery Budget Implementation Plans (SDBIP),”

Deductions/Interpretations:

In the context of the South African government a programme is defined as “a set or group of related projects, which collectively deliver on a strategic objective of a department or government” (RSA, 2010c:23; see paragraph 2.4.1 of Chapter 2). In line with this definition, the aforementioned literature indicated that institutions’ strategic objectives should be demarcated into different programmes according to the needs and attributes of projects (Pellegrinelli (1997:142; see paragraph 2.3.4 of Chapter 2). The NSG document (RSA, 2010c:23) further maintains that a programme creates a link between organisational objectives, strategy and project to serve as a structure for the assembly of projects in terms of common objectives and resources, and thus lead to the successful implementation of strategies.

It is evident from the discussion points above that the respondents were able to identify different projects, however, they could not respond to the question on how these projects are clustered or packaged in order to achieve the objectives of programmes. This lack of understanding could be due to the fact that the municipality does not package its work into

projects and programmes (see the strategic-level responses in paragraph 4.3.2.2, interviewee 3; and paragraph 4.3.2.5, interviewee 2). On basis of the literature findings and the responses indicated above, it can be inferred that there is no link between programmes and projects, and that projects are not packaged into programmes on the basis of their unique features as explained by Pellegrinelli (1997:142).

4.3.3.3 Which management and leadership structures supporting programme management are in place in Maquassi Hills Municipality?

Discussion Point 1:

"We have four committees: the Technical Services Committee, Engineering Committee, Community Services as well as the Human Resources Committee. Those are the leadership structures that support all programmes of the municipality that have been identified as per departments. At management level the structure that we have is the management committee that actually assesses and technically approves the programmes."

Deductions/Interpretations:

The literature indicates that a municipality is required to establish PMU in order to fulfil its developmental role at local municipal level (Thiry and Deguire, 2007:654; RSA, 2007; Van der Waldt, 2009a:36; CoGTA, 2007). The response of officials is limited to committees in different departments as the committees are only limited to the scope of work within each directorate or department as indicated in the MHLM 3rd Generation IDP (MHLM, 2012 – 2016:61-62) and the MHLM-SDBIP (MHLM-SDBIP, 2014 – 2015:40-53). According to a respondent (paragraph 4.3.2.5), the work at operational level in the MHLM is not packaged in terms of projects. Thus, it can be inferred that the respondents at operational level are not aware of the PMU that was established in April 2014.

4.3.3.4 In which office are management and leadership structures supporting programme and project management located in Maquassi Hills Municipality?

Discussion Point 1:

"In most cases when there are programmes they are either supported from the office of the mayor, or the office of the Speaker. Now, from the implementation side where there is management, they are supported on the office of the Municipal Manager and they cascade down, depending on which directorate that a programme is situated."

Deductions/Interpretations:

The literature shows that “management by projects” require public organisations such as MHLM to create platforms and structures that support this basis idea. These structures include a PMU, which can be located strategically according to the needs of the organisation (Van der Waldt, 2009a:36). It is clear that the respondents are not aware of the office in which management and leadership structures that support programme and project management are located in the MHLM. This is due to the fact that the PMU was appointed in April 2014 (paragraph 4.3.1.5 above). The respondent also pointed out that the work at operational level in MHLM is not packaged in terms of projects (paragraph 4.3.2.5).

4.3.3.5 How are projects implemented at operational level in Maquassi Hills Municipality?

Discussion Point 1:

“They are implemented by going out on tender, advertising the project and procuring the service provider and the service provider will see to the operation.”

Discussion Point 2:

“After such exercise of procuring the services provider for the implementation the municipality at the operational level also monitors the project through steering committees, with the intention to come up with corrective measures. So, even after procuring, you still have the monitoring and evaluation to play in so far as the project implementation is concerned.”

Discussion Point 3:

“At the operational level mostly with the infrastructure development, you would have technical steering committees and you have project steering committee. Technical steering committees would involve people who are core to deal with the technical issues on the project, but steering committees would extend to include councillors, community participation, the CLO, contractors. Technical part is where decisions are taken in terms of the design, scope of work, what needs to be achieved there.”

Deductions/Interpretations:

According to MIG document (CoGTA, 2007:38), project implementation through project life-cycle phases is the responsibility of the PMU at municipal level. From the discussions with the respondents it becomes clear that projects are implemented at operational level by procuring services through tender processes such as advertising the project in order to

appoint a service provider. The service provider would then ensure the operations of the project while the municipality would monitor the implementation of the project through a steering committee. From this discussion point it can be inferred that the role of the municipality is limited to procurement of services and monitoring of the project by the steering committee.

4.3.3.6 Which Project life-cycle phases does the municipality follow to implement projects in Maquassi Hills Municipality?

Discussion Point 1:

“All projects are submitted through IDP after they are initiated; they get buy-in of the community, and followed by need analysis. Then other steps unfold, like implementation, to execute it we have the SDBIP; now procurement is started up to execution. At the end of the project we follow the closure, and handover. If it is infrastructure, the consultant and contractor does the final inspection; then it is handed over to us to operate then we sign it off.”

Deductions/Interpretations:

The literature indicates that projects are implemented at operational level according to the following project life-cycle phases: conceptual/ initiation phase; planning phase/ design; execution/implementation; termination/closure; operation, maintenance and mentoring phase. (Wideman, 2007:2; Patanakul, Lewwongcharoen & Milosevic, 2010:46; Hewagamage & Hewagamage, 2011:98; MIG document – CoGTA, 2007)

Discussion on question 4.3.3.6 indicated that projects in the MHLM are initiated through IDP processes and financed through the SDBIP. Services are then procured and the project is executed. At the conclusion, the project is inspected by the consultant, closed and handed over to the municipality. These above mentioned roles of the municipality are the modalities within the conceptual/Initiation phase of the project life-cycle. Thus, based on the literature and the responses indicated above, it can be deduced that the MHLM is only responsible for the conceptual/initiation phase of the project life-cycle. This is done through IDP processes and the development of the SDBIP. The consultant and the contractor are responsible for other project life-cycle phases such as “implementation; operations, maintenance and mentoring; and monitoring and evaluation” (CoGTA 2007:39). However, the assertions above imply that, in a situation where the municipality is the implementing agent, project monitoring is conducted by the municipality and the CLO. This finding is in line with paragraph 4.3.2.4.

4.3.3.7 Which modalities within each phase of the Project Life Cycle does the municipality consider in the implementation of projects in Maquassi Hills Municipality?

Discussion Point 1:

"The first step is the adoption of the IDP process plan, followed by a meeting to clarify the process. The IDP Representative Forum convenes a meeting with communities to identify needs. Once the IDP is adopted by Council, then we are at the stage where we have a project. SDBIP is then developed to check performance of the project. Then the plan is executed. There is specific reporting time-lines through the SDBIP which are actually regulated. Those are the few steps that we follow up until completion. So at that completion, the steps that we follow depend on the nature of the project. In Infrastructure projects there will be specific documentation, testing, inspection, approval documents to be signed off, and then we have the delivery of project."

Discussion Point 2:

"For infrastructure projects we always have problems that not all documents are produced, such as final approved drawing because some of the designs changes and modifications are done, at the final closing we struggle with the service providers and that has been a serious oversight over the years on the municipality's side and it causes a lot of problems for maintenance going forward. So at the two stages those are the major problems identified."

Discussion Point 3:

"At the inspection phase there are also challenges, for example RDP houses have been approved but there are no RDP houses actually built. Project was approved, the expectations were that the end product would be there, but after a few years later, about ten years later you realise that money was spent by the department, that money was actually going to the service provider or the contractor, and was fraudulently misused. Because if the service provider was paid for raw foundation and top structure and you found out ten years later that the project has been registered and there is no structure, that there must have been something wrong with the inspection phase in signing up of the project."

Discussion Point 4:

"The starting of projects is a delay in terms of partnering with other departments so that the project can start. Then the finishing part and accountability and even the reporting part is a problem. We start with the agreement that certain documents supposed to be part of reporting, yet at the end those documents are not submitted such as the initial agreement,

people who signed for it; people who started the project are no longer part of it at the end. Monitoring and closing is also a challenge."

Deductions/Interpretations:

The literature outlines certain modalities within each project life-cycle phase that should be considered in the implementation of projects at operational level as documented in paragraph 1.6.4 in Chapter 1, as well as in paragraph 2.5.2.1 – 2.5.2.6 in Chapter 2.

In discussion point 1 the respondents identified the following as modalities: IDP process plan; meeting with the committee; consultation process; develop the SDBIP, develop the performance agreement; and execute the plan. The modalities indicated by the respondents are only limited to the processes of formulating IDP and SDBIP. Based on the literature findings (see paragraph 2.5.2 of Chapter 2), and the responses indicated above, it can be inferred that the respondents' contribution is only limited to modalities within the conceptual/initiation phase of the project life-cycle, which could be the only phase in which the MHLM is involved. On the other side of the coin, the consultant is responsible for the feasibility study, while the contractor and the consultant are responsible for modalities under the following project life-cycle phases: implementation; operations, maintenance and mentoring; monitoring and evaluation.

In discussion 2, 3, and 4 above the respondents went further to identify the following as challenges for the implementation of projects in the MHLM: missing documents; no final approved drawing of the design by service providers; lack of proper inspection (project-quality management); changing stakeholders; lack of accountability; lack of proper reporting; and lack of proper monitoring of the project. In view of these challenges a conclusion can be made that the MHLM's lack of skills in project management resulted in the delay of services to the community.

Summary of inferences of questions:

The inferences based on the discussions at operational level of MHLM, can be summarised as follows:

- Programmes are not in place in the MHLM.
- Programmes are not packaged into different projects, based on the advantages, range and diversity of projects as proposed by Pellegrinelli (1997:142; see paragraph 3.4 of Chapter 2).
- The MHLM did not have management and leadership structures that support programme management until the PMU was established in April 2014.

- The participants could not identify the correct office in which management and leadership structures are located that support programme management.
- There is no link between strategic objectives; programmes and projects.
- The MHLM is only responsible for procuring service providers to implement projects; therefore the municipality is responsible for project-cost management and stakeholder management as a knowledge area, if the municipality acts as the implementing agent. Thus, the MHLM is only responsible for project conceptual/Initiation phase.
- The MHLM is responsible for project modalities under the conceptual/initiation life-cycle phase, whilst the consultant is responsible for the feasibility study, term of reference and project charter.

4.4. CONCLUSION

Chapter 4 documented "management by projects" in practice: the MHLM through interpretive study type and a qualitative research inquiry. Data for the research was collected through semi-structured interviews at strategic and tactical levels and a focus group at operational level. An interpretive data- analysis strategy was employed to process the data in order to arrive at inferences and conclusion at strategic, tactical and operational levels.

The empirical findings of the study at these levels of the MHLM were quoted verbatim for each question respectively as presented in section three in order to increase construct validity. The findings were summarised further at the end of each item in order to synthesise the discussions according to each item. This helped the researcher to identify diverging views and to try and motivate such diverging findings. On the basis of the inferences made at strategic, tactical and operational levels of the municipality, the following conclusions were drawn on the extent to which the MHLM implemented "management by projects" through the different features in the MHLM's area of responsibility. These conclusions are detailed in the following tables below.

Table 4.1: Features at strategic level of the MHLM

NO.	Features from the literature review (Chapter 2)	Features as currently applied in the MHLM
1	Drivers of "management by projects"	Development of strategic objectives in the MHLM is informed by drivers at all levels of government (local. provincial and national), e.g. Municipal Systems Act, Municipal Structures Act, the NDP, Municipal Financial Management Act, Municipal Development Act and the Spatial Development Frameworks. The respondents at strategic level were not cognisant of most of the drivers
2	Strategic objectives of the MHLM	The MHLM has five strategic objectives aligned to the local government Strategic Agenda (Five Key Performance Areas). The respondents at strategic level of the MHLM were not knowledgeable of most of these strategic objectives of

NO.	Features from the literature review (Chapter 2)	Features as currently applied in the MHLM
		the MHLM
3	Programme management	There are no programmes in the MHLM
4	Link between strategic objectives, programmes and projects	There is no link between strategic objectives, programmes and projects
5	Project-type organisational structure or strong matrix structure	Functional organisational structure
6	Location of management and leadership structures	The PMU is located in the office of the Director: Engineering Services
7	Management and leadership structures	The Project Management Unit (PMU) was established in April 2014
8	Project management systems (input, output, outcome and impact) and processes (initiating, planning, executing, monitoring and controlling, closing)	Project management systems (input and output) and processes (initiating).
9	Performance management system	Performance management system is not in place for all employees, except for Section 56 managers
10	Project performance modalities regarding input, output, impact, assumption/risk	Performance monitoring in general is conducted for the Section 56 managers, and takes place at input, activity and output levels
11	Critical Success Factors (CSFs), which are inclusive of factors within the project, organisation and beyond (external)	CSFs do not include factors within the organisation and beyond (external). Some factors within the project are considered

(**Source**: Researcher's own compilation)

Table 4.2: Features at tactical level of the MHLM

NO.	Features from the literature review	Features as currently applied in the MHLM
1	Drivers of "management by projects"	Development of strategic objectives in the MHLM is informed by drivers at all levels of government (local, provincial and national), e.g. Municipal Systems Act, Municipal Structures Act, the NDP, Municipal Financial Management Act, Municipal Development Act, and the Spatial Development Frameworks. The tactical level respondents know most of the drivers.
2	Strategic objectives of the MHLM	The MHLM has five strategic objectives aligned to Local Government Strategic Agenda (Five Key performance Areas). The respondents at tactical level know the strategic objectives of MHLM.
3	Programme management	There are no programmes in MHLM, therefore, there is no link between strategic objectives, programmes and projects
4	Project knowledge areas: Human resource management. Integration management Scope management. Time management Cost management. Quality management. Communication management Risk management Procurement management	The MHLM is not responsible for the project knowledge areas due to lack of capacity. The municipality does not have officials with "knowledgeable project management knowledge". Therefore, the consultant and the contractor are responsible for PKA. However, if the municipality is the sponsor and the implementing agent of the project, then it makes the municipality responsible for project-cost management and stakeholder management.

NO.	Features from the literature review	Features as currently applied in the MHLM
	Stakeholder management	
5	Implementation of projects at operational level.	Projects are implemented through a memorandum of understanding with the consultant and the contractor

(**Source**: Researcher's own compilation)

Table 4.3: Features at operational level of the MHLM

NO.	Features from the literature review	Features as currently applied in the MHLM (Chapter 4)
1	Management and leadership structures	The MHLM did not have management and leadership structures supporting programme management, until the PMU was established in April 2014
2	Location of management and leadership structures	The participants could not identify the correct office in which management and leadership structures supporting programme management is located
3	Programme management	There are no programmes (programme management) in the MHLM
4	Link between strategic objectives; programmes and projects	There is no link between strategic objectives, programmes and projects
5	Project life-cycle phases: Conceptual/initiation phase: Planning/design Execution/implementation Termination/closure Operation, maintenance and mentoring	Project life-cycle phases: Conceptual/initiation phase: The MHLM is only responsible for project conceptualisation; the consultant is responsible for planning/design and the contractor is responsible for implementation/execution, termination/closure, and operations, maintenance and mentoring.
6	Modalities of project life-cycle phases: Conceptual/initiation phase: Ward/community meetings Needs identification Needs analysis Needs prioritisation Projects identification Adoption of IDP Development of SDBIP Feasibility of the study Project proposal Project terms of reference Project charter	Modalities of project life- cycle phase: Conceptual/initiation phase: The MHLM is only responsible for the following modalities under the conceptualisation phase: Develop the IDP process plan; conduct meetings with the community; identify needs; prioritise needs; conduct consultation meetings; develop the SDBIP, develop performance agreement; and execute the plan; while the consultant is responsible for the feasibility study, terms of reference and the project charter .
	Planning/design Phase: Project design Project activities Work-breakdown structure Gantt chart Project time-frames Resource plan Procurement Appointment of a contractor	Planning/design phase: The consultant is responsible for modalities in the planning/design phase
	Execution/implementation phase: Creation of project deliverables Implementation through work-breakdown structure and Gantt chart Monitoring and controlling the following management processes:	Execution/implementation phase: the contractor is responsible for the implementation of the project, and monitoring is done by the consultant and the MHLM, if the municipality is the implementing agent

NO.	Features from the literature review	Features as currently applied in the MHLM (Chapter 4)
	time; risk; change; cost; quality; procurement; change; acceptance and communication Project steering committee	
	Termination/closure phase: Final inspection of the project Releasing resources. Terminating contracts Project handover Project report Project review Certificate of completion	Termination/closure phase: The project is inspected by the consultant and the MHLM steering committee, a certificate of completion of the project will be issued by the consultant, after which the implementing agent (Sedibeng Water Board) and the MHLM will release the funds of the project to the contractor. Then the project will be handed over by the consultant.
	Operation, maintenance and mentoring phase: Mentoring sessions Maintenance of the project for a specified period	Operation, maintenance and mentoring phase: Mentoring is normally conducted by the contractor of the project

(**Source**: Researcher's own compilation)

Chapter 5 will conduct a comparative analysis of the features of "management by projects" identified in the literature review as documented in Chapter 2, the case of the WWWTPU project, documented in Chapter 3, and **"**management by projects" in practice, documented in Chapter 4.

CHAPTER 5 "MANAGEMENT BY PROJECTS": A COMPARATIVE ANALYSIS

5.1. INTRODUCTION

In Chapter 4 semi-structured interviews were employed to collect data at strategic and tactical levels, whilst a focus-group session was held to collect data at operational level within the MHLM. The empirical data was analysed by using an interpretive data analysis strategy in order to make inferences and draw a conclusion.

Chapter 5 will undertake a comparative analysis of the features of "management by projects" identified in the literature review in Chapter 2, the case study on the WWWTPU project, examined in Chapter 3, and the data analysed in Chapter 4. A strategy of triangulation will thus be employed. At the end of the comparative analysis, the inconsistencies, if any, will be pointed out: To what extent did the MHLM apply the features of the basis theory on "management by projects" to improve service delivery? The next section will therefore present a comparative analysis of the features of this basis theory at strategic level.

5.2. COMPARATIVE ANALYSIS OF FEATURES OF "MANAGEMENT BY PROJECTS" AT STRATEGIC LEVEL.

A comparative analysis will focus on the following three trajects for the triangulation:

- features of "management by projects" at strategic, tactical and operational levels – identified from the literature review in Chapter 2;
- the use of these features in the implementation of the case of the WWWTPU project – investigated in Chapter 3;
- the findings of the data on how the basis theory are applied in practice, in the MHLM – according to Chapter 4.

5.2.1 Drivers of "management by projects"

Paragraph 2.3.1 in Chapter 2 outlined the strategic drivers of "management by projects" that should be considered by the MHLM when developing strategic objectives of the municipality. The case of the WWWTPU project is informed by the priority of Department of Water and Sanitation (DWS, 2011b), the North-West Province and Dr Kenneth Kaunda District Municipality Strategic Agenda. The following drivers were not indicated at strategic level of the MHLM: the Millennium Development Goals (UN, 2000); Constitution, 1996 (RSA, 1996); the White Paper on Local Government, 1998 (RSA, 1998a); Municipal Infrastructure Grant

Programme, (RSA, 2007a); and Notice 347 of 2007 in terms of the Municipal Systems Act, 2000 (RSA, 2000).

The respondents at tactical level mentioned most of the drivers that should inform the strategic objectives of the MHLM. Based on the assertions above it becomes clear that respondents at strategic level did not know most of the drivers, whereas respondents at tactical level knew most of the drivers that inform the strategic objectives of MHLM.

5.2.2 Strategic goals and objectives of the MHLM

According to the literature review, the strategic goals and objectives of a local municipality in South Africa are informed by the Five Year Local Government Strategic Agenda/Priorities (RSA, 2006b), which is in line with the Key Performance Areas of local municipalities as outlined in paragraph 1.1.2 in Chapter 1 and in paragraph 2.3.2 in Chapter 2.

The case of the WWWTPU project indicates five strategic objectives for the MHLM, and also that this project is informed by the Department of Water and Sanitation's priority, namely water and sanitation. The respondents at strategic level of the MHLM could not outline its strategic objectives but instead referred the researcher to the SDBIP of Maquassi Hills (SDBIP, 2014), the Constitution (RSA, 1996) and the Millennium Development Goals. On the basis of the above assertions, the following conclusion can be drawn: While the strategic objectives of the MHLM are in line with the Five Year Local Government Strategic Agenda/Priorities (RSA, 2006b) and are known by the tactical level respondents, respondents at strategic level of MHLM do not lead the organisation by recognising these strategic objectives or even by an in-depth knowledge of these objectives.

5.2.3 Programmes (programme management)

The literature advocates a strong link between strategic objectives, programmes and projects within an institution such as the MHLM (Knipe *et al.,* 2002:43; Gray & Larson, 2006:24; see paragraph 2.4.1 of Chapter 2). The strategic objectives of an institution (e.g. MHLM) should be demarcated into various programmes according to the needs and attributes of projects as indicated by Pellegrinelli (1997:142; see paragraph 2.3.4 of Chapter 2). The case of the WWWTPU project indicated that programmes are managed through the Expanded Public Works Programme (EPWP), whereas at strategic level of the MHLM respondents indicated the SDBIP as the programme. It becomes evident that respondents on the WWWTPU project and those at strategic, tactical and operational levels could not identify distinct programmes

in the MHLM. From this can be inferred that the strategic objectives are not translated into programmes in this municipality.

5.2.4 Organisational structure

The literature indicates that a desirable structure to support programme management is a project-based organisational structure or strong matrix organisational structure, (Hobday, 2000:874; Clements & Gido, 2006:393; Aubrey, Hobbs & Thuillier, 2007.330; see paragraph 2.3.5.2 and 2.3.5.3(c) of Chapter 2). The case of WWWTPU indicated that programme management in the MHLM is supported by a functional organisational structure. Such an inference was made from responses at the strategic level of the MHLM that the organisational structure is connected to directorates and departments. This assertion is supported further by the second respondent that the managers responsible for each directorate can be identified as: “the Director for Engineering Services, Director Technical Services; Director Community Services and Director Finances” (Strategic interview 2 of 4.3.1.4). The descriptions above by respondents are in line with features of a functional organisational structure outlined by Clements and Gido (2006:391; see paragraph 2.3.5.1 of Chapter 2). They assert that a functional organisational structure is based on individuals with the same skills located in the same directorate. Furthermore the literature indicates that a functional organisational structure is not the best choice to support programme management as it leads to complexities in the coordination of programme and project management and in the additional time needed because the functional duties compete with programme- and project-related duties (Kerzner, 2003:93; Meredith & Mantel, 2010:193). This organisational structure is clearly functional driven in contrast to programme driven.

5.2.5 Management and leadership structures supporting programme management

The literature indicates that a municipality should establish a Project Management Unit (PMU) to fulfil the developmental role at a local municipal level (Thiry & Deguire, 2007:654; the Municipal Infrastructure Grant document (CoGTA, 2007; Van der Waldt, 2009a:36; see paragraph 2.3.6 of Chapter 2). The case of WWWTPU indicates that the Director: Engineering; and the Manager: Project Management Unit (PMU) is the management and leadership structure supporting programme management. The respondents at the strategic level indicated that the PMU was established in April 2014 to support programme management. Furthermore the WWWTPU project is implemented by the Sedibeng Water Board and NEP Consulting Engineers, because the PMU is not fully capacitated (see paragraph 2.3.7.4 of Chapter 2). According to the MIG document (CoGTA, 2007, see

paragraph 2.3.6 of Chapter 2), the PMU should include the following personnel for it to be fully capacitated to implement projects within the MHLM: Project Manager; Engineer; Technician; Secretariat; Financial personnel; Legal personnel; Administrative personnel; Occupational Health & Safety personnel; Data Capturers; Information Technology personnel; and Community officer/communications personnel.

According to Klakegg *et al.* (2008:29); Crawford and Helm (2009:77), and Van der Waldt (2010:251), a lack of capacity in the PMU implies that the PMU and the MHLM at large is still lacking in terms of the following features of a project governance structure (PMU): "the rules, processes and behaviour that affects the way in which powers are exercised in programmes and projects, particularly regarding openness, participation, accountability, effectiveness and coherence." Furthermore, the appointment of consultants, due to lack of capacity in the MHLM contradicts the directives of the Constitution, 1996, (RSA, 1996), and the MFMA, 2003, (RSA, 2003a). The problem is that resources such as financial allocation (MIG) to the municipality are not handled in an effective, economical and efficient way to address serious service delivery backlogs.

5.2.6 Location of the management and leadership structures (PMU) supporting programme management in the MHLM

According to Van der Waldt (2009a:36) public organisations such as MHLM should create platforms and structures that support "management by projects". These include PMUs which can be located strategically according to the needs of the organisation. In the case of WWWTPU and indicated by participants at strategic level of the MHLM, the PMU is located in the office of the Director: Engineering.

5.2.7 The organisational systems and processes used to support programme management in the MHLM

According to the literature, a municipality which is aligned with the performance management system should set input, output, outcome and impact indicators according to the priorities outlined in the IDP (RSA, 2000; RSA, 2001; see paragraph 2.3.8 of Chapter 2). In addition, the following process phases should be inculcated in project implementation: initiating phase; planning phase; executing phase; monitoring and controlling throughout the project, and closing or hand-over phase (PMBOK Guide, 2008:43; Burke, 2010:66). In the case of the WWWTPU project, systems in the MHLM include "design; specification, quality of material and procurement" (paragraph 3.3.3 of Chapter 3). On the other hand, at the strategic level of the MHLM the response about systems and processes mentioned only the "financial

management system" (Strategic interview 2 of paragraph 4.3.1.7 in Chapter 4). The systems mentioned in the findings above ("design; specification, quality of material and procurement") are classified as systems at input and output levels as they relate to resources and activities leading to the end product (e.g. a project). Even though the MHLM is responsible for all phases in a project cycle, empirical findings related to the WWWTPU project revealed that the MHLM is only involved in the initiating phase (i.e. identify needs and draw up a budget). This is because the WWWTPU project was initiated by the MHLM and planned, but executed, monitored and evaluated by the Sedibeng Water Board as the implementing agent, and NEP Consulting Engineers. The MHLM only assumed the role of beneficiary in the implementation of the WWWTPU project.

5.2.8 Performance management systems

The literature examined in paragraph 2.3.8 of Chapter 2, points out that municipalities are obligated to develop a Performance Management System in consultation with the community. This system should have clear Key Performance Indicators addressing the priorities set out in the IDP (RSA, 1996; RSA, 2000; RSA, 2001; DPSA, 2003; CoGTA, 2007). Such a performance management system should be in line with the project management systems and processes as prescribed by the literature and outlined in paragraph 2.3.8 of Chapter 2.

In the case of the WWWTPU project and the input of the respondent's at the strategic level of the MHLM, the following process becomes evident: managers appointed in terms of Section 56 of the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000) sign performance contracts. However, the Municipality is not at a stage where performance agreements "are signed with lower level employees" (paragraph 3.3.3 of Chapter 3). Targets set by Section 56 Managers are discussed with lower level employees "as they are expected to achieve them as well" (paragraph 3.3.3 of Chapter 3). Managers who are not appointed in terms of Section 56 "do not have performance contracts and as a result do not receive performance rewards". Secondly, a "performance management policy that is still a draft needs to be adopted by the Council" (paragraph 3.3.3 of Chapter 3). Regarding the strategic level of the MHLM, the municipal council is yet to adopt a performance management policy, which is still a draft (paragraph 4.3.1.8 of Chapter 4). Based on the emerging themes and scholarly efforts, the MHLM does not have a performance management system that includes all officials employed within the MHLM.

5.2.9 Modalities to monitor the performance of programme management

According to the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000), the Local Government: Municipal Planning and Performance Management Regulations, 2001 (RSA, 2001), and the National Treasury Regulations, 2005 (RSA, 2005a), project performance monitoring should be conducted at the following levels within a project life cycle: input monitoring, activity monitoring, output monitoring, impact monitoring and assumption/risk monitoring (see paragraph 2.3.9 of Chapter 2). In the case of the WWWTPU project, the following modalities to monitor programme-management performance were indicated: “project schedule; planning; procuring the contractor and execution” (paragraph 3.3.3 of Chapter 3). On the other hand, at the strategic level of the MHLM, “assessment is being done on quarterly basis” (paragraph 4.3.1.9 of Chapter 4).

The researcher noted during the semi-structured interviews with employees on strategic level that they recognise the project modalities in the WWWTPU project as: project schedule; planning; procuring the contractor and execution; and assessment (paragraph 4.3.1.9, 6 of Chapter 4). It is evident that these are modalities at input, activity and output levels. The discussion points did not indicate modalities related to impact monitoring and assumption/risk monitoring. Based on the literature and the findings above it can be inferred that performance monitoring of projects in the MHLM does not cover all the mentioned phases in the project life-cycle. Project monitoring takes place at only the input, activity and output levels.

5.2.10 Critical Success Factors (CSFs) used to evaluate programme success

The literature indicates that the successful implementation of a project relies on institution’s ability to identify and outline the CSFs of projects that extend beyond a narrow definition of time, cost and quality. It should also include other factors located outside the project and the organisation (Westerveld, 2004:412; Cook-Davies *et al*., 2009:117; Muller & Jugdev, 2012:761; Ika *et al*., 2012:107; see paragraph 2.3.10 of Chapter 2). CSFs that would ensure a successful completion of projects within a programme according to community needs, should cover a great variety of attributes as indicated previously (Morris & Pinto,2007:118; Westerveld, 2003:412; Ika *et al.,* 2012:112; Muller & Jugdev, 2012:761; PMBOK Guide, 2008:43; see paragraph 2.3.10 of Chapter 2).

CSFs at a strategic level within the MHLM were indicated in terms of the project as “Hundred percent spending; project completion certificate; and time”(paragraph 4.3.1.10 of Chapter 4). The CSFs listed by the respondents do not include factors such as project mission; leadership, technical skills; top management support, and sufficient and skilled personnel.

Respondents indicated the following CSFs as support to the WWWTPU project: “socio-economic factors in terms of job creation, contract participation goal” (paragraph 3.3.3 of Chapter 3). In the case of WWWTPU project, the MHLM is the beneficiary due to a “lack of capacity” (paragraph 3.3.3 of Chapter 3). The CSFs in the MHLM do not include all factors in the project, organisation and external factors. Moreover, there is no coherence between the organisational and project CSFs. It is furthermore recognised that there is no informed relation between the CSFs that respondents identified for the WWWTPU project in the MHLM and defined project management principles, cycle and processes in the literature. It is also interesting to note that the MHLM is the beneficiary and not the community.

5.2.11 Translation of strategies into programmes and programmes into projects

It is clear from the literature that a programme is viewed as an assemblage of a group of projects to ensure the effective and efficient implementation of strategic objectives of an institution such as the MHLM (McElroy, 1996:328; PMBOK, 2000:6; Williams & Parr, 2006:31; Morris & Pinto, 2007:118; RSA, 2010:23; see paragraph 2.4.1 of Chapter 2). A programme furthermore should create a link between organisational strategy and objectives and projects. This link then serves as a structure to combine projects with common objectives and resources and to ensure the successful implementation of strategies (RSA, 2010:23).

Considering the empirical data collected within the entire MHLM (strategic; tactical, and operational levels) and the WWWTPU project, respondents could not outline a particular method by which organisational strategy and objectives are translated into programmes, and programmes translated into projects. Based on the literature and empirical findings, it can be inferred that the MHLM has no clear link between organisational strategies and objectives, programmes and projects.

5.3. COMPARATIVE ANALYSIS OF FEATURES OF “MANAGEMENT BY PROJECTS”AT TACTICAL LEVEL

This sub-section will present a comparative analysis of the features of “management by projects” at tactical level, as identified in the literature review in Chapter 2, the use of these features in the implementation of the WWWTPU project, investigated in Chapter 3, and the application of this basis theory in practice, as analysed in Chapter 4.

5.3.1 Drivers of "management by projects"

Based on the literature in Chapter 2, a great number of drivers were listed on "management by projects" (see paragraph 2.3 of Chapter 2) that should be considered by the MHLM when developing strategic objectives of the municipality.

At the tactical level the respondents indicated the following drivers for project management: priorities of the Department of CoGTA, the Provincial department of housing; the NDP, the Provincial Development Strategies; the Constitution, 1996 (RSA, 1996) the five strategic objectives of local government; the White Paper on Local Government, and the Municipal Systems Act". The WWWTPU project is informed by the priority of Department of Water and Sanitation (DWS), the North-West Province and Dr Kenneth Kaunda District Municipality strategic agenda.

The respondents at tactical level did not indicate the following drivers: the Millennium goals (UN, 2000); the Millennium Development Goals (UN, 2000); The Local Government Municipal Demarcation Act, 1998 (RSA, 1998b); the Local Government Municipal Structures Act 117 of 1998 (RSA, 1998c); the Municipal Finance Management Act 56 of 2003 (RSA, 2003a), and Notice 347 of 2007 in terms of the Municipal Systems Act, 2000 (RSA, 2000).

Based on the literature and empirical findings, it can be inferred that while the respondents at tactical level knew most of the drivers that inform strategic objectives and goals of the MHLM in comparison with respondents at strategic level, the respondents at both levels could not indicate all the drivers that should inform strategic objectives and goals of the MHLM.

5.3.2 Translation of programmes into projects

The literature points out a strong link between strategic objectives, programmes and projects within an institution such as the MHLM (Knipe *et al.,* 2002:43; Gray & Larson, 2006:24; see paragraph 2.4.1 of Chapter 2). Furthermore, the strategic objectives of an institution (MHLM) should be demarcated into different programmes based on the needs and attributes of projects (Pellegrinelli, 1997:142; see paragraph 2.3.4 of Chapter 2). The respondents at the MHLM's tactical level could not list the programmes that are in place, nor establish a link between strategic objectives, programmes and projects within the MHLM. In addition, the programmes are not indicated in the MHLM 3rd Generation IDP (MHLM, 2012 – 2016:61-62, 74-93) and the MHLM-SDBIP (2014 – 2015:40-53). The findings drawn from the respondents at tactical level above concur with those at strategic level, as well as the findings for the WWWTPU, which indicate that projects are not assembled into programmes or programmes

are not in place in the MHLM. Based on the literature and the empirical findings at tactical level, it can be inferred that programmes at tactical level are not in place.

5.3.3 Structuring of projects to achieve the objectives of the programmes

Exponents of the literature asserted that a programme is an assemblage of a group of projects to ensure the effective and efficient implementation of strategic objectives of an institution (McElroy, 1996:328; the PMBOK, 2000:6; Williams & Parr, 2006:31; Morris & Pinto, 2007:118; RSA, 2010:23; see paragraph 2.4.1 of Chapter 2). Furthermore, Pellegrinelli (1997:142; see paragraph 2.3.4 of Chapter 2) emphasises that the strategic objectives of an institution (e.g. the MHLM) should be demarcated into various programmes based on the advantages, range and diversity of projects.

The respondents at MLHM's tactical level could not outline how projects are structured or clustered in the MHLM. The indication from these respondents confirms the findings in the case of WWWTPU project and those at strategic level that programmes are not in place in the MHLM. Furthermore, these responses at tactical level confirm the findings in 5.3.2 above. Based on the literature and the findings inferred from the responses, it can be concluded that projects are not grouped or structured together under a particular programme based on common resources or features of individual projects.

5.3.4 Project knowledge areas

According to the Municipal Infrastructure Grant document (CoGTA, 2007), project management at municipal level is the responsibility of the PMU. Furthermore, the National Capacity Building Framework (NCBF), (CoGTA, 2008), investigations by Maserumule (2008:441) and Koma (2012:65-66), propose that local government should have the following categories of capacity for it to respond effectively to its developmental roles. These exponents also point out that programmes and projects is a technical skill needed to enhance the ability of government institutions at all spheres in delivering quality services to the citizens of South Africa. This requires capacity on three basic levels:

- **Strategic** – ability of the local government to provide leadership and direction and encourage communities towards using programmes to attain developmental goals (CoGTA, 2008; Maserumule, 2008:441).
- **Organisational** – efficiency and effectiveness of systems, structures and processes within the organisation to accomplish developmental goals (CoGTA, 2008; Maserumule, 2008:441).

- **Technical** – ability of the local government to convert the strategic objectives of the developmental local government into programmes and projects (CoGTA, 2008; Maserumule, 2008:441).

In the case of the WWWTPU project, the MHLM is a beneficiary and the project is implemented by Sedibeng Water Board and NEP Consulting Engineers. This reason is that the MHLM was subjected to an administration intervention in terms of Section 139 1(b) of the Constitution, 1996 (RSA, 1996). This was firstly, due to the "lack of proper governance, lack of institutional capacity, lack of both financial and technical performance, as well as lack of service delivery (AGSA, 2013:online). At the tactical level of the MHLM, there is "no sufficient capacity and skill to can be able to implement those projects" (Tactical-level interviewee 2 of 3.2.5, 1 October 2014). However, that is except for the infrastructure projects. Secondly, the municipality does not have the "project capacity in terms of people with knowledgeable project management knowledge, so what we do we utilise consultants" (paragraph 4.3.2.4 of Chapter 4). Thirdly, to date there was no "a holistic approach" on project management by the entire Municipality (paragraph 4.3.2.4 of Chapter 4).

Based on the information above, the MHLM is not responsible for managing the project knowledge areas, due to a lack of capacity. This means that the consultant and the contractor are responsible for these project knowledge areas. Therefore, the MHLM is lacking the categories of capacities as outlined above (also see paragraph 2.3.7.4 of Chapter 2). In view of the themes that emerged from the empirical data, the inference can be drawn of the project knowledge areas for which the consultant and the contractor are responsible. These inferred knowledge areas are detailed in **Table 5.1** below.

Table 5.1: Inferred project knowledge areas

Empirical Findings/Evidence	**No**	**Project Knowledge Areas**	**Responsibility**
Feasibility study and design	1.	Project scope management	Consultant
Appointing contractor and sub-contractor	2.	Project human resources management	Consultant Contractor
Project scheduling (work-breakdown structure; schedule; daily scope; daily targets; Gantt chart & histograms)	3.	Project time management	Contractor
Specifications and milestones, oversight role	4.	Project integration management	Consultant
Quality assurance	5.	Project quality	Consultant

		management	
Endorsing payments	6.	Project cost management	Consultant; implementing agent and municipality
Project steering committee	7.	Stakeholder management	MHLM; Consultant and the contractor
No data	8.	Project communication management	-
No data	9.	Project risk management	-
No data	10.	Procurement management	-

(**Source**: Researcher's own compilation)

There were no relevant themes that could suggest the following project knowledge areas: project risk management; project procurement management, and project communication management.

5.3.5 Implementation of projects at operational level

The literature indicates that projects are implemented at operational level according to the following project life-cycle phases: conceptual/ initiation phase; planning phase/ design; execution/implementation; termination/closure; operation, maintenance and mentoring phase (Wideman, 2007:2; Patanakul, Lewwongcharoen & Milosevic, 2010:46; Hewagamage & Hewagamage, 2011:98). Project implementation, which includes the project life-cycle, is the responsibility of the PMU at municipal level (CoGTA, 2007:38).

However, the responses to Question 4.3.2.5 in Chapter 4 pointed out that the "work at operational level of the municipality is not structured or packaged in terms of projects" (paragraph 4.3.2.5 of Chapter 4). This is due to a lack of capacity in human and financial resources, and because the municipality does not "follow a specific project management philosophy" (paragraph 4.3.2.5 of Chapter 4). The projects are implemented by consultants and service providers who are appointed by the municipality. If the MHLM is the implementing agent, the monitoring is done jointly by the MHLM and the consultant. Therefore, it can be inferred that the MHLM is only responsible for implementing the conceptualisation phase of the project life-cycle.

5.4 COMPARATIVE ANALYSIS OF FEATURES "MANAGEMENT BY PROJECTS" AT OPERATIONAL LEVEL

This section will present a comparative analysis on the features of the project management philosophy at operational level as identified in the literature review (Chapter 2), the use of these features in the implementation of the WWWTPU project (Chapter 3), and the application of this philosophy in practice, as analysed in Chapter 4.

5.4.1 The project life-cycle phases

As was already indicated from the literature, projects are implemented at operational level according to the mentioned project life-cycle phases. Furthermore, project implementation including the project life-cycle is the responsibility of the PMU at municipal level (CoGTA, 2007:38, also see paragraph 1.6.4 of Chapter 1 and paragraph 2.5.2 of Chapter 2).

In the case of the WWWTPU project*, "*MHLM was responsible for the conceptualisation of the project and for approving the design developed by the Consultant" (paragraph 3.3.3 of Chapter 3). The contractor is responsible for execution of the project including appointing sub-contractors, project scheduling using the Gantt chart and histograms; resource allocation; implementation of the schedule and daily scopes; and achievement of daily targets. The consultant was responsible for "feasibility study, and has an oversight role on the design; quality assurance; specifications and milestones as well as endorsing payments according to the work done" (paragraph 3.3.3 of Chapter 3). At operational level of the MHLM, "projects are submitted through IDP after they are initiated; they get buy in of the community, and followed by need analysis. Then implementation is done through the SDBIP" (paragraph 4.3.3.1 of Chapter 4).

Based on the themes emerging from the analysis above, the following conclusions can be drawn:

- The only projects implemented in the MHLM are related to infrastructure.
- The MHLM is not following a project-management philosophy at operational level.
- In relation to infrastructure projects, the MHLM is only responsible for project conceptual/initiation phase.
- The implementing agent (Sedibeng Water Board) and the consultant (NEP Engineering Consultants) are responsible for the planning/design phase, whereas the implementation and termination/closure phases of the project are the responsibility of the contractor. The operation, maintenance and monitoring is the responsibility of the

contractor who ensures that the beneficiary, the MHLM, is mentored on how to operate and maintain the upgraded waste-water treatment plant.

Thus, to conclude this section: the MHLM is only responsible for the conceptual/initiation phase, whereas the consultant and the contractor are responsible for the following phases of the project life-cycle: planning/design; execution/implementation; termination/closure; and operation, maintenance and mentoring.

5.4.2 The project life-cycle modalities

A variety of modalities under the project life-cycle phases were examined in Chapter 1 (see paragraph 1.6.4) and Chapter 2 (paragraph 2.5.2). This included modalities for each of the phases that are outlined above. These modalities are compared to the following themes emerging from the empirical data.

Themes emerging from empirical data:

In the case of the WWWTPU project, the following themes emerged:

- The MHLM was responsible for the conceptualisation of the project and for approving the design developed by the Consultant.
- The contractor is responsible for the execution of the project which include the appointing of sub-contractors, scheduling the project by using the Gantt chart and histograms; allocating resource allocation; implementation of the schedule and daily scopes; and achievement of daily targets.
- The consultant was responsible for the "feasibility study, and has an oversight role on the design; quality assurance; specifications and milestones as well as endorsing payments according to the work done" (paragraph 3.3.3 of Chapter 3).

At the operational level of the MHLM, the following modalities were identified: "IDP process plan; meeting with the committee; consultation process; develop the SDBIP, developing the performance agreement; and execute the plan" (paragraph 4.3.3.1 of Chapter 4).

The conclusion on the findings from paragraph 5.4.2 above was that the only projects which the MHLM implemented are related to infrastructure. The MHLM is not operating in terms of "management by projects" at operational level. It was also pointed out that the MHLM is responsible for project conceptual/initiation on infrastructure projects. Thus the following project life-cycle modalities from the emerging themes could be inferred. These are detailed in **Table 5.2** below.

Table 5.2: inferred project life-cycle Modalities

Emerging theme	Inferred modality	Project life-cycle phases	Responsibility
Convening IDP meetings with communities to identify the needs of the community; classify and prioritise needs as projects in the IDP document	Ward/community meetings; identification; analysis and prioritisation of needs; identification of projects; adoption of IDP; development of SDBIP	Conceptual/initiation	MHLM/PMU
Feasibility study	Feasibility study	Conceptual/initiation	Consultant
Design	Project design	Conceptual/initiation	Consultant
Appointing sub-contractors	Resource plan	Planning/design	Contractor
Project scheduling	Project activities	Planning/design	Contractor
Specifications and milestones	Work breakdown structure	Planning/design	consultant
Gantt chart and histograms	Gantt Chart	Planning/design	Contractor
Resource allocation	Resource plan	Planning/design	Contractor
Implementation of the schedule and daily scopes	Implementation through work breakdown structure and Gantt chart	Execution/implementa -tion	Contractor
Achieving daily targets	Creating project deliverables	Execution/implementa -tion	Contractor
Oversight role	Change management	Execution/ Implementation	Consultant
Quality assurance	Quality management	Execution/implementa -tion	Consultant
Endorsing payments	Cost management	Execution/Implementa -tion.	Consultant

(**Source**: Researcher's own compilation)

From the findings it became evident that the MHLM is only responsible for the modalities under the conceptualisation phase. These entail: convening IDP meetings with communities to identify the needs of the community; classify and prioritise needs as projects in the IDP document. The feasibility study under the conceptual/initiation phase is the responsibility of the NEP Consulting Engineers. The responsibility of modalities in the following life-cycle phases are shared between the NEP Consulting Engineers and the contractor. These modalities are planning/design; execution/implementation; termination/closure, and operation, maintenance and mentoring. No evidence was found of themes in other life-cycle

phases. This is due to the fact that the implementation of the project was due to start when empirical data was collected on 14 October 2014.

In addition to the above conclusions, during focus-group session respondents highlighted the following challenges regarding project life cycle phases and modalities:

- missing documents;
- no final approved drawing of the design by service providers;
- lack of proper inspection (project quality management);
- changing stakeholders;
- lack of accountability;
- no proper reporting; and
- no proper monitoring of the project.

These challenges pose serious challenges to the MHLM in the auditing of the WWWTPU project. This auditing is done regarding project management, accountability, implementation, maintenance, mentoring and sustainability. The following section will draw the conclusion to the investigation in Chapter 5.

5.5. THE DISPROPORTIONS OR DISPARITIES IN THE APPLICATION OF THE BASIS THEORY OF "MANAGEMENT BY PROJECTS".

The focus of this comparative analysis is to determine the disproportions or disparities in the application of the basis theory through its features at strategic, tactical and operational levels, for service delivery improvements by the MHLM in its area of operation. Subsequently, the disparities will be pointed out at the mentioned levels.

5.5.1 Disparities at strategic level of the municipality

The disparities regarding the features of "management by projects" as the present research pointed out are discussed below.

a) Drivers of "management by projects"

Respondents at tactical level know most of the drivers that inform strategic objectives of the MHLM, whereas the respondents at strategic level did not know some of the drivers such as: The Millennium Development Goals (UN, 2000); Constitution, 1996 (RSA, 1996); the White Paper on Local Government, 1998 (RSA, 1998a); Municipal Infrastructure Grant Programme, (RSA, 2007a); The Five Year Local Government Strategic Agenda/Priorities (RSA, 2006); Notice 347 of 2007 in terms of the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000).

b) Strategic goals and objectives of the MHLM

The MHLM has five strategic objectives aligned to the five Key Performance Areas or Agenda of the Local Government. The MHLM is, therefore, informed by legislation, guidelines and priorities from the national and provincial levels of government. However, the empirical findings indicate that respondents at strategic level do not know the strategic objectives of the MHLM.

c) Programmes (programme management)

It was found that the MHLM does not employ programmes or programme management in order to address and improve service delivery in its area of responsibility. In other words, the strategic objectives of the MHLM are not demarcated into programmes.

d) Organisational structure

The findings show that the MHLM does not employ an organisational structure (project-type structure or strong matrix structure) that supports “management by projects”. Instead they use a functional organisational structure within the MHLM. The research noted the establishment of a Project Management Unit in April 2014 at the end of the administrative intervention as stipulated in Section 139 1(b) of the Constitution, 1996 (RSA, 1996).

e) Management and leadership structures supporting programme management

From the findings it is evident that the PMU is not sufficiently capacitated to handle projects such as the WWWTPU. This state of affairs may hold serious health implications to communities, seeing that the planned waste-water treatment plant is still inoperative. This is because the following positions are still vacant in the PMU: Technician; Secretariat; Financial personnel; Legal personnel; Administrative personnel; Occupational Health and Safety personnel; Data Capturers; Information IT personnel; and Community officer/communications personnel.

The fact that the WWWTPU is still managed by the Sedibeng Water Board as the implementing agent and NEP Engineering Consultants is a sign of lack of capacity in the MHLM. According to the report of the Auditor General South Africa’s (AGSA) on local government in North-West Province, the use of consultants holds various negative consequences: audit queries, no policies and strategies to manage the use of consultants; systems to monitor performance of consultants are not established or put into practice; it impedes the transfer of skills to the MHLM as policies or strategies do not outline the responsibility of skills transfer to the MHLM (AGSA, 2013:online). In this way the use of

consultants, due to a lack of capacity in the MHLM, contravenes the Constitution, 1996, (RSA, 1996), and the MFMA, 2003, (RSA, 2003a).

f) The organisational systems and processes used to support programme management in the MHLM

The organisational project-management systems in the MHLM are at input and output level and the processes are at initiating level. In contrast, the literature review directs that the systems should be pitched at input; output; outcome and impact levels and the processes at initiating, planning, executing, monitoring and controlling, and closing levels. This is according to the Local Government Municipal Systems Act, 2000 (RSA, 2000) and the Local Government Municipal Planning and Performance Management Regulations, 2001 (RSA, 2001).

g) Performance Management Systems

The findings show that the MHLM does not have a performance management system for all the employees of the municipality, except for the Section 56 managers who sign performance contracts. Furthermore, a draft performance management policy is still to be signed by the Maquassi Hills Municipal Council and the labour organisations that are in existence in the MHLM.

h) Modalities to monitor the performance of programme management

Monitoring of projects' programme performance in the MHLM takes place at the input, activity, and output levels. Monitoring does not take place at impact and assumption/risk levels.

i) Critical Success Factors (CSFs) used to evaluate programme success

The CSFs do not include factors within the organisation such as project mission; leadership, technical skills; top management support, and personnel. The CSFs in the MHLM do not take into account factors within the organisation and beyond (external).

j) Translation of programmes into projects

The findings show that projects in the MHLM are not assembled from programmes; there is no clear link between strategic objectives, programmes and projects.

5.5.2 Disparities/disproportions at tactical level of the MHLM

The disparities at tactical level regarding the features of the design "management by projects" are expounded below.

a) Project knowledge areas

The MHLM is not responsible for the project knowledge areas. This is due to a lack of capacity as MHLM does not have officials with "knowledgeable project management knowledge". Therefore, a consultant was appointed to take charge of some responsibilities on behalf of the municipality. In some instances an implementing agent is appointed by a sponsoring department (e.g. the WWWTPU project). The MHLM was also subjected to an administration intervention in terms of Section 139 1(b) of the Constitution, 1996 (RSA, 1996). This was due to a "lack of proper governance, lack of institutional capacity, lack of both financial and technical performance, as well as lack of service delivery" (AGSA, 2013: online). Therefore, the MHLM is still lacking in terms of the following categories of capacities:

- **Strategic** – the ability to provide leadership and direction and encourage communities to use programmes, and thereby attain developmental goals (CoGTA, 2008; Maserumule, 2008:441).
- **Organisational** – efficient and effective systems, structures and processes within the organisation to accomplish developmental goals (CoGTA, 2008; Maserumule, 2008:441).
- **Technical** – ability to convert the strategic objectives of the developmental local government into programmes and projects (CoGTA, 2008; Maserumule, 2008:441).

Seeing that the MHLM is the implementing agent, the responsibilities for the managing of project costs, the stakeholders and monitoring of the project are shared between the consultant and the MHLM.

5.5.3 Disparities/disproportions at operational level

The disparities at operational level regarding the features of the design "management by projects" are expounded below.

a) The project life-cycle phases

The MHLM is required to take charge of the five project life-cycle phases as indicated by the MIG document (CoGTA, 2007). The findings show that the MHLM is not following the philosophy of "management by projects" optimally at operational level due to lack of capacity. The role of the MHLM in using the project life-cycle phases is limited to the conceptual/initial

phase, while the implementing agent (Sedibeng Water Board) and the consultant (NEP Engineering Consultants) are in charge of the planning/design phase; and the implementation and termination/closure phases of the project is the contractor's responsibility. Managing the operation, maintenance and mentoring is the responsibility of the contractor. They have to ensure that the beneficiary, the MHLM, is mentored on how to operate and maintain the upgraded waste-water treatment plant.

b) The project life-cycle modalities

The MIG document directs in this case that the use of project life-cycle phases and its modalities is the responsibility of the MHLM (CoGTA, 2007). However, the fact that MHLM is not employing "management by projects" at operational level due to lack of capacity. Thus, the role of the MHLM in using the project life-cycle phases is limited to the conceptual/initial phase. In addition, the municipality focuses only on the following modalities: Convening IDP meetings with communities to identify the needs of the community; classify and prioritise needs as projects in the IDP document. The feasibility study under the conceptual/initiation phase is the responsibility of the consultant. However, evidence of themes in other life-cycle phases could not be determined due to the fact that the implementation of the project was due to start when empirical data was collected before and on 14 October 2014.

In addition to the conclusions above, respondents during the focus-group session highlighted serious challenges relating to project life cycle modalities, as outlined above (paragraph 2.3.2 in Chapter 5). These weaknesses pose a serious challenge for the operation, maintenance and mentoring phase of the WWWTPU project and future projects.

5.6. CONCLUSION

The purpose of Chapter 5 as indicated in the introduction was to respond to the title and research problem relevant to this study, by conducting a comparative analysis in order to arrive at the disproportions or disparities in the application of the basis theory of "management by projects". This was done by an analysis, comparing through triangulation, the three trajects mentioned:

- features of "management by projects" at strategic level as identified in the literature review in Chapter 2;
- the use of these features in the implementation of the case of the WWWTPU project – investigated in Chapter 3;
- the findings of the data on how the basis theory are applied in practice, in the MHLM – according to Chapter 4.

Chapter 6 will draw conclusions on the present research, and make recommendations for future research on this topic within the MHLM and beyond.

CHAPTER 6 CONCLUSION AND RECOMMENDATIONS

6.1. INTRODUCTION

Chapter 5 undertook a comparative analysis of the application of “management by projects” through its features at strategic, tactical and operational levels by the MHLM. The comparative analysis was conducted through the triangulation of data to determine the disparities, if any, in the application of the design of “management by projects” through its features by the MHLM in its area of operation.

Chapter 6 will present the concluding remarks and recommendations. This chapter will reflect on the journey traversed by the study along the following guiding pillars of the research as documented in Chapter 1: the problem statement; the primary and secondary research objectives, and the research questions. Finally the conclusion will be drawn and recommendations made for the MHLM’s service delivery strategy and applications by similar local governments worldwide.

6.2. SUMMARY OF THE STUDY

The research journey was launched to address the topic of the study:

“Analysing the application of project management for service delivery improvements in the Dr. Kenneth Kaunda District Municipality: the case of the Maquassi Hills Local Municipality”

The study presented six chapters as outlined below:

Chapter 1 described the landscape of a developmental state envisioned by the South African Government within which all the spheres of government (national, provincial and local) through cooperative governance should endeavour to allocate and employ resources to deliver services in an effective, efficient and economically viable way to the communities around the country (RSA, 1996). The envisioned South African democratic developmental state that seeks to address its developmental role should function as “a state that could act authoritatively, legitimately and in a binding manner to formulate and implement its policies and programmes, possessing a developmentalist ideology” Edigheji (2007:3).

However, contrary to this envisioned scenario of a South African democratic developmental state and its inferred conceptualisation, the problem statement to the study addressed a different scenario. Currently South Africa, after 20 years of democracy, is characterised by high levels of widespread service delivery protests in local communities, including the locus

of this study: the Maquassi Hills Local Municipality. Moreover, this municipality obtained a disclaimer audit report for the last five financial years (RSA, 2013b):online), and was therefore subjected to an administrative intervention in terms of Section 139 1(b) of the Constitution, 1996 (RSA, 1996) due to "deterioration of service delivery, poor administrative leadership and management, lack of administrative capacity within the municipality" (AGSA. 2013 :online).

The service delivery challenges investigated by the problem statement, connects with the argument of Nel (2001:606) that "efficient and effective implementation of development programmes requires local authorities to undertake a series of interrelated and interdependent development projects". In support of Nel (2001:606), Van der Waldt (2007:250), maintains that "team work and a programme and project based approach is critical in redirecting the public service towards a new paradigm of service excellence". A former Minister of Public Service and Administration, Ms Fraser-Moleketi (DPSA, 2003:6) points out that the public service in South Africa should ensure that project management becomes integrated in the government approach to the extent that it becomes an organisational culture in all spheres of government.

In line with Ms Fraser-Moleketi's argument and the vision of a successful democratic developmental state, the problem statement was formulated:

Which organisational (strategic, tactical and operational) improvements with a specific focus on programme and project management can be suggested to initiate and sustain enhanced service delivery by the MHLM in its municipal area?

In order to address the problem statement and the primary objective through secondary objectives, the following research questions that pillared the research, helped the researcher to micro-focus on the title of the study:

- How should the basis theory that grounds "management by projects" be applied for service- delivery improvements in the MHLM?
- How is this theory applied in the case of the Wolmaransstad Waste Water Treatment Plant Upgrading Project (WWWTPU)?
- How is this basis theory implemented in practice by the MHLM?
- Which disparities can be pointed out regarding the Maquassi Hills Local Municipality's application of this theory?

- Which conclusions can be reached and recommendations made on this design for efficient, particularly with regard to the MHLM's strategies for improved service delivery in its area of responsibility?

These research questions provided a link between the title of the study, the problem statement, and the primary objective of the study.

Chapter 2 responded to the first research question, which delineated the frame of reference of the study as the basis theory grounding "management by projects" in order to improve service delivery in the MHLM. This basis theory was explored further by focusing on the features of "management by projects" at strategic, tactical and operational levels. These features indicated in Chapter 2, therefore, became the borders of data collection in Chapter 3 and 4 in order to respond to the research's problem statement.

Chapter 3 responded to the second research question by investigating the case of Wolmaransstad Waste Water Treatment Plant Upgrading Project (WWWTPU). This was done through an exploratory case-study research. This design was used to collect data through semi-structured interviews guided by the features of the mentioned basis theory. A case-study report was presented in line with the empirical findings, after which an interpretive data-analysis strategy was employed to process the data and draw inferences.

Chapter 4 responded to the third research question by focusing its analysis on the practical application of the basis theory within the MHLM. By following an interpretive research type and qualitative research design, Chapter 4 analysed the empirical data that was collected through semi-structured interviews at strategic and tactical levels, and a focus-group session at operational level. Questions were posed based on the features of the basis theory at strategic, tactical and operational levels. These questions guided the semi-structured interviews and focus-group session. An interpretive data analysis strategy was employed to analyse the data in order to arrive at inferences documented in Chapter 4.

Chapter 5 responded to the fourth research question by conducting a comparative analysis through a triangulation of the features of "management by projects":

- as it were investigated in Chapter 2 according to the literature review;
- as discerned from the explorative case-study done on the WWWTPU project in Chapter 3;
- as it were applied in practice within the MHLM and findings from the data analysed in Chapter 4 of the semi-structured interviews at strategic and tactical levels, and focus-group session at operational level.

The triangulating through the mentioned comparative analysis, pointed out the disparities in the application of the mentioned features of “management by projects” by the MHLM.

In view of the naturalistic approach of the research methodology, the following factors were beyond the scope of the study. However, to a certain extent they are contributory factors to low levels of service delivery in the MHLM. These factors are noted as: capacity, and procurement challenges.

In responding to the problem statement, the primary research objective and the research questions, the study pointed out the organisational (strategic, tactical and operational) “management by projects” improvements. These improvements can be suggested to initiate and sustain the enhancement of service delivery by the Maquassi Hills Local Municipality in its area of authority.

The suggested improvements are recommended in response to the disparities pointed out regarding the mentioned features of project management at strategic, tactical and operational level (see paragraph 3 of Chapter 5).

6.3. RECOMMENDATIONS

The research investigated the dilemma of a lack of service delivery in the MHLM, as embodied in the problem statement. The study also considered the situation according to which the MHLM recently (2014) emerged from a Section 139 1(b) (RSA, 1996) administrative intervention due to challenges such as: a deterioration of service delivery, poor administrative leadership and management, lack of administrative capacity within the municipality, and the fact that the MHLM received a disclaimer due to an audit report for the period 2006 – 2013 (AGSA, 2013:online).

This scenario is observed against the developmental role the MHLM need to fulfil in realising the five strategic agenda or Key Performance Areas (RSA, 2006) which was documented and discussed extensively throughout the study (see paragraph 1.2 in Chapter 1 and paragraph 3.2 in Chapter 2).

In view of the abovementioned state of affairs in the MHLM compared to the developmental role that MHLM is expected to perform, there is a dire need for improvement. Considering the disparities between the current features of “management by projects” as applied by the MHLM, and the lacking features that can provide possible service delivery improvements, the following recommendations are made:

6.3.1 Managers on the strategic level should consider the relevant drivers of "management by projects" when developing the MHLM's strategic objectives.

6.3.2 The MHLM should introduce programmes and programme management that are in line with the Key Performance Areas as prescribed nationally and provincially, and discussed in this research.

6.3.3 Projects should be packaged under the programmes according to the mentioned unique features and in line with the strategic objectives.

6.3.4 The MHLM should revise its organisational structure to enlarge the existing PMU (established in April 2014) and to include an organisational Risk Office. The PMU should be capacitated sufficiently to include the following personnel in order to implement projects within the municipality to its full capacity (RSA, 2007:8):

- Project Manager;
- Engineer;
- Technician;
- Secretariat;
- Financial personnel;
- Legal personnel;
- Administrative personnel;
- Occupational health and safety personnel;
- Data-capture personnel;
- IT personnel; and
- Community officer/communications personnel

Some of these officials could be sourced from within the municipality. A full complement of the PMU will decrease the amount of money spent on consultants to perform some of the responsibilities (feasibility study, terms of reference, project charter and business plan) of the municipality that are delegated to the PMU. A fully capacitated (trained and skilled) PMU will ensure that the PMU is not only limited to "monitoring, reporting, standardising processes and procedures" as far as project management is concerned. The PMU should rather be seen as a linkage between organisational strategy and projects, to which extent the PMU becomes a governance structure that supports efficient "management by projects" as emphasised by Thiry and Deguire (2007:654) and Van der Waldt, 2010:260).

6.3.5 The MHLM should accelerate the process of approving a performance management policy in order to develop an inclusive Performance Management System (PMS) for all employees of the MHLM.

6.3.6 The organisational systems should be defined at the input; output; outcome and impact levels, according to the priorities outlined in the IDP. The processes used to support “management by projects” when implementing the project life-cycle should be outlined in terms of the following process-phases: initiating; planning; executing; monitoring and controlling, and closing. These organisational systems and processes will ensure that a fully established PMU does not backtrack but takes on responsibility for entire projects implemented within the MHLM.

6.3.7 The PMU should outline in the project charter or business plan, the Critical Success Factors which include factors within the projects, and factors within the organisation and beyond (external). When all these CSF’s are considered, it will ensure a successful implementation of the projects – within its time-frame and the allocated budget, as well as its outcome and impact on the community (e.g. the WWWTPU project).

6.3.8 The use of project knowledge areas and project life-cycle phases in the implementation of projects is the responsibility of the PMU. However, the extent, to which project knowledge areas and the project life-cycle phases are used in the implementation of projects in MHLM by the PMU, depends heavily on whether the PMU is fully capacitated as indicated in 3.4 above. If the PMU is understaffed, then the MHLM will have to rely heavily on the consultants.

6.3.9 The establishment of a PMU in the MHLM is highly recommended. In order to ensure that the municipality carefully manages the transition to “management by projects”, project management practices must be introduced gradually by employing “a Project Management Maturity Matrix” according to Andersen and Jessen (2003:457), and Van der Waldt (2009a:43). Such a matrix implies that the MHLM should firstly focus on applying project-management principles and processes and using team efforts when implementing individual projects, e.g. the WWWTPU project. Secondly the MHLM should use the skills and competencies learned in the first level (the WWWTPU project) to manage a collection or a group of related projects effectively within a program. Examples are projects within the MIG programme, which may need a process of restructuring in an organisation or its component. Lastly, such a matrix entails simultaneous implementation or management of projects that do not necessarily share the same objectives and

goals, but still help achieve the overall strategy and objective of an organisation at strategic level. Examples are: projects under basic service delivery positioned as a strategic objective/key performance area/programme of the MHLM (Andersen & Jessen, 2003:457).

6.3.10 The "project management maturity matrix" outlined in paragraph 3.9, should gradually phase in the following variables in order to ensure that the MHLM moves smoothly towards fully employing project management as an organisational strategy. In this sense, the inclusion of the PMU should facilitate the process of creating a temporary (PMU) and permanent (organisational) structure. In essence a process is needed to ensure that project management becomes a culture in MHLM, and lastly that a strategy is followed, grounded by "management by projects" that becomes a vehicle to render improved service delivery in the MHLM (Gareis & Huemann, 2000:712).

6.3.11 The project management maturity matrix recommended in paragraph 3.9 and the variables suggested in paragraph 3.10 will only become a reality if the entire organisation of the MHLM understands and apply the link between strategic objectives (strategic level or organisational structure); programmes (tactical level) and projects (operational level).This should take place through the following interfaces, which must become a culture in the MHLM:

- **Organisational:** When different components, units or directorates within the MHLM all report or establish feedback formally and informally to one another by conjoining relevant resources to the project. These components should be: Engineering, Community Services, Corporate Services, Office of the Chief Whip, Office of the Mayor, Financial Department (RSA, 2010:38; Van der Waldt, 2009:39).

- **Technical:** When officials from different segments and components or programmes with specialised skills and expertise interact to provide reciprocal assistance on the skills required to complete the project (RSA, 2010:38; Van der Waldt, 2009:39).

- **Interpersonal:** When officials from the different projects and programmes interact formally and informally to share best practices (RSA, 2010:38; Van der Waldt, 2009:39).

The recommendations above should be combined with the following dimensions of maturity expected from the leadership who manages a public service project: "sum of action (ability to

act and decide), attitude (willingness to be involved), and knowledge (an understanding of the impact of willingness and action" (Andersen and Jessen, 2003:460; Naidoo, 2005:103).

This combination of structural changes and a change of mind, can suggest possible measures to improve the service delivery by the Maquassi Hills Local Municipality in its area of responsibility. The conclusion to the study will be presented below.

6.4. TO CONCLUDE THE STUDY

For a final reflection on the research topic the theme is highlighted: Analysing the application of project management for service delivery improvements in the Dr. Kenneth Kaunda District Municipality: the case of Maquassi Hills Local Municipality. This was done by a case study of the Maquassi Hills Local Municipality. From this theme, the problem statement; primary and secondary research objectives, and the research questions, demonstrated that the study contributes through the following gains:

- An extensive literature review outlined the features of "management by projects" at strategic, tactical and operational levels as investigated in Chapter 2.
- In addition, a link was established between strategic objectives, programmes and projects. This insight helps ensure the successful implementation of organisational objectives through programmes at tactical level and projects at operational level in local governments such as the MHLM.
- The WWWTPU project was examined as a case study. This was conducted through, semi-structured interviews. The empirical findings provided valuable data that can inform improved service delivery in the MHLM's area of responsibility, as well as other local governments in their area.
- A triangulation on the features of the "management by projects" philosophy (information from the literary review, the empirical data from the semi-structured interviews and findings from the data on application of the features) revealed the disparities in the MHLM's implementation of these features. Cognisance of these disparities by the MHLM's managers on all three levels will help them to discern and rectify the weaknesses in their "management by projects". This empowerment applies to other projects and processes of local government in South Africa as well.

The successful implementation of the recommendations on the features of "management by projects" can, therefore, suggest effective, efficient and economically viable measures in a strategy for sustained and improved service delivery. In the first place this applies to the MHLM in its area of operation, but also to other instances of local government in South

Africa, possibly these recommendations can help construct a strategy for enhanced service delivery globally in countries with a similar governmental structure and processes.

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APPENDIX A: STRATEGIC LEVEL QUESTIONNAIRE

On the (insert date)....., I, Gwai John Moseki received approval from the Municipal Manager (insert name)..... to conduct a research study and collect data in support of my Masters' degree in Public Management and Development. The study is titled as follows:

"Analysing the application of project management for service delivery improvements in the Dr. Kenneth Kaunda District Municipality: the case of the Maquassi Hills Local Municipality".

Based on the aforementioned approval, a questionnaire was designed to collect data relating to the master's degree study in Public Management and Development.

The questionnaire seeks to determine the extent to which "management by projects" is applied by Maquassi Hills Local Municipality in its area of operation. The questionnaire will be administered to managers of the Municipality by focussing on features of "management by projects" at strategic level.

Participation in an interview is voluntary. Participants need not to identify themselves and their anonymity will not be revealed to anyone.

_____	_____
Name of Interviewer	Name of Interviewee
Date: _____	Date: _____

1. Which drivers (legislation, strategic documents, national and provincial priorities) are considered in developing the strategic goals and objectives for service delivery improvements in Maquassi Hills Municipality?

2. What are the strategic goals and objectives informing strategic management for service delivery improvements in Maquassi Hills Municipality?

3. Which programmes are strategically linked with goals and objectives for service delivery improvements in Maquassi Hills Local Municipality?

4. What type of organisational structure is used to support programme management in Maquassi Hills Municipality?

5. Which management and leadership structures supporting programme management are in place in Maquassi Hills Municipality?

6. In which office are management and leadership structures supporting programme management located in Maquassi Hills Municipality?

7. What are the organisational systems and processes used to support programme management in Maquassi Hills Municipality?

8. To what extent is Performance Management Systems used to support programme management in Maquassi Hills Municipality?

9. Which programme management performance monitoring modalities are followed to assess the implementation of programmes in Maquassi Hills Municipality?

10. Which are the Critical Success Factors used to evaluate programme success in Maquassi Hills Municipality?

11. How are programmes translated into projects for successful implementation in Maquassi Hills Municipality

APPENDIX B: TACTICAL LEVEL QUESTIONNAIRE

On the (insert date)....., I, Gwai John Moseki received approval from the Municipal Manager (insert name)..... to conduct a research study and collect data in support of my Masters' degree in Public Management and Development. The study is titled as follows:

"Analysing the application of project management for service delivery improvements in the Dr. Kenneth Kaunda District Municipality: the case of the Maquassi Hills Local Municipality".

Based on the aforementioned approval, a questionnaire was designed to collect data relating to the master's degree study in Public Management and Development.

The questionnaire seeks to determine the extent to which "management by projects" is applied by Maquassi Hills Local Municipality in its area of operation. The questionnaire will be administered to managers of the Municipality by focussing on features of "management by projects" at tactical level.

Participation in an interview is voluntary. Participants need not to identify themselves and their anonymity will not be revealed to anyone.

_____	_____
Name of Interviewer	Name of Interviewee
Date: _____	Date: _____

1. Which drivers (legislation, strategic documents, national and provincial priorities) are considered in developing the strategic goals and objectives for service delivery improvements in Maquassi Hills Municipality?

2. How are programmes translated into projects for successful implementation in Maquassi Hills Municipality

3. How are projects structured together to achieve the objectives of the programmes in Maquassi Hills Municipality?

4. Which knowledge Areas do you consider in project planning in Maquassi Hills Municipality?

5. How are projects implemented at operational level within the municipality?

APPENDIX C: OPERATIONAL LEVEL QUESTIONNAIRE

On the (insert date)....., I, Gwai John Moseki received approval from the Municipal Manager(insert name)..... to conduct a research study and collect data in support of my Masters' degree in Public Management and Development. The study is titled as follows:

"Analysing the application of project management for service delivery improvements in the Dr. Kenneth Kaunda District Municipality: the case of the Maquassi Hills Local Municipality".

Based on the aforementioned approval, a questionnaire was designed to collect data relating to the master's degree study in Public Management and Development.

The questionnaire seeks to determine the extent to which "management by projects" is applied by Maquassi Hills Local Municipality in its area of operation. The questionnaire will be administered to managers of the Municipality by focussing on features of "management by projects" at operational level.

Participation in an interview is voluntary. Participants need not to identify themselves and their anonymity will not be revealed to anyone.

_____	_____
Name of Interviewer	Name of Interviewee
Date: _____	Date: _____

1. How are programmes translated into projects for successful implementation in Maquassi Hills Municipality?

2. How are projects structured together to achieve the objectives of the programmes in Maquassi Hills Municipality?

3. Which management and leadership structures supporting programme management are in place in Maquassi Hills Municipality?

4. In which office are management and leadership structures supporting programme and project management located in Maquassi Hills Municipality?

5. How are projects implemented at operational level in Maquassi Hills Municipality?

5. Which Project Life Cycle phases do the municipality follow to implement projects in Maquassi Hills Municipality?

6. Which modalities within each phase of the Project Life Cycle does the municipality consider in the implementation of projects in Maquassi Hills Municipality?