

**EFFECTIVENESS OF THE ASSET REGISTER AS A
MANAGEMENT INSTRUMENT FOR THE
ELECTRICITY DISTRIBUTION INFRASTRUCTURE
WITHIN THE STELLENBOSCH MUNICIPALITY**

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A mini-thesis submitted in partial fulfilment of the requirements for the
degree of Master in Public Administration in the School of
Government, University of the Western Cape

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October 2008

DECLARATION

I, Derick Gabone, declare that *Effectiveness of the Asset Register as a Management Instrument for the Electricity Distribution Infrastructure within the Stellenbosch Municipality* is my work, that it has not been submitted before for any degree or examination in any other university, and that all sources used or quoted have been indicated and acknowledged as complete reference.



UNIVERSITY of the
WESTERN CAPE

Derick Gabone

October 2008

DEDICATION

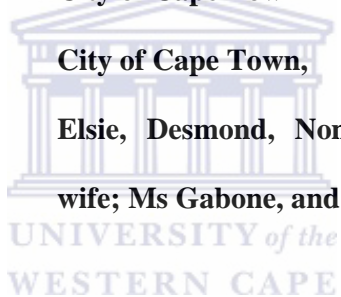
In living Memory
of
Tsietsi Steven Leburu



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ABSTRACT

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The emerging evidence on the state of municipal infrastructure reveals that municipalities have an ineffective internal infrastructure management system and this is adversely impact on service delivery. These observations necessitate an inquiry into the extent to which municipalities are using their asset register as an infrastructure management instrument. As they are compelled by Section 63(2)(c) of the Municipal Finance Management Act (MFMA). The study seeks to establish the state of infrastructure management system, pertaining to electricity distribution, as an example of policy implementation. The study is qualitative in nature and identifies the Stellenbosch Municipality which is situated in the Western Cape as a Case Study. This municipality commands a town that is ranked to have the highest economic development potential in the Western Cape. Data on the state of electricity management is solicited through semi and unstructured interviews, which is analysed using a qualitative content analysis.

The findings of the study underscores that within the municipality, there is predominately consistence in policy prescription and asset management processes, with the exception of operation and maintenance processes. The asset management policy of the municipality is explicit on how the municipality ought to go about optimising assets performance and condition. The systematic and coordination role of the asset register is considered within the policies and processes of the municipality. However, the effectiveness of the asset register in channelling asset management decisions is non-traceable, and this is largely attributable to the fragmentation of the asset register and limited inter-departmental (directorate) communication.

Broadly, the asset management practice of the municipality is undertaken to adhere to legislative requirements. The municipality transcend into a state that embraces the

ethos of asset management. Firstly, this could be achieved by hosting a workshop with senior managers to discuss the provisions of the asset management policy. This will increase the level of asset management awareness within the municipality. Secondly, the municipality need to pull all the sectoral information into a single corporate asset register. In relation to the implementation of MFMA, the monitoring and support role of the provincial coordinator need to be enforced in this regard.

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KEYWORDS

- 1. Asset Disposal**
- 2. Asset Lifecycle**
- 3. Asset Register**
- 4. Electricity distribution**
- 5. Infrastructure**
- 6. Management**
- 7. Municipal Finance Management Act**
- 8. Operation and maintenance**
- 9. Planning and acquisition**
- 10. Stellenbosch Municipality**



ABBREVIATIONS

AMP:	Asset Management Policy
BM:	Bureau-Maximisation
DMP:	Draft Maintenance Plan
EES:	Electrical Engineering Service
EMP:	Electrical Master Plan
Kv:	Kilovolts
MFMA:	Municipal Finance Management Act
MIG:	Municipal Infrastructure Grant
NPM	New Public Management
PA:	Principal Agent
PPE:	Property, Plant and Equipment
QCA:	Qualitative Content Analysis
RSD:	Rastow Stage of Development
SCMP:	Supply Chain Management Policy
SMoLTA:	Strategic Management of Long-Term Asset
TAMF:	Total Asset Management Framework
WCDEADP:	Western Cape Department of Environmental Affairs and Development Planning

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CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

In South Africa, the ushering in of democracy altered the facets of the South African landscape and also a developmental challenge of effecting a progressive realization of a better life for all. Municipalities are situated at the core of this developmental challenge, with infrastructure development being one of the developmental pillars (Makgetla; 2007:149). The municipal infrastructural roles and responsibilities are delineated in the Constitution and in the Local Government White Paper. The South African Constitution elevates the status of municipalities by recognising them as a sphere of government; changing their 'tier' status, and sets a demarcation framework that halt the racial distribution of resources amongst the municipalities. Furthermore, Schedule 4 and 5 (part A and B) of the Constitution mandates municipalities to provide basic services. The basic services basket comprise of electricity, water, local public transport and sanitations to households (Fernholz and Moreles-Fernholz; 2006:3)

The 1998 White Paper on Local Government stresses that the provision of these basic services should be provided within a developmental frame that is underpinned by effective management of resources. The Municipal Finance Management Act (MFMA) is one of the legislative initiatives that have been devised to assist municipalities in managing their resources. The MFMA is premised on five principles namely, promoting sound financial governance, strategic approaches to budgeting, modernization of financial management, corporative government and lastly, promoting sustainability (Fourie and Opperman; 2007:8). According to Fourie and Opperman; (2007:9), the last principle delves on micro-management by emphasizing that municipalities are required to put in place a robust internal control system that improve administrative efficiency and effectiveness.

1.2 RESEARCH PROBLEM

To gear municipalities for the infrastructural development agenda, a large sum of financial resources are injected into municipal infrastructure programmes through the Municipal Infrastructure Grant (MIG) and most of the emerging evidence on the state of municipal infrastructure suggests that municipalities are overlooked the importance of developing adequate internal processes of managing their infrastructure and this is adversely affects the sustainability of service delivery (Atkinson; 2007, National Energy Regulator; 2005 and Lowe and Wall; 2004).

Atkinson (2007:53) underlines that managerial ineffectiveness as one of the key factors that sparked the service delivery protest at municipality level. He stress that the lack of adequate management systems is compromising the operation and maintenance of existing infrastructure stock. In 2005, the National Energy Regulator conducted a technical audit on eleven electricity distributors. The findings of this audit reveal that electricity networks in smaller municipalities are dilapidated; there are instances where contingency requirements are not met, very few formal maintenance and operation procedures are in place.

Lowe and Wall (2004:14) further assert that there is strong evidence which highlights that insufficient attention is being paid to on-going operation and maintenance management issues by the majority municipalities. These observations necessitate an inquiry on how municipalities are managing their infrastructure, specifically to what extent is the information that is encapsulated in their asset register is utilised as an infrastructure managing instrument. This question underscores the linkages (effectiveness) between infrastructure management processes and asset register. Halfawy, Vanier and Hubble, and Pickering, Park and Bannister are amongst the scholars that have highlighted the essence of this linkage. Halfawy et al (2003:340) underscores that

“Sustainable management of municipal infrastructure depends to a large extent on the ability to efficiently share, exchange and manage life cycle information concerning the asset”

While Pickering et al (1993:i) argues that the economic and efficient delivery of infrastructure service depends on effective planning and management. This in turn depends on proper information, underlining that the lack of adequate information has adverse effects on the economy, the quality of life, public health and the environment.

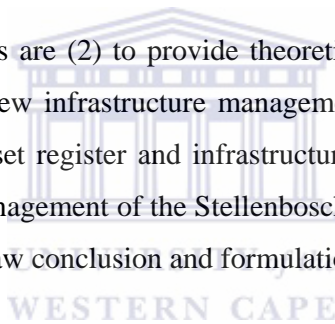
The effectiveness of the asset register is explored within the Stellenbosch municipality. The municipality is identified as a peculiar case study because of its national and regional status. The National Treasury (2006:iii), Local Government Budget and Expenditure Review of 2001/02- 2007/08 indicates that this municipality is amongst the twenty-five national municipalities that make up 68 per cent of the combined local government capital budget. Regionally, the municipality has a town that is ranked¹ by the Western Cape Department of Environmental Affairs & Development Planning as having the highest growth potential in the Western Cape Province (Western Cape Department of Environmental Affairs & Development Planning; 2004:86).

¹ Excluding the Metropolitan City of Cape Town

1.3 OBJECTIVES OF THE STUDY

This study seeks to extend on the empirical understanding on the state of infrastructure management within municipalities. The primary objective of the study is to inform deliberations on the implementation of the Municipal Finance Management Act, particularly Section 63. Section 63 (2) c of the Act compels the accounting officer of a municipality to take reasonable steps to ensure “*that the municipality has and maintain a system of internal control of asset including an asset register*”. This section implicitly implies that there is an inextricable relationship between the asset management system and the asset register.

The secondary objectives are (2) to provide theoretical perspective on infrastructure management and to review infrastructure management frameworks, to highlight the linkages between the asset register and infrastructure management; (3) to document the practices of asset management of the Stellenbosch Municipality; (4) to analyse the findings; (5) lastly, to draw conclusion and formulation conclusion.

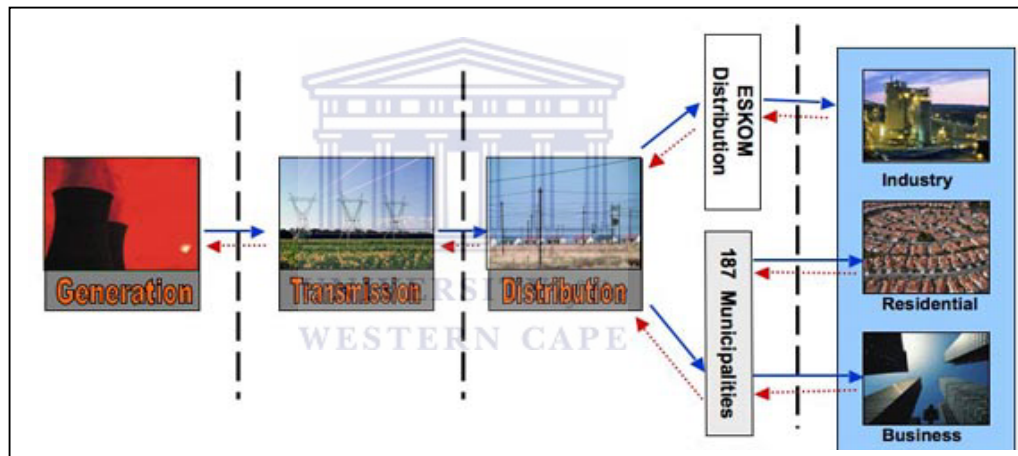


1.4 DELIMITATION OF THE STUDY

The relationship between infrastructure and societal development is a given axiom amongst scholars and practitioners. However, there is no universal definition on the word infrastructure, but there is a broader agreement of what is and what is not. The Development Bank of Southern Africa (1998:4) describe infrastructure based on its developmental impact, making a distinction between social and economic infrastructure. Social infrastructure relates to infrastructure that is set-up to improve quality of life, such as health and educational facilities. While economic infrastructure encompasses network facilities that are set to enhance economic development such as transport, telecommunication and electricity network.

The renewal parts of these networks are commonly described as assets and the data set that contain assets information is commonly known as the asset register (McShane; 2006:85). For the purpose of this exercise, infrastructure refers to economic infrastructure, with a particular focus on electricity distribution. The electricity supply network generally consist of three components, namely generation, the production of electricity, transmission, transportation of high voltage electricity through power lines, distribution; transformation of high voltage into lower voltage, and the delivery to end-user such as the consumers and industrial firms. An example of the South African electricity network is displayed in figure one below.

Figure 1: South African Electricity Supply Network



Source: Electricity Distribution Industry Holdings, 2008

The word ‘management’ strictly refers to decision-making in relation to asset planning and acquisition, operation, maintenance and disposal. ‘Effectiveness’ refers to the judgement on how the asset register informs the undertaking of asset management decision.

1.5 STRUCTURE OF THE STUDY

The ensuing discussion is conversed in five chapters. Chapter two deliberates on the evolution of infrastructure management perspectives as from the early 1960’s,

particularly the centralisation-decentralisation dichotomy and review selective infrastructure management frameworks. Post world war two, the state (through public enterprise) assumed a sole property role in ownership and operation of strategic sectors. This was premised on the notion that the state was a benevolent actor in channelling public interest. Amongst the theories that advocated this public interest notion was the Rostow's Stage of Development and the Natural Monopoly.

In the late 1970's, the public interest notion was challenged by the Bureau-maximization and the Principal Agent theory. These theories focused on the behaviour of state employees (bureaucrats) by asserting that bureaucrats are concerned with their maximise utility, which comes with high government office and that there is information asymmetry between the state and the public. The combination of these factors surmounts public interest. The New Public Management emerged as policy prescriptions for overcoming bureaucrat's behaviour and one of its remedies include the unbundling of public organisation into separate manageable units.

This created scope for alternative service providers such as the municipality to assume greater role in the management of some of the functions that were solely administered by public enterprise. Some of these functions include setting up of investment priorities, building and operating infrastructure facilities and financing of capital, operational and maintenance requirements (Muzzini; 2007:278).

With the municipality assuming a greater role in the management of infrastructure, there has been a greater interest in the internal process of infrastructure management. The Asset Life-cycle Management, Total Asset Management and the Strategic Management of Long-Term Assets are some of the infrastructure management frameworks that have been devised to enhance infrastructure management. The synthesis that emerges from these frameworks underline that infrastructure management is a comprehensive process that entails planning and acquisition, operation, maintenance and disposal, These processes are systematic and coordinated. The systematic and coordination vacuum is assumed by the asset register. Lastly, the

whole process has to be underpinned by an organisational ethos that is inclusive through the sharing of asset information.

Chapter three, isolates the set of beliefs, research design, data collection and analysis, and the design test that underpin the research question of this inquiry. The research problem of this inquiry is situated within the interpretive paradigm which is concerned with the construction of social actors' reality. The case study method is identified as an appropriate method because it enables the researcher to retain the holistic and meaningful context of in-depth information on real life events such as lifecycle analysis. The subjectivity and generalisation case study limitations are buffered through a design test that focuses on conformability, credibility, transferability and dependability. This design test also outlines the validity and reliability aspects of the interpretive paradigm. Data is collected through interviews and policy documents, namely; Asset Management Policy and Supply Chain Management Policy.

Chapter four discusses the case study focusing on the regional and national economic status that is assumed by the Stellenbosch Municipality and the governing structures that manage this municipality. In addition, the chapter drills on the asset management policy and operational processes, i.e, planning and acquisition, operation and maintenance, and disposal to elucidate the systematic and coordination role of the asset register.

The Asset Management Policy of the municipality is not explicit on how the municipality should go about optimising the functionality and conditionality of its assets and no linkages are made to sectoral plans, such as the electricity master plan. The systematic and coordination role of the asset register is considered in the policy-processes practice of the municipality. However, the effectiveness of the asset register in channelling asset management decisions is non traceable and this largely attributable to the fragmentation of the asset register and limited interdepartmental communication.

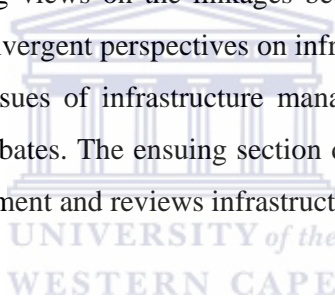
Chapter Five, discusses conclusions and recommendations on the extent of the linkages between the infrastructure management and the asset register within the Stellenbosch Municipality. The observations that emerge from the interview covered in this inquiry situated this municipality at the core level of the core-advance continuum of the total asset management framework. The operation and maintenance processes of the municipality appear to be unsystematic and un-coordinated. It appears that each sectoral department within the municipality has its own asset register (fragmentation) and that there is minimal information exchange between the directorates. Other processes, namely, planning and acquisition and disposal are clearly delineated. This is attributable to the set up of policy and regulatory requirements. The municipality can enhance its infrastructure management practice by delineating in its Asset Management Policy how the municipality should go about optimising its operation and maintenance processes or by making linkage to the sectoral plan.

The Infrastructure Management Practice can further be enhanced by increased maximising the level of asset management awareness within the municipality. This could be achieved by hosting an internal workshop to discuss the asset management provisions that are outlined in the Asset Management Policy of the municipality. The municipality also need to consolidate its sectoral asset register into a single corporate asset register. The state of infrastructure management within the Stellenbosch Municipality also underlines the need for Provincial Treasury to expedite its monitoring and evaluation of Section 63 of the Municipal Finance Management Act.

CHAPTER TWO: THEORETICAL FRAMEWORK

2.1 INTRODUCTION

The economic, social and environmental benefits of infrastructure towards societal development are given axioms that are accepted by scholars and practitioners. Economically, access to adequate and reliable infrastructure reduces input factors costs in production processes and creates spill-over effects of promoting trade, competitiveness, regional integration and tourism (Fourie; 2006:540). Socially, infrastructure has a direct bearing on the extent of poverty and inequality in a society. Environmentally, infrastructure also has a bearing on the society's quality of life. Despite these converging views on the linkages between infrastructure and societal development, there are divergent perspectives on infrastructure management. Over the last four decades, the issues of infrastructure management have assumed a central stage in public policy debates. The ensuing section discusses theoretical perspectives of infrastructure management and reviews infrastructure management frameworks.



2.2 INFRASTRUCTURE MANAGEMENT PERSPECTIVES

In the early 1960's, the state assumed an unwavering mandate of 'rowing' infrastructure management activities, ownership and operation of economic infrastructure through public enterprise (Denhardt and Denhart; 2000:549). This mandate was shouldered on the notion that the state was an appropriate entity that could serve the developmental (public) interests of society. The Rostow Stage of Development and Natural monopoly are amongst the notable theories that advanced the public interest notion. However, in the late 1970's, the crux of state-led infrastructural management approach attracted immense criticism. The government sector was diagnosed as bloated, wasteful, over bureaucratic, underperforming and needed a face lift. The bureau maximization and principal agent theories are located at the nerve of this criticism.

2.2.1 Rostow Stages of Development Theory

The Rostow Stages of Development theory emanated as an intellectual construct of swaying non-industrial countries to a self sustaining development path. The theory asserts that the transition from underdevelopment to development is a series of interrelated stages namely, traditional, pre-condition for take-off, the take-off, drive to maturity and the age of high mass consumption (Todaro and Smith; 2003:112). The traditional and pre-condition taking-off stages relate to the transition from subsistence to a semi-industrial economy. The take-off and maturity stage is a transition from semi-industrialization to semi-commercialization. Lastly, the mass consumption stage is fully commercialized stage. This theory asserts that one of the principle strategies for taking off from traditional to commercialization stage is achieved by mobilising domestic and foreign savings (investments).

2.2.2 Natural Monopoly Theory

The Natural Monopoly theory expounds on the Rostow's Stages of Development theory by prescribing that the state should channel these investments (domestic and foreign) into strategic sectors such as telecommunication, water, transport and electricity, emphasising the capital cost structure (economies of scale properties) that are characteristic of these sectors. The economies of scale assertion postulate that an increase in output of strategic sectors is associated with a reduction in production cost i.e. average and marginal cost (Black Calitz and Steenkamp; 2005:49). This output-cost structure creates an efficient option of having a single entity supplying the whole market, with the state being the preferred entity because of the belief that it is a benevolent actor that can advance the social welfare of a society (Srinivasan; 2002:394). The state assumed this role by the forming of public enterprise.

2.2.3 Bureau-Maximization Theory

In the late 1970's, the state-led infrastructural intellectual paradigm cracked as a generally accepted axiom. Government management process and the activities of

public enterprise was underlined as primary constraints towards development. The Bureau-Maximization (BM) and the Principal Agent (PA) theory underpinned this argument by challenging the public interest assertion. The BM theory focused on government employees (bureaucrats) behaviour by claiming that bureaucrats are rational human beings who are interested in maximising their utility, high income, power, prestige and exquisite offices. The incentives for attaining these benefits are inherent in the bureaucratic structures, (Black et al 1999: 68).

For example, in most societies, the public reveals its policy choices by electing politicians, who in turn appoints bureaucrats on hieratical structures to administer public policies. These policies are devised by bureaucrats and this creates incentives for bureaucrats to surfeit the provision of public goods to maximise their utility (ibidi). Subsequently, this results in inefficient allocation of public resources and ultimately makes the society worse-off.



2.2.4 Principal Agent Theory

The principal agent theory penetrates into state-led intellectual paradigm by exploring accountability within the intrinsic relationship between the bureaucrats, public and politicians, fusing on information exchange (asymmetry) within this relationship (Broadbent, Dietrich and Laughlin; 1996: 115). Within this relationship, Bradbent et al (1996: 115) argues that the cost to an individual public member (principal) to lobby for particular public expenditure (or against high public expenditure) is exuberant due to the layers of hierarchal bureaucratic structure and further constrained by free riding (people benefiting from a decision without taking deliberation action). These factors impinge on the interaction between the public and bureaucrats. Similarly, politicians (principal) have limited access to the technical information that bureaucrats have at their disposal. This creates a disjunction between the principal and the agent and also incentives for the agent to advance his/her private interest. The criticism of the state-led infrastructural management approach led to the advancement of new management approaches which are embedded within the New Public Management (NPM) (Hood; 1999: 94).

In relation to public enterprise, the NPM prescribes that public enterprise be unbundled into separate manageable units which have greater delegation of resources, and the introduction of competitive bidding and contracting with greater use of the alternative service providers. For example, in the electricity sector, the production process has been restructured into three separate phases namely, generation, transmission and distribution, with the municipalities assuming a greater role in the latter phase (World Bank; 2003: 1).

The involvement of municipalities in the management of infrastructure has subsequently pulled infrastructure management to the fore and there has been an array of infrastructure management frameworks that has been devised to enhance accountability within the public sector. Some of these frameworks are reviewed in the following section.



2.3 INFRASTRUCTURE MANAGEMENT FRAMEWORK

Recently, the management of public infrastructure has emerged as a significant public policy with an underlying concern of poor infrastructure management practices. Particularly, criticism has been levelled toward local municipalities (McShane; 2006:83). There have been arrays of infrastructure management frameworks that have been devised to assist municipalities to improve their infrastructure management practices. In this section, three of these frameworks are reviewed and within these frameworks, the role of the asset register is discussed.

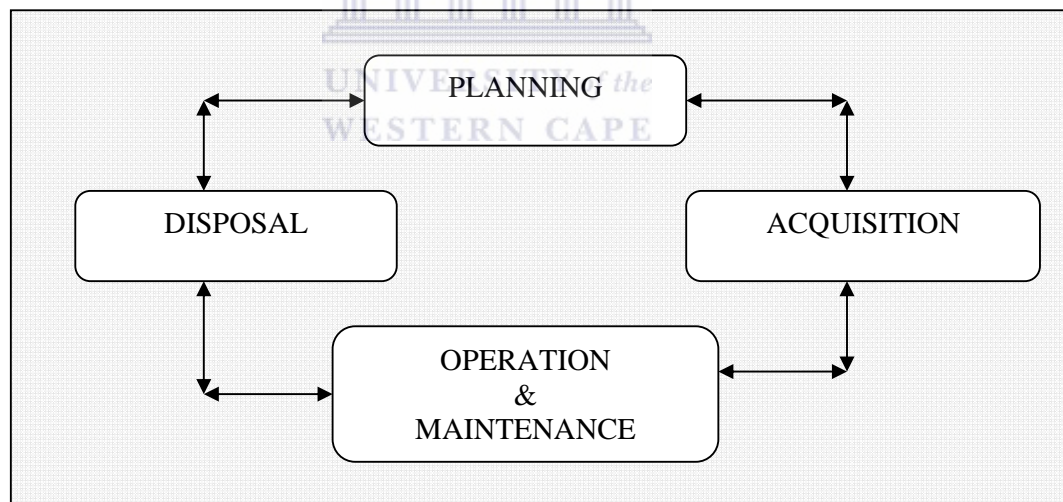
2.3.1. Asset Life-Cycle Management Framework

As part of the overall transformation of the South African public sector; National Treasury, particularly the Office of the Auditor General formulated an *Asset Management Framework* and an *Asset Management Practical Guide*. The purpose of this guide is to provide financial management and accounting information on asset

management of national and provincial departments. Both documents² commence from the premises that asset management is a “*process of guiding the acquisition, use, safeguarding and disposal of assets with an objective of extracting the most of its service delivery potential, managing related risks and costs over the entire life of an asset*” (National Treasury; 2004:9).

The definition underscores that asset management is a series of interrelated activities that stretch over the entire life of an asset. These activities are undertaken to enable an organisation to address its service delivery objectives which include (amongst other things) maximisation of service potential of existing assets and lowering of overall costs of owning assets. The Guide clusters asset management activities into four phases namely, asset planning, acquisition, operation and maintenance and disposal as shown in Figure 2 below.

Figure 2: Asset Life Cycle Management Framework



Source: National Treasury; 2004

² These documents will be reference as the “GUIDE in the text unless state otherwise

2.3.1.1 Asset Planning Phase

The planning phase comprises of three elements namely, integration, evaluation and financial appraisal (National Treasury; 2004:22). The integration element encompasses activities that align the asset bases with the overall corporate service requirement of an organisation. The alignment is supported by the evaluation element which provides an assessment of the physical condition of existing assets and with identification of new assets (or upgrade), that match service requirements of the organisation. Financial appraisal focuses on activities that weigh funding options for asset rehabilitation or acquisition of new assets that have been identified during the evaluation process. These three elements form the base of the asset planning report.

2.3.1.2 Asset Acquisition Phase

The planning report forms the basis of the asset acquisition phase and the asset acquisition processes are predominantly delineated in an acquisition plan. The acquisition plan is formulated before an actual decision to acquire an asset is undertaken. The plan unpacks the specification of the programme delivery requirement to establish the appropriateness of an asset in matching the service delivery requirements set by an internal department or external stakeholders that is, customer, regulator etc (National Treasury; 2004:32-44).

Secondly, the acquisition plan also weighs methods of asset acquisition and there are basically two methods of acquiring an asset. An organisation can either buy (or build an asset) or lease an asset. The final decision on the acquisition method needs to factor the life-cycle costs:

- Planning costs: conducting environmental impact and feasibility studies.
- Acquisition costs: construction, commissioning, delivery and installation.
- Operational and Maintenance costs: cleaning and specialists staff to operate the asset.
- Disposal costs: agent commission and dismantling costs.

2.3.1.3 Asset Operation and Maintenance Phase

After an acquisition decision has been undertaken, an organisation has to develop an asset operation and maintenance plan which synthesis approaches to be employed in operating and optimising the performance of an asset over its entire life. The operation plan sets operational standards of asset use (utilisation) and covers aspects such as resources required to operate an asset, arrangements for collecting, monitoring and reporting performance data, access to and security of assets, training of staff, and estimation of operating expenses (National Treasury; 2004:45-59).

The maintenance plan is undertaken to ensure that the physical condition of an asset supports the programme delivery requirement at the lowest possible cost. The plan outlines the maintenance approaches (corrective or preventative approach), types of maintenance (in house or outsourcing), projected cost of routine maintenance, and forecasts of major replacement needs.

2.3.1.4 Asset Disposal Phase

The disposal phase is the extinct phase within the life cycle approach of the asset management process. The Guide (2004:61) underscores that a disposal decision needs to be factored within the integrated asset management framework by examining service delivery requirements, corporate objectives, financial and budgetary constraints and disposal methods such as public auction, public tender, transfer to another entity, sale to another entity, letting other entity, sale to staff, trade-in and controlled dumping (National Treasury; 2004: 65)

In addition to the management phases, the Guide incorporates a section on the asset register and stresses that “*an adequate asset register is integral to effective asset management*” (National Treasury; 2004:68). The asset register is outlined as the basis of an asset management information system that contains asset information on cost, price and evaluation, date of acquisition, location, asset condition and expected life of an asset. The Guide underlines that the compilation of asset information enables the

identification of ongoing cost which in turn assists an organisation to be effective and efficient in formulating policies that safeguard assets against misuse, theft and fraud.

2.3.2 Total Asset Management Framework

The Total Asset Management Framework (TAMF) is a compendium of international asset management frameworks and the Southern African version is published by the Institute of Municipal Engineering of Southern Africa. The TAMF situates asset management processes on a core-advance continuum (Institute of Municipal Engineering of South Africa; 2006:9). At the core stage, asset management activities are predominately undertaken to adhere to legislative requirements (reporting). While, at an advanced stage; an organisation is concerned about synergies between asset management, corporate strategy and collation of individual assets information.

Within the TAMF, asset management is described as “*systematic and coordinated practices through which an organization optimally manages its physical assets and their associated performance, risks and expenditure over its lifecycle*” (Institute of Municipal Engineering of South Africa; 2006:3). The definition underscores the lifecycle approach as an effective instrument of managing infrastructure. The life cycle approach is an approach that considers management options and strategies that range from planning right through to disposal.

2.3.2.1 Asset Planning

Asset planning encompasses activities that are undertaken to identify customer services requirements and matching these requirements with asset specification. These activities broadly range from formulation of service level, demand forecasting, and decision-making optimisation (Institute of Municipal Engineering of South Africa; 2006:46). In formulating service levels, an organisation segments its customer base (residential or commercial) to establish service needs and expectations to formulation performance measures (targets).

With the performance targets, an organisation needs to probe factors that might alter service requirements. Some of these include changes in economic growth, population, government policies and technological advancement. To buffer some of these uncertainties, demand and supply side measures such as shifting demand to non-peak periods and minimising energy loss in the distribution system can be employed.

The decision-making optimised activity is a balancing act of asset identification and prioritisation of potential solutions that relate to financial viability, social, economic, environmental and cultural outcomes (Institute of Municipal Engineering of South Africa; 2006:57). Some of the techniques that are employed to improve decision-making are the Benefit and Cost Analysis and Multi-Criteria Analysis³.

2.3.2.2 Asset Acquisition, Operation and Maintenance

Asset acquisition is inextricably attached to the asset planning, particularly the optimising decision-making and demand forecasting activities (Institute of Municipal Engineering of South Africa; 2006:113). As part of the identification and prioritisation trade-off process, the lifecycle cost of owning, operating and replacement need to be dissected. Ownership costs are attached to costs that are incurred during planning, design, construction or acquisition of an asset. Operating costs are associated with maintenance, depreciation and administration support. The replacement costs include costs such as asset valuation and cleaning up of facilities. Demand forecasting within the acquisition phase requires quantification of long-term financial forecasting needs such as refurbishment, operational costs and maintenance of an asset (or the asset base) over a minimum period of 10 years. The ten-year forecast should be reviewed annually.

Operation and Maintenance forms a third phase of the TAMF and is concerned with the functioning and sustainability of assets. Operational activities focus on asset

³ The Benefit and Cost Analysis tool is vital in quantifying the net monetary outcome of a taken decision. While, the Multi-Criteria Analysis tool is vital in quantify non-monetary aspects by developing criteria or indicators of ranking the impact of a decision.

performance and condition. Asset performance relates to the ability of an asset to provide maximum return on funds invested and to deliver on the required level of service (Institute of the Municipal Engineering of Southern Africa; 2006:39). The required level of service is quantified by comparing the actual performance with the desired service level targets. Asset condition is concerned with the monitoring of the physical state of the asset, period (deterioration), rehabilitation and renewal requirements, and the estimated residual life to minimise the probabilities of premature asset failure. Interventions that seek to minimise asset failure are linked to the maintenance plan

According to the Institute of the Municipal Engineering of Southern Africa (2006:99) the major challenge with asset maintenance is devising an asset maintenance plan that strike a balance between planned and unplanned maintenance. Planned maintenance encompasses corrective measures such as preventative maintenance, and activities undertaken to prevent an occurrence of an asset failure. Unplanned maintenance deals with corrective measures such as repairing default components and disposing of assets that are irreplaceable due to unforeseen events.

2.3.2.4 Asset Disposal

Asset disposal form a last phase of an integrated asset management process and a decision to dispose is taken when an asset is no longer required or becomes uneconomical to maintain or rehabilitate (Institute of the Municipal Engineering of Southern Africa; 2006:45). Technical advancement and changes in customer requirements are some of the factors that render an asset inappropriate. In relation to the asset register, the TAMF underlines the asset register as an enabler that provide essential outputs for effective asset management processes (Institute of the Municipal Engineering of Southern Africa; 2006:4.2). Four enabling aspects are outlined in the framework:

- Improve governance and accountability by demonstrating to owners, customers and stakeholders that services are being managed sustainable and delivered effectively.

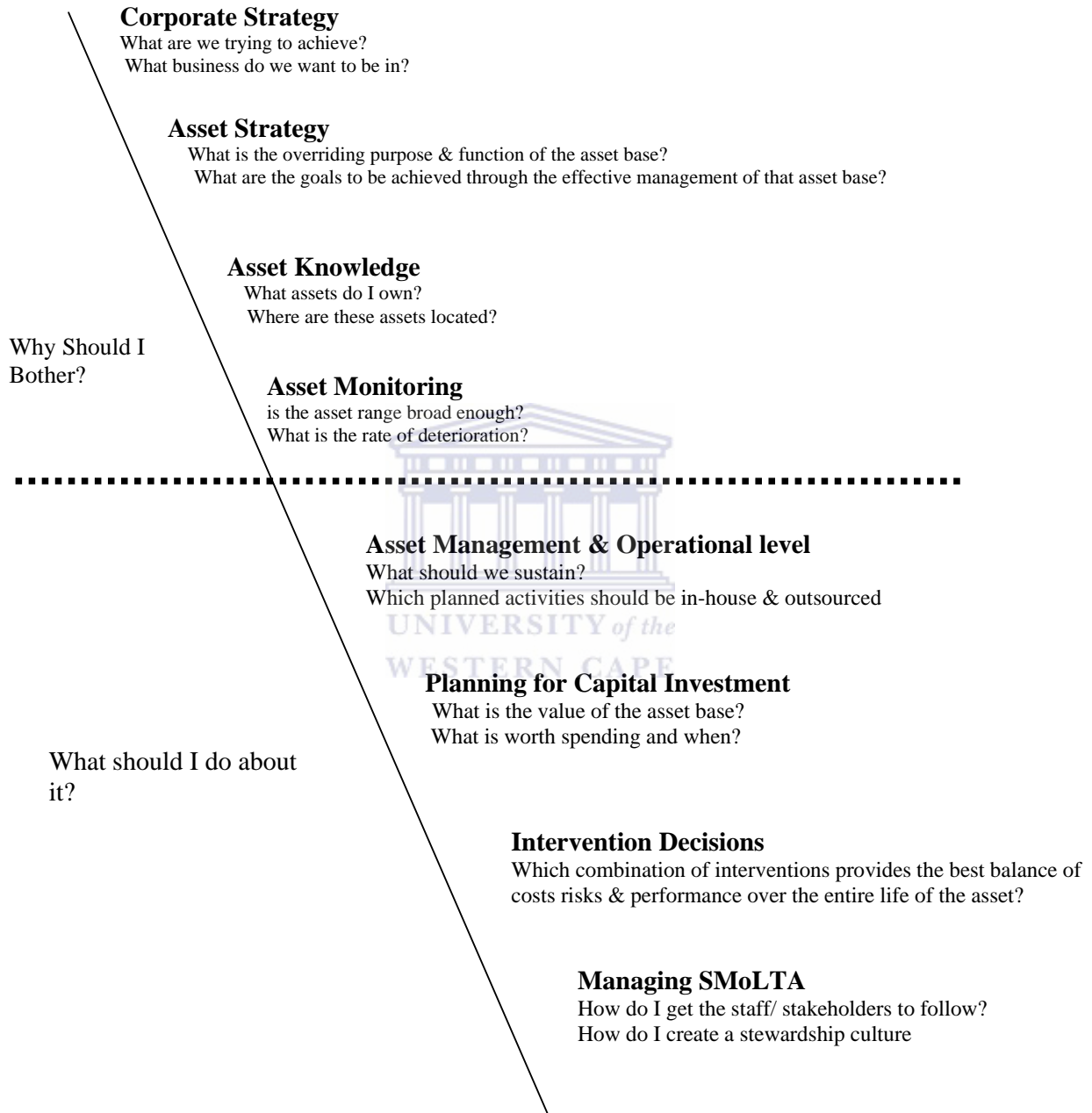
- Enhance service management and customer satisfaction through improved performance and control service delivery to the required standard.
- Improved risk management by assessing the probability and consequences of asset failure.
- Lastly, improve financial efficiency through improving decision-making on costs and benefits alternatives.

2.3.3 Strategic Management of Long-Term Asset

The Strategic Management of Long-term Asset (SMoLTA) is an outcome of an exploratory survey that was undertaken by Tranfield, Denyer and Burr in 2004, on how managers are addressing the strategic management of long-term assets. Their sample comprised of twenty-five organisations, seven central government departments, three local authorities, three agencies, three private utilities, seven manufacturing companies and two service organisations. From the solicited responses, Tranfeild et al (2004: 280) delineated asset management as a process of *“development of a stewardship culture that nurture shared understanding, motivation and trust that ensures asset and service delivery extended over timescale”*.

This process elucidates two interrelated questions; why should I bother? (Strategic question) and what should I do about it? (Operational question). The strategic questions drill into aspects of corporate strategy, asset strategy, asset knowledge and asset monitoring. Whereas, the operational questions fuse on asset management and operational level, planning for capital investment, intervention decisions and managing the strategic management of long-term asset as depicted in figure 3 below.

Figure 3: Strategic Management of Long-Term Assets



Source: Transfield et al; 2004

Asset corporate strategy outlines the strategic integration of the asset management activities within the overall strategic direction of an organization. This is the extent to which the management of infrastructure assets are recognised as an essential component of an overall businesses strategy. The asset strategic component of the framework addresses technical issues that sketch out the unique contribution of infrastructure towards the realization of corporate strategic direction and an infusion of infrastructure management in the sub-strategies of the organisation such as human resource strategy, financial strategy and other strategies (Tranfield et al; 2004:283).

Tranfield et al underlines that the infusion of the asset strategy is anchored on asset knowledge. Asset knowledge delves on specifying organisational asset requirements in order to achieve its strategic purpose. Specific information is required with regards to what the overriding purpose and function of the asset base is, what goals are to be achieved through effective management of the asset base, with an ultimate objective of producing a comprehensive audit of both the volume and the condition of the assets available to the organisation. In turn, the audit facilitates asset monitoring, which focuses on producing an integrated knowledge management system of collecting appropriate data and making it available to those who need it.

With regards to asset management and operation, Tranfield et al (2004:285) underscores that with adequate asset knowledge, managers are in a better position to make intervention on what the organisation should sustain, acquire, divest and which of the planned activities should be done in-house or outsourced. Furthermore (on capital investment), the planned activities needs to be done on the “whole life cycle approach,” which stresses that the planned activities should be done to minimise costs while maximising the return on invest. The questions that relate to capital investment touches on what the value of the asset is, what to spend on and when to spend.

The third component of the SMoLTA probes a combination of interventions that provide an optimal balance of costs, risks and performance over the entire life of the asset. Lastly, the framework discusses the human dimension of infrastructure

management which encapsulates leadership and management. Leadership and management focuses on the inclusion of all levels of management and exchanging of information amongst all stakeholders.

With regard to asset registers, the role of the asset register is outlined in both the strategic and operational aspect of the framework. In the strategic aspect, the framework underscores the alignment space that is occupied by the asset register, by outlining the linkages between asset strategy (which in turn is linked with the corporate strategy) and asset knowledge through the assertion that the formulation of the asset strategy is anchored on asset knowledge which is kept in the asset register. Operationally, decisions on asset management, planning for capital investment and intervention decisions require in-dept information on the state of assets which are encapsulated in the asset register.



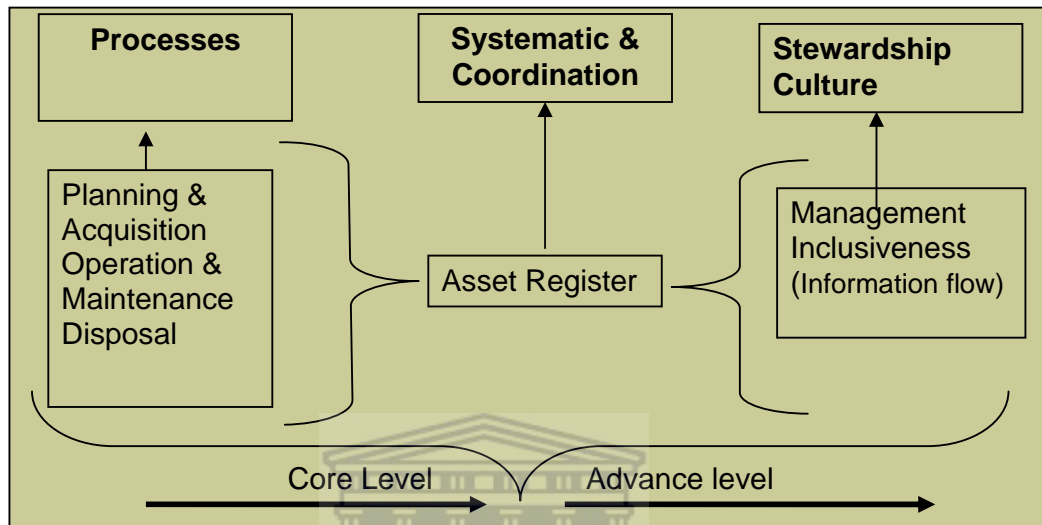
2.4 SUMMARY

Over the last three decades, the functions of public enterprise have been restructured, with local municipality gaining a greater share in the management of these functions. The devolution of infrastructure management to local municipalities has attracted immense interest in the internal management processes of the municipalities and there are numerous frameworks that have been devised to delineate processes of infrastructure management. Three of these frameworks are reviewed, namely, Asset Lifecycle Management, Total Asset Management, and Strategic Management of Long-Term Assets.

The synthesis of these asset management frameworks underscores that asset management entails a systematic and coordinated process of guiding the acquisition, use, safeguarding and disposal of assets, managing related risks and cost which are incurred over the entire life of an asset. Furthermore, this process is managed within an organisational culture that nurtures a shared understanding, motivation and trust. From the synthesis, three aspects emanate namely, that asset management is a process

that is systematic and coordinated within a stewardship culture as displayed in figure 4 below.

Figure 4: Synthesis of Asset Management Framework.



The first aspect underlines processes indicating that asset management is a process which can be clustered into three interrelated phases namely, planning and acquisition, operation, maintenance and disposal. Planning and acquisition is the inception phase of the asset management process and delves on aspects that relate to the linkages between asset management, the overall corporate strategy of an organisation and the balancing act of asset identification and priorities. The operation and maintenance phase underlines aspects related to approaches that optimise functionality and conditionality of an asset over its entire life. Lastly, asset disposal is an extinction phase in the life of an asset and is undertaken when assets cease to match customer requirements or when it becomes uneconomical to maintain or rehabilitate.

The second part of the synthesis highlights the systematic and coordination aspect of asset management. The systematic aspect underlines the interrelatedness of the infrastructure management, while coordination stresses the anchoring role that is

assumed by the asset register. Lastly, the synthesis focuses on the human dimension of infrastructure management, which is, sharing of information inter-departmentally.



CHAPTER THREE: RESEARCH DESIGN & METHODOLOGY

3.1 INTRODUCTION

In organizational and management science, the quest for knowledge on how to enhance organizational performance is a critical issue in an ever changing world. Changes in the economic, social and environment have a direct bearing on organisational performance and ultimately service delivery in the case of municipalities. According to Remenyi (1996: 22), the quest for scientific knowledge is premised on three philosophical questions: why research? what to research? and how to research?. The first question highlights that human beings have limited knowledge on some of the issues that affect their welfare. The second question underlines the context or field in which the researcher is operating under. For example, within the management field, an investigator will probe issues that seek to improve efficiency and effectiveness of the organisational management processes. The latter question underscores the methods and procedures that are utilized to produce scientific knowledge, which is the focus of this section. The ensuing discussion delineates the research paradigm, discusses the research design and the method that is employed to collect and analyse the collated data of this inquiry.

3.2 RESEARCH PARADIGM

In organizational management science, there is an array of approaches of classifying research: practicality (basic or applied), differentiation by methodology (qualitative and quantitative or experimental and non-experimental) and by the type of the research question (amongst others; ethnographic, historical, descriptive) (Mertler and Charles; 2005: 28). According to Henning, Rensburg and Smit (2004: 16), the dividing line among these approaches is underpinned by a set of values and beliefs (paradigm) that are inherent within them.

He broadly clusters these paradigms into positivists and interpretive paradigm. The distinction between these paradigms is grounded on their ontological, epistemological and methodological assumptions (Terre Blanche and Durrheim; 2006: 6). The ontological assumptions relate to nature of what is believed to be social reality. Epistemological assumptions delve on the nature of the relationship between the researcher and the researched object (unit of analysis). Lastly, methodological assumptions delineate apt ways of investigating what is assumed to be nature of reality.

3.2.1 Positivist Paradigm

The positivist paradigm is mounted on the ontological assumptions that organizational performance is rooted in natural laws and mechanism that are quantifiable and predictable (Lincoln and Guba; 1994: 108). That is the researcher should employ scientific methods that enable a manager to quantify the cause and effect of organizational performance.

Within the positivist paradigm, it epistemologically assumes that the relationship between the researcher and the unit of analysis is mutually exclusive. The researcher is presumed to have an ability to probe the investigated object without being influenced by it or influencing it. The methodological approaches are predominately quantitative in nature and seek to predict or test a predefined dependent-independent aspect of a social phenomenon (Henning et al; 2004: 16)

3.2.2 Interpretive Paradigm

The interpretive paradigm questions the appropriateness of the naturalist reality that is advocated by the positivist paradigm within the social science arena. Pozzobon (2003: 5) argues that reality is socially constructed and is constructed through language and shared meaning that people assign through their subjective experiences.

The interpretative paradigm claims that reality is not measurement-orientated, but rather meaning-orientated.

Epistemologically, the role of the researcher is to understand the inter-subjective meanings embedded within the organisational life and explain the actions of those constructing reality. The researcher does not confine organizational performance into dependent and independent factors because these factors are mutually inclusive. Methodologically, an approach that seeks to provide an understanding of a social phenomenon is located within this paradigm (Henning et al; 2004:16).

3.3 RESEARCH DESIGN

The research problem of this inquiry namely, how effective the asset register is utilised as a management instrument for electricity distribution within the Stellenbosch municipality, situates this study within the interpretive paradigm. Within the Interpretive approach, the case study method is employed as a preferred method of this study. The strength and the limitations of employing this method are discussed below.

3.3.1 Strength of the Case Study Method

The case study method is one of the several methods of conducting social science research and Henning et al (2004:32) describes the case study method as a method that seeks to investigate qualities of a phenomenon within a bound system. The system may be a group of people, a set of documents, a television series, or any social entity that can be bound with features that shows a specific dynamic and relevance in revealing information. The parameters of the system boundary are demarcated by the unity of analysis (the object of study).

The strength of this method is that it enables a researcher to retain a holistic and meaningful characteristic of producing context in-depth information on real life

events such as individual life cycles, maturation of industries, international relations, organization and managerial processes. (Yin; 1994:3). Flyvbjerg (2005:221) further asserts that predictive theory and universals cannot be found in the study of human behaviour, its concrete context-dependent research on learning that allows people to develop from rules-based to virtuoso experts.

3.3.2 Limitation of the Case Study Approach

There has been a growing interest in employing the case study method since the late 1960's. Simultaneously, this interest has attracted criticism, which Ellram (1996: 93) labels as "misconceptions". Amongst these "misconceptions" is that this method is suitable in the inception phase of a research process, embroiled in subjectivity, and the findings of this method are not easily extrapolated (Flyvbjerg; 2005, Henning et al; 2004, Mouton; 2000, Ellram; 1996 & Yin; 1994).

According to Yin (1994; 3), amongst scholars there is a misconception that there is a hierarchical array of the research methods and the case study method is ranked as the least in comparison to other methods such as surveys, experiment and archival.. The ranking is underpinned by a conviction that the case study method is appropriate in the exploratory phase of an inquiry, the preliminary stage of developing a research hunch (theory-building), because it provides anecdotal evidence. Other methods are considered to be superior in alleviating an inquiry into a stage of formatting explanatory factors or establishing correlations (or association) of a social phenomenon.

In conducting the field work, the investigator usually establishes a close and direct interpersonal relation with the unit of analysis, organizations or people through interviews. This creates scope for what Flyvbjerg (2005: 243) calls the "crippling drawback", that is, the investigator infiltrates his/her preconceived biasness in collecting and interpreting the collated data. This has raised concerns about the rigorousness of a study conducted through this method. Other scholars have refrained from using this method based on an argument that the findings that emanates from the

case study method is restrictive, because they cannot be interpreted as a general social phenomenon (Mouton; 2000:151). For example findings on a particular organization cannot be simplistically generalized to be descriptive of another organisation.

These limitations underweight the strength of the case study method. They can be overcome by linking the research method with the research question and developing criteria for assessing rigorousness, and improving generalization of case study findings. These two issues are discussed in section 3.5 of this report. Yin (1994: 6) argues that the adoption of a hieratical view of the research method is a scientific error. The appropriateness of a research method is anchored in the research question, while the research questions that focus on “how” leads to the use of case studies, because such questions deals with operational linkages which is the key focus of this inquiry.



3.4 DATA COLLECTION AND ANALYSIS TECHNIQUES

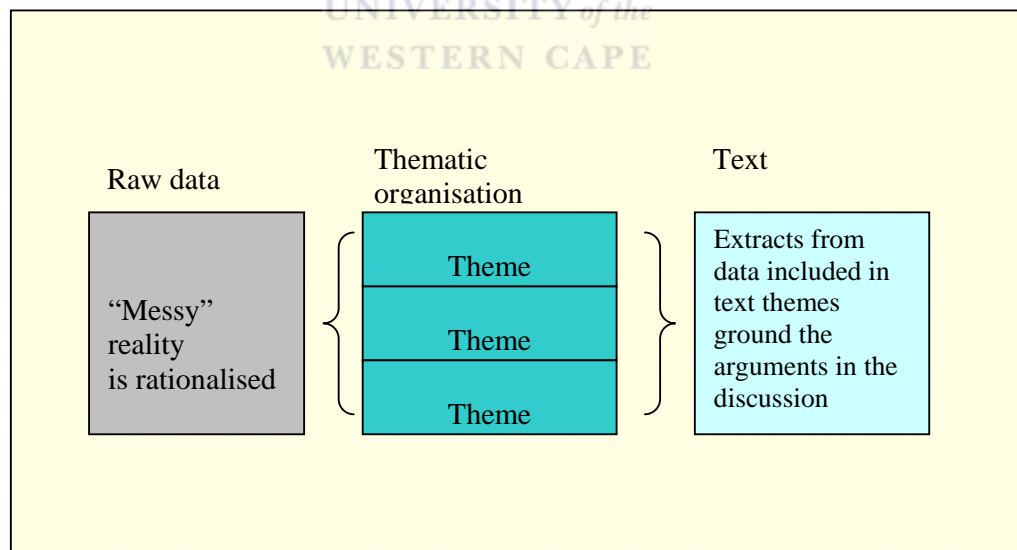
The relation between infrastructure management processes and the asset register within the Stellenbosch Municipality was established using primary and secondary data. The primary data was collected through semi-structured and unstructured interviews. The semi-structured interview was conducted with Mr Mark Bolton, Treasury Manager and there were two interactions with him. The first session focussed on soliciting context information on Stellenbosch Municipality; that is, what is the general status on infrastructure management is and who to contact for additional information. The framework used to facilitate this discussion is attached as annexure A of this document. From this discussion, a semi-structured questionnaire was developed and directed to Mr Bolton. The questionnaire including Mr Bolton’s response is attached as annexure B of this document.

The unstructured interview was conducted with the Electrical Engineering Service Manager, Mr Michel Rhode. This interview was recorded with a tape recorder and converted into a transcript which is attached as annexure C of this document. The secondary data is made up of the policy documents of the municipality, particularly,

Asset Management Policy (AMP) and the Supply Chain Management Policy (SCMP). The collated data is analyzed using the qualitative content analysis. Making meaning of data is a critical element that intersperse the theoretic-empirical mosaic. There is an array of analytical procedure for data analysis and interpretation within social science. For the purpose of this exercise, the qualitative content analysis (QCA) method is employed because it complements the data collection method that is utilised in this study.

According to Zhanke (2006: 2) the QCA offers better possibility of analysing interview transcripts that can uncover or model information related to people's behaviour and thoughts. This method is apt for interpreting subjective text content through its systematic processes of classification and coding of themes. Conventionally, there are three approaches toward qualitative content analysis namely, conventional, directed and summative (ibidi).

Figure 5: Qualitative Content Analysis Process



Source: Henning et al; 2004

The conventional approach derived themes directly and inductively from the raw data, which is the Ground Theory approach. With the direct approach, themes are

developed in accordance within a theory or research findings. Lastly, with the summative approach, themes emerge after an investigator has counted words in a given text(s). Of these three approaches, the direct approach is a favoured approach because it matches the raw data with the theoretical thematic (as illustrated in figure 5) and this approach which is embraced in this study.

3.5 DESIGN TEST

According to Sandberg (2005:42), one of the most significant challenging question that clouds the interpretive paradigm; *“given its rejection of the positivist methodological procedure for producing knowledge (validity and reliability testing⁴), is how, and to what an extent can the knowledge produced within interpretive approaches can be justified, that’s what criteria can be used to justify interpretive knowledge claim.”* This question underscores the issue of generalization and rigorousness of the methodical procedure of the interpretive paradigm, in this case, the case study method. Riege (2003:81) responds to generalization-rigorousness quandary by asserting that people are not static measurements, thus, there are variations in the findings of the case study method. Flyvbjerg (2006:228) also asserts that generalization is considerably overrated as the main sources of scientific progress, underscoring that generalization is only one of the many ways in which a researcher can gain and accumulate knowledge and that the case study is well suited for identifying the ‘black swans’ because of its in-dept approach. On rigorousness, Riege (2003:81) argues that the quality of case study research can be filtered through a design test that has four criteria namely, conformability, credibility, transferability and dependability.

Reige (2003:81) describes the conformability test as analogues to the notion of neutrality and objectivity in the positivist paradigm, particularly the validity test. The conformability test assesses whether the interpretation of data is done in a logical and

⁴ Validity testing is concerned: looking for confidence with inference about real-life experience can be made and with extrapolation of the research finding, while, Reliability is concerned with replication of the findings when the same are methods are employed (Riege; 2003:81)

unprejudiced manner. The assessment is done by probing whether the general methods and procedures of the study are described explicitly and whether the data is available to other researchers. Therefore, the technique for establishing conformability is to retain the raw data used in the study. In this case, the raw data is attached as annexure A-D of this document to assist in assessing whether the findings of this study are logical and unprejudiced.

Similarly, the credibility test relates to validity and assesses the approval of research findings by either interviewees or peers. This is undertaken to ensure that findings reflect on real-life social phenomenon, not biasness of the researcher (ibid). The trustworthiness of the findings is assessed by presenting the findings to the respondent and by peer debriefing. For this study, credibility was ensured by soliciting inputs on the final report from the Stellenbosch Municipality, particularly the interviewees, by debriefing the supervisor of this study and by presenting it in a research seminar that was organised by the School of Government of the University of the Western Cape.

The transferability test is analogous to generalisation in the conventional quantitative analysis research. The test assesses whether the findings include a “thick description” for the reader to potentially emulate for their own setting and whether the findings are congruent with prior theory. This is achieved by explicating the data analysis procedure. Within this study, the transferability test is adhered to by having a dedicated section of data analysis which is aligned with theoretical themes.

Lastly, the dependability test is aligned with the notion of reliability in quantitative research and assesses whether the procedures or techniques used in the process of the study are consistent, that the research is clear and that the features of the study design is congruent with them. Within this study, the dependability test is adhered to by delineating the research question, aligning the research design to the research question and to its paradigm.

3.6 SUMMARY

To trace the links between infrastructure management process and the asset register within the Stellenbosch municipality, it is crucial that the research paradigm, design, data collection, analysis techniques and design tests are clearly isolated to unpack the set belief, assumption and methodology that anchor the study. The study is premised on set of belief reality that is constructed by the social actor through their language and shared meaning and that the role of the investigator is to provide an understanding on how social actors construct their reality. Within this approach, the case study method is underscored as an appropriate methodology of constructing the social reality.

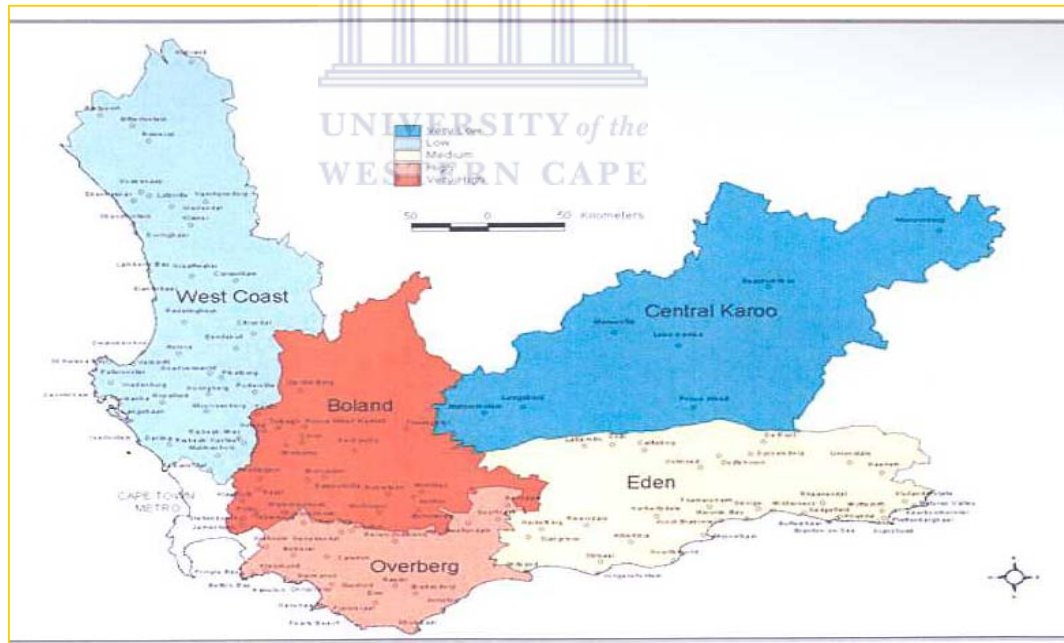
The peculiarity of this method is that it enables a researcher to solicit in-dept context-dependent information on real life events. However, the drawback of this method is that it enables a researcher to drill in his/ her preconceived baseness in the collecting and interpreting of data. Secondly, the findings that emerge from this method are not easily extrapolated to explain dynamic of another setting. In this study, these limitations are overcome by formulating yardsticks (design test) that shields this method from these draw backs. The design test focuses on conformability, credibility, transferability and dependability.

CHAPTER FOUR: INFRASTRUCTURE MANAGEMENT WITHIN THE STELLENBOSCH MUNICIPALITY

4.1 INTRODUCTION

In the Western Cape Province, the municipal demarcation process resulted in the formation of thirty municipalities: one metropolitan (City of Cape Town) and twenty-nine municipalities which are demarcated into five districts, namely; West Coast, Central Karoo, Overstrand, Eden, and Cape Winelands. The Cape Wineland District is ranked by the Western Cape Department of Environmental Affairs and Development Planning (WCDEADP) (2004: 87) as a district that has the highest growth potential in the Western Cape as displayed in figure 6 below.

Figure 6: Western Cape Economic Potential Profile



Source: Western Cape Development and Development Planning (2004)

Within the WCDEADP report, the Stellenbosch Municipality is identified as having a town (Stellenbosch) which has the highest growth potential in the province⁵. The growth potential is quantified by a composite index that factors the natural resources, economic growth and infrastructural base of the Western Cape municipalities (Zietsman, Ferreira and Van der Merwe; 2006:688). In addition, The National Treasury (2006:iii), Local Government Budget and Expenditure Review of 2001/02-2007/08 indicates that Stellenbosch Municipality is amongst the twenty-five national municipalities that make up 68 percent of the combined local government budget.

These facts underline that the infrastructure assumes a critical role in sustaining (and extending) the growth path of this municipality. The following section provides a review of the municipality's infrastructural management policy and processes to document the practice of infrastructure management. But before this, this chapter outlines an overview of the governing structure and asset base of the municipality.



4.2 OVERVIEW OF THE STELLENBOSCH MUNICIPALITY

4.2.1 Governance Structure of Stellenbosch Municipality

With the 2006 local government election, the political baton of the Municipality was swayed from the Democratic Alliance to the African National Congress and Maree, EL was elected as the Executive Mayor with an Executive Mayoral Committee that comprises of: Shubani, K (Deputy Executive Mayor), van der Westeuzen (Speaker), Götze, Jooste, Venter, van der Poel, Swartz and Fernandez (Stellenbosch Municipality; 2007a:19). In November 2006, the Executive Mayoral charted a vision that foresees the municipality as:

“A dynamic, efficient, accountable and caring frontline organisation dedicated to professionalism, excellence, good governance and the pursuit of sustainability in delivering on Constitutional mandate by fostering social and economic development in viable local economies and creating opportunities

⁵ The ranking exclude the City of Cape because it's a metropolitan

for all in Greater Stellenbosch to improve their quality of life in safe, sustainable human settlements (Stellenbosch 2007: 39).

The vision is further dissected into five focus areas as depicted in table 1 below.

Table 1: Stellenbosch Municipality Focus Areas

Focus Area	Elements
Services	Sustainable, quality and accessible infrastructure
	Provision of basic services
Development	Local economic development
	social development
	Conservation
Living Environment	a healthy environment
	a safe environment
	housing opportunities
Community	Participation in matters of local government
	Building social capital
Governance	Serving the community
	Organisational management
	financial viability
	institutional transformation and development

Source: Stellenbosch Municipality (2007)

The realisation of this vision and focus areas rests on an administrative team that is led by Mr Dave Daniel (Municipal Manager). This team comprises of nine directorates⁶, namely, Economic Services, Support Services, Social Development and Public Works (Stellenbosch Municipality; 2007a: 20).

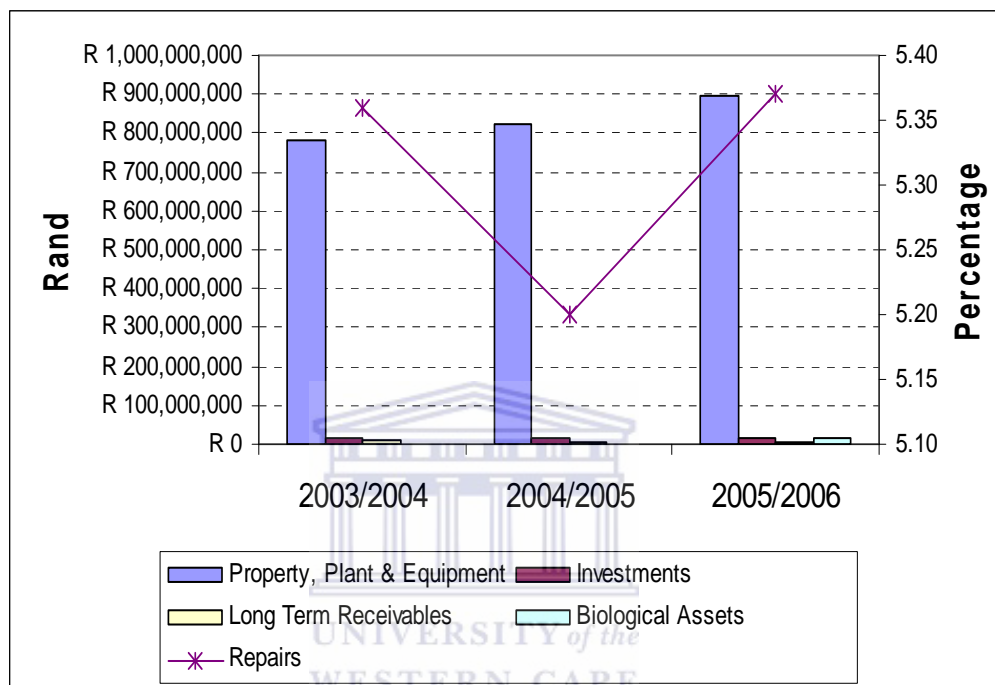
4.2.2 Asset Base of Stellenbosch Municipality

The 2005/06 audited financial statements of the municipality indicates that the municipality recorded a surplus budget of R67,10 million with a current ratio and long-term debt to income ratio of 2.46:1 and 7.2 respectively. These ratios highlight that the municipality has an ability to settle its liabilities from its assets and total income if it were to be liquidated (Stellenbosch Municipality; 2006d: 5-9). During the 2003/2004-2005/06 financial years, the asset base of the municipality surged by 14 percent, from R 803,23 million to R 934,56 million as shown in figure 7 below.

⁶ The administrative structure of municipality is currently undergoing restructuring.

Property, Plant and Equipment assume a large portion of the asset base and comprises of three items, namely, infrastructure (network assets i.e electricity), Community (i.e recreational assets), and other (i.e office equipment).

Figure 7 Stellenbosch Municipality Asset Base and Maintenance 2003-2006



Source: Stellenbosch Municipality 2006

In addition, within the same period, expenditure on repairs and maintenance as a percentage of total operating expenditure ranged between 5, 36-5, 37 percent as depicted in figure 7 above.

4.3 INFRASTRUCTURE MANAGEMENT POLICY

Infrastructure management processes within the Stellenbosch municipality are demarcated in the Asset Management Policy (AMP), which was adopted on the 29th of May 2007. The policy was devised in a three-day workshop that was attended predominately by the Finance Management team that is led by Mr Mark Bolton who is the Manager of the Treasury Unit. The policy contains thirteen sections namely,

preamble, definitions, objectives, scope of the policy, accounting officer, acquisition of assets, recognition of property, plant and equipment in the financial statements, maintenance of fixed assets, transfer of assets, insurance, writing of assets, selling movable assets, procedure, and short title. For the purpose of this exercise, only sections that are related to planning, acquisition, operations, maintenance, disposal and the asset register are discussed.

4.3.1 Planning and Acquisition of Assets

The policy moves from the premises that the municipal accounting officer (municipal manager) is the person responsible for managing, safeguarding and maintaining all assets of the municipality, underscoring that this should be done in the most effective and efficient manner (Stellenbosch Municipality; 2007c:3). An infrastructural item (asset) is recognised as an asset if it carries a purchasing value that is greater than or equal to R1000, 00; and has a probability of generating future economic benefits.

The policy outlines that the municipality can acquire an asset through purchasing or hiring, stressing that both options should be done in accordance with the supply chain management regulations, which are prescribed in the Supply Chain Management Policy (SCMP) of the municipality. Amongst other things, the supply chain management regulation stipulates that goods and services that carry a transaction value that is greater or equal to R200 000,00 must be approved through the competitive committee system of the municipality, which comprises of three committees, namely, Bid Specification, Bid Evaluation and Bid Adjudication (Stellenbosch Municipality; 2005f: 17)

The Bid specification committee is responsible for providing descriptions of the required goods or services. The Evaluation committee is assigned with the responsibility of evaluating service providers who bid to provide the required goods or services and makes recommendations to the Adjudication committee, which makes the procurement decision. The policy further underlines that all asset acquisitions must occur in terms of budgetary provision and assets must be “appropriately

recorded” in the asset register, which should be regularly updated when an asset acquisition has occurred.

4.3.2 Operation and Maintenance of Assets

In terms of operation and maintenance of infrastructural assets, the policy compels each directorate to issue a certificate indicating all assets accounted for and checked against the asset register on an annual basis. The policy situates the asset register at the core of asset maintenance by prescribing that:

“a fixed asset register must be maintained by keeping a record of all classes of property, plant and equipment classified under categories of: infrastructure, community, heritage, investment and other assets” (Stellenbosch Municipality; 2007c: 7)

Furthermore, the policy stipulates that the asset register should contain the following asset information: description; classification, date of acquisitions; location, identification number; purchase price; funding sources; revaluation; and depreciation.

4.3.3 Disposal of Asset

In the preamble, the AMP aligns asset disposal with Section 14 of the Municipal Finance Management Act (MFMA) which stipulates that a municipal council may dispose of an asset when it has permanently reached its maximum life and no future economic benefits or potential service delivery is expected from it (Stellenbosch Municipality; 2007c: 1). The policy underscores that the council can write off an asset after considering a report from the accounting officer and that all assets earmarked for writing off must be sold in public auction or through a tender, after following certain procedural processes. Some of these processes include the appointment of an independent appraiser who establishes a minimum selling price.

The policy (ibidi) stresses that when an asset is disposed, the fixed asset register should be updated by the Asset Control Section and that directorates should notify the

Asset Control Section within 7 days on any of the following movements: new purchases; additions or improvements; auctions; and loss or damages of asset(s).

4.4 INFRASTRUCTURE MANAGEMENT PROCESS

In-dept information on infrastructural management processes within the Stellenbosch Municipality was collated through an unstructured interview and the interviewee was Michel Rhode who is the Senior Manager of the Electrical Engineering Services, (EES) which is part of the Public Works Directorate. The interview was conducted on the 04 September 2007 and started with a presentation that dealt with the orientation of the study, the research statement, purpose of the study and an explanation why Stellenbosch Municipality was chosen as a case study, and lastly, with an interactive session that focuses on the following open-ended questions:

- How do you go about planning and acquiring assets?
- How do you go about operating and maintaining your assets? and
- How do you go about disposing your assets?

The ensuing section discusses the findings that emerge from this interview.

4.4.1 Asset Planning and Acquisition Process

The introduction of the Municipal Finance Management Act has impacted on planning and acquisition of infrastructure within the Stellenbosch Municipality. This came across through the citation made by Mr Rhode during the interview; “... *in the past, the focus was getting the backlog sorted out, but with the Municipal Finance Management Act ...one now needs to look at asset management or infrastructure that you got on the ground and in the air to get maximum life out of it*”

Within the Electricity Engineering Services, infrastructural planning and acquisition is guided by the Electrical Master Plan (EMP)⁷. According to Mr Rhode, the EMP

⁷ The Electrical Master Plan and the Draft Maintenance Plan were not shared with the researcher because the council of the municipality hasn't yet approved these documents. As a prove a letter from the municipality is attached as annexure D.

ushers in a twenty-year infrastructural (new infrastructure) development view and this view is aligned to the Municipality's Spatial Development Framework, which outlines the growth trajectory or what Mr Rhode calls the "hallmarks of the municipality".

In addition to growth trajectory, the EMP deals with the refurbishment needs by outlining the failure pattern that is due to infrastructural neglect. The funding requirements of new infrastructure and refurbishment needs are outlined in the Electrical Engineering Service annual plan and this plan serves as a base of budgetary engagement with the Municipality Treasury Unit.

According to Mr Rhode, the acquisition of new assets and refurbishment needs are funded through the capital budget and new asset acquisitions are done in accordance with the supply chain management regulations, that is, the competitive bidding process. Refurbishment is predominately done using internal staff with the exception of major changes such as the fixing of the circuit breaker.

4.4.2 Asset Operation and Maintenance Process

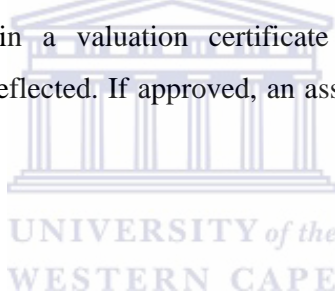
Stellenbosch Municipality sources the bulk of its electricity from Eskom, while the municipality's electricity distribution system consist of two main substations. These substations are located in Stellenbosch and Franschoek. The Stellenbosch substation has two 66 kilovolts (kV) intake meter points while Franschoek has one 11 kV intake meter point. The flow of electricity within the distribution network is generally monitored in control rooms. However, the municipality is in a process of building a control room. At present, the municipality uses a telemetry system, which is a web-based technology that transmits network information into a computer machine.

The maintenance of this equipment is guided by the Draft Maintenance Plan (DMP). Mr Rhode outlines that the DMP sketches a medium term (1-3 years) action plan on what people need to do, who is responsible and the cost associated with maintenance. He outlines that the DMP is aligned with the Electricity Master Plan which provides

in-dept information on the “knots and bolts,” such as the year of asset manufacturing, life span of the network, depreciation and the value of an asset.

4.4.3 Asset Disposal Process

In getting rid of redundant assets, the Electricity Engineering Service leans notably on section of 14 of the Municipal Finance Management Act and this is underlined by the remarks made by Mr Rhode that “the MFMA is clear that if an asset does not match minimum service delivery requirements then you can dispose of it”, and the disposal processes are outlined in chapter five of the SCMP of the municipality. The chapter stipulates that it is the responsibility of the relevant director to inform the Supply Chain Management unit of an asset(s) that is under-utilisation and redundant. The notification must contain a valuation certificate and compilation of a list of independent valuations reflected. If approved, an asset will be disposed of via public auction.



4.4.4 Asset Register

In relation to the asset register, it emerged that the municipality Treasury Department and the Electricity Engineering Services each have an asset register. The treasury register provides information on asset type, asset ID, description of the asset, revaluation, original, depreciation and book value per department as shown in table 2 below.

The Electricity Engineering Service asset register was not shared with the researcher. However, when Mr Rhode was asked about questions related to the asset register, he stated that asset registers that is managed by Treasury is “largely historic---and purely a financial exercise”, indicating Electrical Engineering Services asset information is kept in the electrical master plan which provide ‘knots and bolts’. He underlined that he has not requested any information from the Treasury asset register because his directorate has its own information depository on the operation and maintenance. This

underscored by the following remarks that Rhode made; “---*No maintenance they won't know because it's done on the operation budget. All they assist us with is the purchase*”. He further indicated that in 2006, the EES appointed PT power to conduct a desktop study to determine the asset evaluation of the EES. The findings of this study contrasted the asset valuation of Treasury and this information was not shared amongst these services.

4.5 FINDINGS - INFRASTRUCTURE MANAGEMENT

This section traces the findings that emerged from the case study (Stellenbosch Municipality), particularly the three aspects of asset management, namely, process, systematic and coordination, and management stewardship.

4.5.1 Asset Management Processes

4.5.1.1 Planning and Acquisition

Planning and acquisition is an inception phase of the asset management process and focuses on elements that are related to strategic integration and decision optimisation. Within the Stellenbosch Municipality, the adoption of the Asset Management Policy and the linkages made to the Supply Chain Management and the budgetary process is a notable intervention of pulling asset management into the fore of the corporate strategic direction of the municipality.

These linkages underline the essence of asset management integration into the overall strategic direction of the municipality. In relation to decision making, the policy and management process of asset planning and acquisition appear to be consistent across the organisation, making it easy to manage the balancing act of asset identification and prioritisation. For example, the planning and acquisition decision are discussed in the budgetary forum which translates into the adoption of the capital budget. This practice is consistent with asset management best practices.

4.5.1.2 Operation and Maintenance

Operation and maintenance is synthesis as a second phase of asset management which is predominantly concerned with approaches that optimise the functionality and conditionality of assets over its entire lifecycle. The electricity distribution functionality approaches are managed through a telemetry system. Whilst, asset conditionality is managed through the draft maintenance plan. However, it appears that operation and maintenance policy and processes are inconsistent. The Asset Management Policy is not explicit on how the municipality should ensure that assets are operated optimally and managed efficiently. There are also no linkages to sectoral policies such as the electricity master plan. This creates space for a sectoral unit such as the Electrical Engineering Service and Treasury to maintain inconsistent asset information or an understanding of operation and maintenance of assets within the municipality.

4.5.1.3. Disposal

Asset Disposal is the last phase of asset management and focuses on the process of establishing the linkages between asset specification and service delivery requirements. A disjuncture between these two, institutes a process of asset disposal. The policies and processes that are undertaken within the Stellenbosch municipality appear to be consistent. The processes outlined within the Asset Management Policy are aligned with the Supply Chain Management Policy disposal requirements. Similarly, the practice of asset disposal is congruent with the policy prescription which requires the disposing unit to compile an asset valuation before disposing an asset and that disposal should be done through public auction.

4.5.2 Systematic and Coordination

Within the asset management processes, the systematic and coordination space is assumed by the asset register. The asset register assumes this space by containing and filtering asset decision-making information on planning and acquisition, operation and

maintenance and disposal. Within the municipality, it appears that the policy and the management processes recognise the integral part that is fulfilled by an asset register. Nine of the eleven pages of the Asset Management Policy contain a notification of asset register, giving the policy 82% coverage of asset register.

In practice, the organisation does have an asset register. However, this asset register is not holistic because it does not capture all the aspects of asset management within the municipality. Furthermore, it is fragmented, as each unit has its own set of asset information. This renders the asset register as an ineffective instrument for managing the electricity distribution within the municipality.

4.5.3 Stewardship Culture

Lastly, the stewardship aspect relates to human dimension, particularly inter-departmental communication (flow of information). From the findings, it emerges that inter-departmental communication is blurry. This is underscored by the different asset valuation figures that are in position of Treasury and the Electrical Engineering Service. Secondly, the Electrical Engineering Services considers Treasury asset information to be largely historic. This signals limited communication. Broadly, the findings on asset management practice within the Stellenbosch Municipality situate this municipality at core level within the core-advanced continuum because the elements that are consistent within their practices are those that legislatively focus and those aspects that have a non-legislative focus. These are inconsistent.

4.6 SUMMARY

The regional and national status that is assumed by the Stellenbosch Municipality underlines the importance of adequately managing infrastructure. The observations that emerge from the policy-practices analysis highlights that the Asset Management Policy of the municipality recognised that the management of assets should be done in a manner that is efficient and effective over its entire life cycle.

Predominately, the policy-process practice of the municipality appears to be consistent with the exception of the operation and maintenance aspects. The Asset Management Policy of the municipality is not explicit on how the municipality should go about optimising the functionality and conditionality of its assets and no linkages are made to sectoral plans such as the electricity master plan.

The systematic and coordination role of the asset register is recognised by the policy-practice of the municipality. However, the effectiveness of the asset register in channelling asset management decisions is non-traceable. This is attributable to the fragmentation of the assets register and limited inter-departmental communication within the municipality.



CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This inquiry was set out to establish the extent to which the information contained in the asset register of the Stellenbosch municipality is effectively utilised as a management instrument for the electricity distribution infrastructure. There is notable evidence that underlines that South African municipalities are discarding the importance of developing an adequate internal infrastructure management system and this is adversely impacting on sustainability of infrastructure. In 2003, National Treasury promulgated the Municipal Finance Management Act as one of the initiatives of improving resource management at municipality level. Section 6 of the Act entrusts the municipal accounting officer of municipalities with the responsibility of developing an internal control system which encompasses an asset register.

With five years after the promulgation of this Acts, it is appropriate to conduct an exploratory study on how effective the asset register is utilised as an infrastructure management instrument within the electricity distribution. The Stellenbosch municipality is identified as a peculiar case study because of its regional and national economic status. In the Western Cape Province, the municipality is ranked as a municipality that has the highest growth potential. Secondly, the municipality is amongst the twenty-five national municipalities that assumes 68 percent of national capital budget during the 2001/02-2007/08 financial year. The ensuing section discusses the conclusion that emanates from this inquiry and the recommendation.

5.2 INFRASTRUCTURE MANGEMENT WITHIN THE STELLENBOSCH MUNICIPALITY

Within the Stellenbosch Municipality, the infrastructural developmental role towards the progressive realisation of better life for all is encapsulated in the vision and in the one of the five focus areas of the municipality. The vision of the municipality foresees

a municipality that is dynamic, efficient and in pursuit of sustainability in delivering social and economic development. The vision is further translated into five focus areas and two of these areas delve on the provision of basic services and organisational management. The ensuing section discusses the conclusions on how the municipality goes about managing its infrastructure, particularly focusing on policy and operational process.

5.2.1 Infrastructure Management Policy

The municipality has taken quite a limp jump in translating its vision by formulating an Asset Management Policy that commences on the premises that infrastructure should be managed in the most effective and efficient manner and by allocating this responsibility to the municipal accounting officer. The policy dedicates a section that discusses approaches on how the municipality ought to go about managing its infrastructure. With regards to planning and acquisition, the policy stresses that an acquisition of an asset that has a value that is equal or greater than R200 000.00 must be processed through supply chain regulations, which includes the competitive committees, Bid Specification, Bid Evaluation and the Bid Adjudication Committee. Secondly, it contains a clause that compels the municipality to invite the public to comment on its asset management process, giving residents an opportunity to scrutinise the municipality's intentions in terms of its development needs which is encapsulated in the Integrated Development Plan. Thirdly, the policy outlines the acquisition options that the municipality can undertake.

Operational and maintenance, the policy is quite narrow in sketching out approaches that municipality must pursue in utilising and maintaining its asset base. However, it seems that this gap is covered in the sectoral master plan because the Electricity Master Plan provides in-dept information on the life span of the network and the depreciation value of an asset. The master plan is attached to a Draft Maintenance Plan which contains a medium-term action plan that delineates what people need to do, and costs associated with maintenance.

On asset disposal, the policy is quite extensive and cites section 14 of the Municipal Finance Management Act which stipulates that a municipal council may dispose of an asset when it has permanently reached its maximum life and no future economic benefits or potential service delivery is expected from it. The policy underscores that the council can write off an asset after considering a report from the accounting officer. Assets earmarked for write off must be sold through public auction or tender after certain steps have been taken. Some of these steps include a valuation notification from an independent valuator. Furthermore, the policy stresses that when an asset is sold or bought, the fixed asset register should be updated and that the Asset Control Section should be informed within seven working days

The essence of the asset register is also notably sketched in the Asset Management Policy of the municipality. The word asset register is reported nine times in the 11 page policy document, which translates to 82 percent coverage. The policy prescribes that the asset register should contain the following information: description, classification, date of acquisition, asset identification number, purchase price, revaluation and depreciation. The policy further mandates the municipal directorate of the municipality to update their Asset Control Section on an annual basis.

5.2.2 Infrastructure Management Process

The observations that emerge from the interviews covered in this inquiry underlines that there seems to be consistency between the asset management policy and operational management processes with the expectation of operation and maintenance of assets. The Asset Management Policy of the municipality is not explicit on how the municipality should go about optimising the functionality (operation) and conditionality (maintenance) of its assets and no linkage is made to the sectoral plan such as the electricity master plan. This has bearing on systematic and coordination and stewardship culture aspects of the asset management best practice.

The systematic and coordination relates to integral role that is assumed by an asset register. Within the Stellenbosch Municipality, it appears that each sectoral directorate

has its own asset register. For example, the Treasury unit of the municipality has an asset register that contains information on asset type, ID, description, revaluation costs, original, total to date, depreciation and book value. While, the Electrical Engineering Service asset register (master plan) contains information on the “knots and bolts” i.e. year of manufacturing, life span of the network etc. This suggests that organisation have not formulated a holistic corporate asset register.

In relation to inter-directorate communication (steward culture), it emerges that there is limited communication on operational and maintenance aspects of asset management practice. The Electrical Engineering Services considers Treasury asset registers to be largely historic and have not requested information from it. Secondly, The Electrical Engineering Service has conducted an asset evaluation desktop study that came with different asset evaluation figures and the finding were not shared with other directorates.

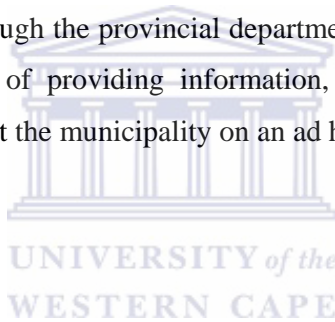
5.3 RECOMMENDATIONS

The linkage between the infrastructure management processes is partially tractable within this municipality. There is consistence between the asset management practice and the operational process that are related to planning and acquisition and disposal with the exception of operation and maintenance. The synergy is largely attributable to the legislative requirements that have been adopted by the municipality, e.g Supply Chain Management. However, the linkage between the infrastructure management process and the asset register is non-traceable and this largely is attributed to the non existence of a holistic corporate asset register and the limited inter-directorate communication. Broadly, this situates the asset management process of the municipality at the core level of the core-advance continuum because their processes are much more legislatively orientated.

To move from the core to advance level, the municipality may need to revisit its Asset Management Policy by delineating how the municipality should go about optimising its asset operation and maintenance or by making linkages to the sectoral master plan.

The Treasury Unit of the municipality should take a lead in the implementation of the Asset Management Policy and one key initiative would be to increase the level of asset management awareness with the municipality, with a strong emphasis on communicating the policy provisions that are related to the management of the asset register. Secondly, the Treasury Unit should facilitate an internal workshop to consolidate a holistic corporate asset register that will be central and administered by the Asset Control Section.

The state of the infrastructure management within the Stellenbosch Municipality underlines the need for National Treasury to expedite micro-management of infrastructure by buffing up its monitoring, evaluation and support. This support should be facilitated through the provincial departments of Treasury. The support can be shaped in the form of providing information, organising training sessions or organising experts to visit the municipality on an ad hoc basis.



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Chapter 5: Conclusion and recommendations

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Municipal Interview

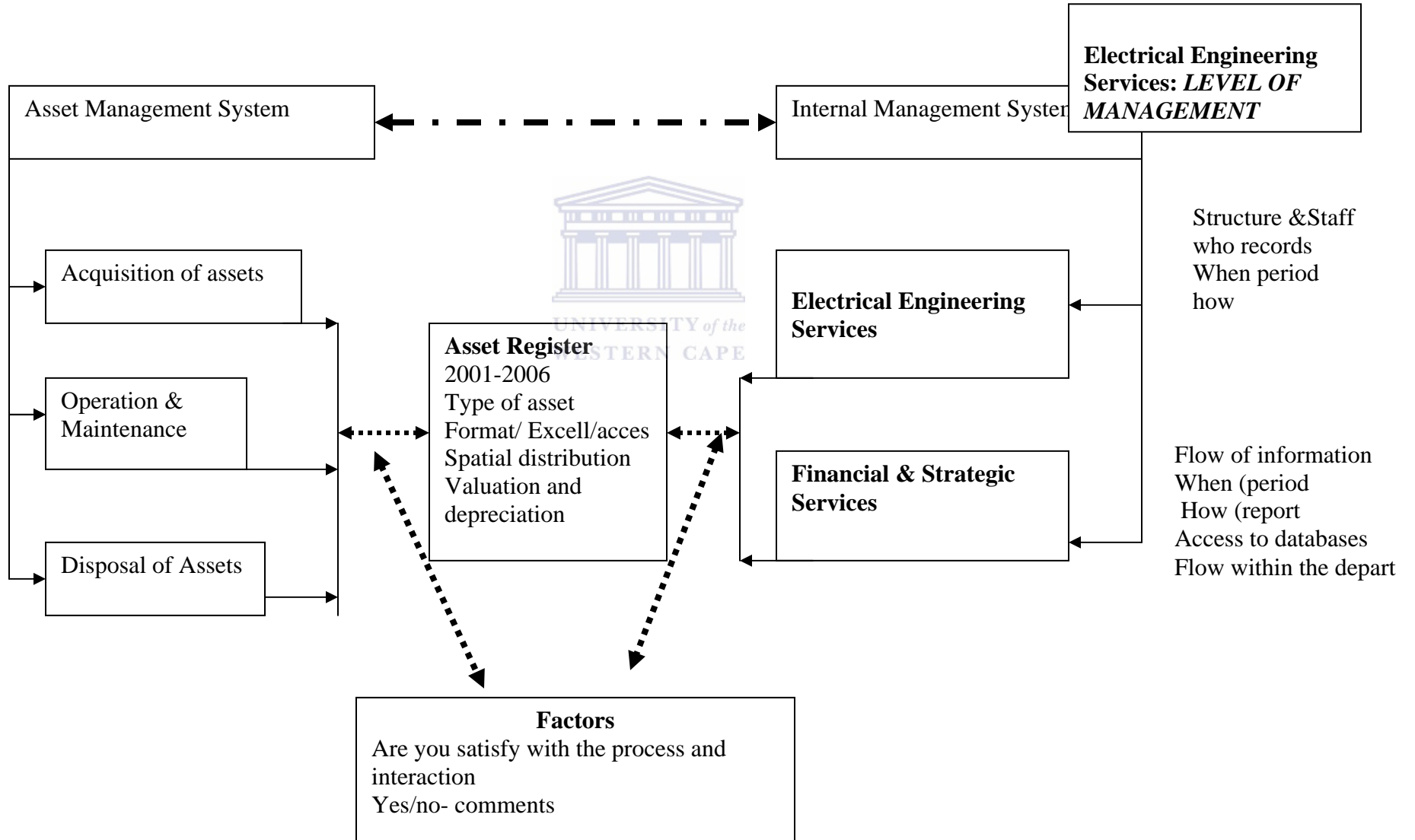
Michel Rhode, Electrical Engineering, 04 September 2007

Mark Bolton, Financial Services,



ANNEXURE A:

Interactive Framework with the Stellenbosch Municipality



ANNEXURE B:

Questionnaire
on
**Infrastructure Management within the Stellenbosch
Municipality**
University of the Western Cape



Mini-Thesis Study 2007
Mr D, Gabone
073 443 9361
2101047@uwc.ac.za



ORIENTATION

This document (questionnaire) forms an integral part of mini-thesis that is conducted by Mr D. Gabone for a Masters in Public Administration-Local Government Programme. The programme is done through the University of the Western Cape and is supervised by Dr. L, Pretorius. The thesis is intends to respond to the theoretical and practical debates that suggest the lack of an adequate internal infrastructure system in municipalities is one of the primary factors that accounts for slow service delivery.

In Response, the thesis has traces the principles and frameworks of infrastructure management system. The principles underscores that an adequate infrastructure management system plays a vital role in supporting coordination and decision-making within an organization. The framework basically, identify four component of an effective infrastructure management system, namely, asset

planning, asset acquisition, asset operation and maintenance and asset disposal and all this component are inextricable linked to an asset register.

To map out the principal and components of infrastructure management, the thesis has identified the Stellenbosch municipality as practical laboratory case, on two counts. The municipality is one of the eight high capacity municipalities in the Western Cape Province and mostly, the municipality is hub to a town-stellenbosch- that is identified to have the highest growth potential in the province, excluding the metro. These observations warrant attention of infrastructure management in light of the role of infrastructure in sustaining and alleviating this growth potential. Thus the need for the questionnaire, the questionnaire is structured into three sections, namely; asset management policy, asset management process and factors influencing infrastructure management. For practical reasons, process of asset management, focus only electricity management and targeted towards those who are responsible for asset management policy, managing asset register and electricity process.



Thanks in advance for take time to respond to this questionnaire

ASSET MANAGEMENT POLICY

First Draft Asset Management Policy

Relate to the Draft Asset Management Policy (this is the draft done by Deon Williams)

1.1.1 Was this Asset Management Policy drafted internally?

(a) If yes- which department facilitated the draft Asset Management Policy?

TREASURY DEPARTMENT WITHIN THE FINANCIAL
DIRECTORATE

On scale on weak/moderate/influential- how would you rank the participation of other internal departments in the drafting of the first Draft Asset Management Policy?

Weak	Moderate	Influential
		√

(b) if no- which external organization or service provider drafted the policy and which department liaised with the service provide?

WESTERN CAPE

1.1.2 How long did it take to draft the Asset Management policy?

± 44 HOURS

1.1.3 Why was the first draft Asset Management Policy not approved?

MATERIAL SHORTCOMINGS

Second Approved Asset Management Policy

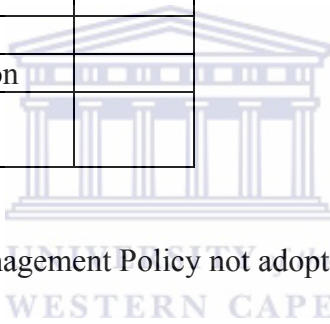
1.2.1 When the Approved Asset Management Policy was initiated and was it developed internally?
 DURING APRIL/MAY 2007 , YES FORMULATED AND FINALISED INTERNALLY

.....

.....

(a) If internally, where did you pooled you source documents? [Tick more than twice]

Source	Tick
Local municipality	√
Provincial government	
National Government	
Private Sector	
University/Technikon	
Other i.e IMFO	



1.2.2 Why was the Asset Management Policy not adopted on the 9th May Council meeting

MEETING POSTPHONED

.....

.....

.....

ASSET MANAGEMENT PROCESSES

2.1 ASSET REGISTER

2.1.1 Which department or division compiles the asset register?

ASSET MANAGEMENT SECTION IN CONJUNCTION WITH BUDGET OFFICE

.....

2.1.2 Which of the following features are recorded in you asset register

Feature of you Asset Register	Yes	No
classification of asset	√	
Source of Finance	√	
date of acquisition	√	
location of the asset	√	
asset identification number	√	
Purchase price	√	
Asset revaluation method	√	
Depreciation Method	√	

2.1.3 For who long have you been keeping the asset register and in what software package is the

record stored

SINCE 1988

.....

.....

2.1.4 On average when do you update the asset register

Period	Tick
Weekly	
Monthly	√
Quarterly	
Annually	
Other	



2.1.5 How has access to the asset Register

Internal Department

THREE FINANCIAL OFFICIALS

.....

External unit:

.....

2.1.6 When do you share with other senior management the information that contained in the asset register?

ON REQUEST

.....

2.1.7 Have you receive any asset register information request from other senior managers

YES

.....

Factors Influencing Infrastructure management

3.1 Which is the most beneficial aspect of having of asset management system?
Rank; 1 =least, 2=moderate, 3= most

Rank	1	2	3
a. Improve decision-making: asset management components			3
b. Improve interdepartmental coordination and planning		2	
c. Improve relation with external stakeholders		2	
d. Other:			

3.2 How would you rate the level of infrastructure management awareness within the top management?

Low	Medium	High
		√

3.3 What are the issues that make you to give the above rating?

BUY-IN FROM EXECUTIVE DIRECTORS AND THERE INSTRUCTION TO STAFF TO

.....

IMPLEMENT PROCEDURES

.....

3.4 Can you rate the type of assist that your organization needs to improve infrastructure management?

Rank	1	2	3

Infrastructural management information			
Attended courses on infrastructure management			√
Periodical Technical Assist			
Other			

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ANNEXURE: C

Interview Transcript of Michel Rhode of the Stellenbosch Municipality

1. Introductions

The interview was conducted on the 04 September 2007 and the people who were present were: Michel Rhode; Senior Manager of the Electrical Engineering Service, Ms Ndile Ntsieni-Gabone; researcher assistant and the researcher; Derick Gabone,. The interview session started with presentation that outline the orientation of the study, that is, the research statement, purpose of the study and an explanation why the Stellenbosch Municipality is chosen as a case study. Thereafter, an interactive session that focuses on the following open-ended questions:

- how do you go about planning and acquiring asset,
- how do you go about operating and maintaining your assets
- how do you go about disposing your assets
- Mr Rhode's response to these questions was recorded in type and the record were later converted into a text¹format which clustered his response according to the following themes; planning and acquisition, operation and maintenance, asset register and asset disposal.. In this text, MR refer to Michel Rhode while DG refers to Derick Gabone

2. Interactive Session:

2.1 Planning and Acquisition

DG: how do you go about planning and acquiring assets

¹ An attempted has been made to convert the records as verbatim as possible

MR: in the past the focus was getting the backlog sort out, but with the Municipal Finance Management Act (MFMA) as you also rightly say that one now needs to look at asset management or infrastructure that you got in our case on the ground, in the air to manage so that get maximum life out of it and that what's is all about. With your first question, in terms of planning and acquisition, you also know that under the MFMA, it prescribed a supply chain management process or procedure that you need to follow to acquire an asset. But let me before that, how do we determine what asset to purchase, all comes out of a master plan. We have a master plan that basically tell you how infrastructure in you town need to grow, or being a high growth town and this relate back to spatial development plan of the municipality, that's planning language, spatial development plan says Stellenbosch is gone grow that areas, its gone grow that way; Somerset West way or Cape Town way. We as the Electricity Department and other department: water, sewerage, need to flag that and say that if the town is gone grow that way, we need to make provision for the infrastructure to also grow that way. So how do you do that? You do that in terms of the master plan. You draw up a master plan that looks ahead, 20 years and the master plan is also in harmony with the spatial development plan; say this certain development is gone be the hallmark of the municipality, then infrastructure needs for that spatial development plan need to be captured in a master plan that will follow the spatial development.

That is the master plan, our master plan talks about growth, as you said, and also talks about refurbishment. It says in your current state you got infrastructure in the ground but these things will fail, it give you a sort of a failure pattern of it, if you don't look after it.

so the plan say, while growing, you also need, the essence of your question, how you go maintain you current equipment and extend their lives, so our master plan cover both of that, it cover your growth and it cover your refurbishment needs. Refurbishment you know the definition of refurbishment is obviously is to keeps a piece of equipment back to its original state, maintenance is to maintain it so that it carries life-up. Now refurbishment and growth get done in our capital budget and maintenance get in done in the operating budget. So the operating budget takes about your day-to-day running of the municipality such as circuit brake and cables, your do all that in the maintenance. Refurbishment is the big job where you restore, as I said early, restore equipment back.

A lot of it in the master plan and you got your 20 year view, you then know what to do every year to keep up with the growth and not to let you network fall down in term of refurbishment and then determine what's the infrastructure equipment you gone need and then go to Treasury, Mark Bolton and his friends and you go and barge for money. So you go there and say next year we need R45 million rand to do this portion for growth and a portion for refurbishment. You barge and if you lucky and you can get out of the starting block. Now your needs for growth; you need a piece of cable that you need to put some where or substation then you put out a tender to buy a cable. For bigger job, you also know the municipalities don't have capacity anymore or the luxury capacity to set up their own consulting department because of there is a shortage of skills in the field that we are operating. So we try not to use a lot of consultants.

So a lot of small to medium job we do internal but the bigger job like building a substation; we go out to consultants and get a tender calling for consultants to tender on

the job. We put an advert on the newspaper, tenders will come and evaluate it and then appoint a consultant. You know the MFMA rules around it, if a consultant cost more than R200 000 rand per year you need to go for competitive bidding and under R200 000 you don't need to call a tender. You can collect from an internal list. Once you got the consultant appointed him/her their can run with the job. We play a role of monitoring in term of the project plan they have given us.

Once you got your tender documents, its need to go through your supply chain management process and all the rules and regulation and three committees: bid specification committee; write the specifications, Evaluation committee; that look at specification and come up with recommended supply. The Adjudication committee; which will make the final adjudication and say yes we agree with the evaluation committee this are the consultant that can be appointed. One you got that you can give the consultant a letter. Their will go and start doing the job, with that goes now the environmental impact studies, the whole process of getting the substation of the ground. Is there any question?

DG: Now around refurbishment, how do, for example let's say you have already made acquisition, how do you go about refurbishment.

MR: Refurbishment we tend to do ourselves, internal we have got enough capacity to do that. if there is major changes, to say a circuit breaker, that needs to be done then we rather go to same set of process or if its propriety to one manufacture can do like ABB or GVC then we go straight to them because it's a propriety item and we ask them to

refurbish but only their will know how to do it. But, the other things, where we can, we do it ourselves and most of the time we can, we do refurbishment ourselves internal.

DG: I think that answer and links again with the operation questions

2.2 Operation and Maintenance

MR: Operations of the asset: mainly in the electricity, we have control room that monitor stellenbosch and those not have a control room yet. We are busy setting up telemetry equipments to give us feedback for the network. A lot of them are working already we just sort of finalizing that process then stage setup a control room that can monitor that lines. On maintenance, we got maintenance plan which tell throughout the year to the medium term; 3 years, what people need to do in terms of maintenance. Our big maintenance things are overland and circuit breaker that's the big maintenance issue

DG: does the plan also outline who is responsible?

MR: yes, the plan outline who is responsible, what need to be done and the what the cost is and remember you have a budget of x amount and you need

DG: your budget is around R192 million.

MR: its about R192 million and ok that include a lot of staff so you got a budget and you need to work within that budget so you need to do a maintenance plan, allocate money to the different aspect of the maintenance plan or different time slots and come out within the budget at the end of the day. Off course, with maintenance there are dynamics some times other things happen and you don't get to and just move

DG:... your maintenance policy---

MR: we got a draft policy at the moment, plans are different to policies. Policy just gives you a sort of desktop framework of what need to be doing. A plan is the actual and you

can have a plan without a policy say I need to go to that substation to change a circuit breaker number 1 or 2 or 3, That's is a tool The policy will just say we as Stellenbosch municipality we will do that-----

2.3 Asset Register

DG: so you said you are in the process of developing a maintenance policy and is linked to the asset register?

MR: we have a got a draft maintenance policy and maybe I have taken step back a bit. You now, traditionally municipality, there is lack here also well. In municipality, there is the treasury, check the asset register and not the different department. We have done last year and you would know that I am new here; I have been here since March last year. So last year, my predecessor went out and got a consultant to do an asset register and the master plan. Our master plan; specify your assets to the knots and bolts actually so. if you have a soft copy you can go to a substation and get to a circuit breaker and get all the data; year of manufacture, life span of the network and form that already you can extract asset data and you could extract depreciation value etc.

On our master plan currently that is done up to level 11 Kilovolts (Kv) so the low volt are excluded. At this stage, we have done an exercise towards end of last year a desktop asset register or actual asset evaluation desktop and PT power there are the expert and their did it for us and the asset evaluation come out as R550 million. what is interesting is when you look at treasury their book say 108 million or something, all those figures in my view are not right and should be more like than a 2 billion if you look at the asset around but

that is what we have at the moment we got so their got an asset register we got the master plan which tell us our asset from 11 Kv upwards.

DG: is Mark's team sort of informed about the desktop study that you guys undertook?

MR: yes they know about it

DG: did you share that information with?

MR: yes they know about it but we didn't give them documents. They would know about it because the funds come through them.

DG: because one of the things which I am trying to establish again, I am trying to establish how these processes are running, I just want you to confirm in terms of your processes; you go and do the staff and that information is not immediately share with other department so which means that your asset register is not complimenting the treasury register.

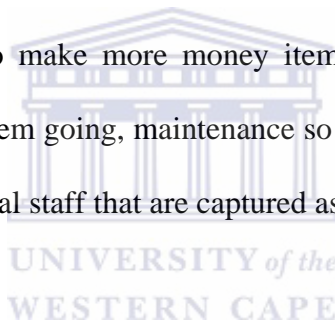
MR: ok, maybe just a step back, in the capital budget, remember, I said you go and barge for money and you get you forty odd million and then in the asset register there is a different project you gone do and their will immediately flag that as asset that gone be added to the asset register. So you say substation in Klappmuts that will be built for R10 million for example, their will immediately in the asset register write a substation in Klappmuts R10 million. So as we spend, in fact after we have spend, at the end of the year , so we spend the money and they will know the money has gone towards establishing that asset that's how they know.

DG: Around maintenance how will they know?

MR: no, maintenance they won't know because it's done on the operation budget. All they assist us with the purchases of staff but they don't have a sense if I say I need to buy a cable joint they won't know where the cable it is to capture on the asset register. We will know that on a day we fix a cable between two points.

DG: They only know when they are dealing with their books at the end year?

MR: Finance will never know that, Operational staff they will never know that because remember the idea with operation staff is not establish asset, that's the difference. Capital budget establish assets and operational doesn't establish assets. It's like a bakery, the baker comes in and he buys a building that's his assets. Now he starts baking bread, that's operation and starts making money out of it. Same with us, on the operation budget, it's the money used to make more money items of buying electricity, selling electricity and keeping the system going, maintenance so those things are not captured as an asset in which only the capital staff that are captured as assets



DG: One of the questions that I am having, let's say for example you have already bought an asset which you have in the you case. what is the idea with maintain, as you go along; that type information may need to be filtered in your asset register to give you a glimpse, for how long have been having the asset and how far have you done all that?

MR: remember I said there is a difference between maintenance and refurbishment. Refurbishment is also on the asset register, in other words---

DG: oh, refurbishment goes on the asset register,

MR: on the capital remember, it's part of capital. When you build and you now what to build another piece on the building, you refurbish the building. You build a new, that will

set in the asset register in the following year and it will say that now the original assets value has gone up and if you do other things such as adding windows, doors, shows. All those items will set on you capital as an upgrading that what its. In other words, in you register, your asset will depreciate but on the base you hick it again and get its a new value and depreciate at a different rate.

DG: Have you seen the asset register that one that Mark has?

MR: To be honest I haven't seen it but I know what the value is, but I haven't see, it out of terms.

DG: so you guys hardly rely on that information to make decision.

MR: no I must say this is largely historic, with the MFMA, and a lot of the municipalities got around out of the starting block late, so I think from now onwards things will come right. You got all this historical information that is not relevant. Remember, I just said to you we did a professional study on the asset value. It came to 550 million where Marks set with hundred and odd million. Now, it's historic because maybe one of my predecessors didn't record up when they did things in the past and with the dawn of the MFMA, where there is proper reporting and recording keeping. so I have hardly seen them but I must tell you what we need to do an asset register for the whole municipality

2.4 Asset Disposal

DG: to do update and feed the information that you have, items of disposal have dispose and what are the guide lines?

MR: if an item get redundant then the way to dispose it is through an auction that's how we do, we as the department say this item can't deliver the service any more, the MFMA

is clear that if an asset is not required to deliver minimum service than you can dispose it. You could have given it to another municipality, to municipal entity but we take that asset and go put it on a municipal auction and people come and tender, give the price for it

DG; I think those are the three process that i wanted to understand, but as you were talking about the master plan, is it available to the public?

MR: I must check If I can give you the master plan copy its fairly thick and has not yet gone to council yet but the draft went to council so I must push it to council first but we work on already it's a draft approved end of last year and update now in my term and so I must push it for council now end

DG: so when will it be?

MR: it will be October –November, October the earliest. its work done, except it must go to council and for approval. It hasn't change a lot and I am comfortable that the council will approve it and we have already sorted for budget it

DG: so will I be able to get access to it?

MR: I will have to check, I would like it to go to council firsts you know they are the custodian of it

DG: that's fine and the maintenance plan?

MR: that I can get you

DG: now I think I have sort of reached the end of this session. Just to sort of recap and from my side, best practice seems to suggest that every thing around your assets need to be linked to asset register to enhance decision relate to infrastructure-. I am trying to

establish that link now based on my understanding in terms of your municipality you have another entity which with setting with the asset register and you also have your own information which is not immediately shared or there is sort of lag before it goes to the main asset register.

MR: you see the finance dept and they give an asset register purely from the budget, it purely a financial exercise to tell you the truth. I have got on my capital budget to build a substation in Klappmuts for 10 million and I go and build or buy a truck with that money if all that is possible and then on their registration it will come as the substation because they got down there unless they check, I don't know their process, unless they check the assets as the votes come through when they do the purchases, they might pick up the discrepancies, may this a weak example that I have used because substation in Klappmuts vs substation in Jamestown you know. They will capture it as the substation in Klappmuts because the book says so but in the mean time it not there some else

DG: so in extent, it not a true reflection?

MR: it does give you a true reflection but it will tell you an asset was bought for R10 million rand that it will definitely tell you. It will give you the value but not the actual

DG: so it won't give you the spatial distribution of the assets?

MR: where they get information is on budget time or when you start putting projects on the budget so that we, you are right in the ideal world it should all revolve around your main asset register and remember, I said early that I have asked them to do a corporate asset register. once you got that I think the other process will follow because you have a corporate asset register its correct then we can then feed all the information into this, even the maintenance information. Currently we do it on the master plan information which is absolute raw asset register but its working quite well

DG: for your department?

MR for the department

DG: you might find that another dept use another process which is related to its master plan. Now I think one of the things which I am forced to make is to make conclusions. The conclusion around this discussion, the asset register exists but is not yet effective in supporting those decisions. However, not every thing is doomed because there are policies that you mention which are in place?

MR: correct

DG, from my side once again thanks for agreeing to meet me

MR: any time and you can give me a call

