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STRATEGY IMPLEMENTATION OF PREPAID WATER METERS IN THE CITY OF JOHANNESBURG

Research Report submitted to the Faculty of Commerce, Governance and Management, University of the Witwatersrand, in fulfilment of the requirements for the Degree of Masters of Management (In the field of Public Sector Monitoring and Evaluation

Abstract

The City of Johannesburg has on several occasions reported challenges that were experienced with regards to revenue collection. It has been acknowledged by the Major of Johannesburg that the billing system is one of the biggest challenges facing by the City of Johannesburg. During the State of the Nation's Address President Jacob Zuma announced that the City of Johannesburg will be assisted to resolve the problems with the billing system (State of the Nation's Address, 2014). According to The City of Johannesburg's annual reports, revenue collection is still problematic. As of 30 June 2016, the nett outstanding consumer debtors amounted to R6.2 billion [2015: R5 billion]. Water debtors account for 31% of the total nett consumers debtors balance. According to The City of Johannesburg's annual report the total consumer debtors increased by 24% from the previous year, driven mostly by the prevailing economic conditions.

When prepaid water meters were introduced, it was a proactive mechanism to mitigate this problem and provide households with the opportunity to monitor and manage their usage without incurring debts for the service. The researcher is interested in exploring the success of the implementation of prepaid meters and to explore the challenges and lessons learned during the implementation of this intervention. This study will therefore assess whether or not the prepaid water meters can be rolled out to other Regions within The City of Johannesburg.

Government has been accused of developing good strategies that promise to change the lives of many South Africans, however, results have shown that the implementation has failed in many government institutions. Municipalities are at the core of ensuring that citizens receive quality service delivery. With the problems that are facing municipalities, especially the issue of payment for services new models and different approaches will be required to ensure that provision of efficient services becomes a reality.

Effective strategic implementation has become the critical phase in ensuring that municipalities achieve its objective of providing improved service delivery.

This study is based on the views of strategic management theory and reviewed literature on strategic implementation. For the purpose of this study factors were analysed that contribute to the successful implementation of the strategy. These factors include the following: communication of the strategy; involvement of key stakeholders; assignment of responsibilities and putting in place control measures to monitor the implementation progress. These factors are further supported by a discussion of the two key approaches or models to strategy implementation and these are McKinsey 7's model, as well as the balance scorecard. Both models provided a guide on the important aspect of the business that needs to be considered when implementing strategy. Managers are also expected to know these factors and take them into consideration, when planning and implementing strategy. The literature review also revealed some of the challenges that could be faced with the implementation of the strategy. Both internal and external factors are equally important in the implementation of the strategy and if not considered properly during the planning stage, they have the potential to contribute largely to the challenges experienced during implementation.

This study was conducted using a qualitative study whereby interviews and document analysis were utilised to collect data. The findings revealed that there is still a gap on how the process of strategic management is implemented. A combination of internal factors such as involvement of all stakeholders during the planning and formulation phase, change management and consultation and putting in place control systems were critical to the implementation of the strategy. External factors such as customer involvement, involvement of politicians in driving change, as well as continuous education of society about the intervention were also identified as one of the key factors.

The study recommended that an implementation framework be developed which will summarise a comprehensive process of effective strategic implementation. The City of Johannesburg's mandate will always be to provide services to its citizens and therefore is possible that the implementation of some projects may take a similar approach. This framework will therefore assist as a guideline for such similar interventions.

Declaration

I Nontsikelelo Sylvia Loteni student Number: 1145075

I am a registered student for Masters of Management in the field of Public Sector Monitoring and Evaluation in the year 2017. I thereby declare that:

The research project is my own work except where referencing and acknowledgement has been indicated.

I am aware that plagiarism (use of someone lese work without their own permission and or acknowledging the source) is not accepted. I know that the University of Witwatersrand may take disciplinary action against me if there is any belief that this is not my work, or I have not acknowledged the source of the thoughts or words used in my writing.

Signature: _____ Date:_____

Dedication

I would like to dedicate this research to myself for perseverance despite the challenges that I was faced with. I had to make a lot of sacrifices financially and socially to ensure that I finished this research. Lastly the Lord has been my strength throughout this period without Him I would have not been able to do this.

Acknowledgement

I would like to thank the following people for their support and encouraging words and faith in my abilities to complete this study, even when I did not believe in myself.

Firstly I would like to thank God almighty for wisdom and strength to persevere and complete this research. My Supervisor, Dr. Manamela Matshabaphala, for your guidance and patience with me. You were always there to assist when I needed help and you supported me throughout this project. You brought light when I needed clarity.

Last but not least to my friend Mumsy Maake, who always believed that this is possible with God by my side and, that I will finish this research and do well. My Pastor, who always pushed me by asking progress all the time and the prayers, thank you so much.

Acronyms

IT – Information Technology

JW – Johannesburg Water

MDG's – Millennium Development Goals

SDG'S – Sustainable Development Goals

SA – South Africa

WSA – Water Service Act

List of Tables

Table 1: Comparison of Average Monthly Water Supply…… 21
Table 2: Project Logical Framework…… 21
Table 3: Summary of the Conceptual Framework…… 38
Table 4: Summary of the Six Phases of Thematic Analysis Process…… 54
Table 5: Results from Interviews…… 63
Table 6: Factors Influencing Strategy Implementation…… 69

List of Figures

Figure 1: Johannesburg Water Regions ……..19
Figure 2: Model of the Strategic Management Process ……..28
Figure 3: Model by McKinsey Company ……40
Figure 4: Formulation of a Balanced Scorecard……42
Figure 5: Qualitative Research Perspective……...50
Figure 6: Management Levels……..60
Figure 7: Soweto Region Consumption……..64
Figure 8: Water Savings……....65
Figure 9: Return on Investment……66
Figure 10: Strategy Formulation Stage of Comprehensive Strategic Management Model……....71
Figure 11: A Suggested Framework for Managing Change ……..76
Figure 12: Risk Assessment Phases ……78
Figure 13: The Proposed Strategic Implementation Framework ……..83

TABLE OF CONTENTS

Abstract 2
Declaration 4
Dedication 5
Acknowledgement 6
Acronyms 7
List of Tables 8
List of Figures 9
TABLE OF CONTENTS 10
CHAPTER 1: INTRODUCTION AND BACKGROUND 13
1.1 Introduction 13
1.2 Background of the Study 14
1.3 Global View on the Implementation of Prepaid Water Meters 15
1.4 Water Service Delivery Needs in Africa 16
1.5 Supply of Water in South Africa 16
1.6 The Constitution of South Africa 17
1.7 Water Service Act 1997 17
1.8 Free Basic Water Policy (2001) 17
1.9 The City of Johannesburg 18
1.10 Problem Statement 22
1.11 Purpose Statement 23
1.12 Research Question 23
1.13 Significance of Research 23
CHAPTER 2: LITERATURE REVIEW 25
2.1 Introduction 25
2.2 Purpose of Literature 25
2.3 The Conceptual Framework 25
2.4 The Essence of Strategic Management 26
2.4.1 Strategic Implementation as a Key Component of Strategic Management 28
2.5 Key Factors to Successful Strategic Implementation 30

2.5.1 Enabling factors 30
2.5.1.1 Communication 30
2.5.1.2 Employee and Community Involvement 31
2.5.1.3 Resources 31
2.5.1.4 Space and Time 32
2.5.1.5 Leadership 33
2.5.1.6 Control Through Monitoring, Feedback and Follow Up 34
2.5.1.7 Coordination 35
2.5.1.8 Review Meetings 35
2.5.1.9 Management by Walking Around (MBWA) 36
2.5.1.10 Sharing 36
2.5.1.11 Culture 36
2.5.1.12 Rewards 37
2.5.2 Summary of the Conceptual Framework 38
2.6 Theoretical Framework 39
2.6.1 Approaches to Strategic Implementation 40
2.6.1.1 McKinsey 7S Framework 40
2.6.1.2 The Balance Scorecard 41
2.7 Measuring the Strategy using the Balance Scorecard 43
2.7.1 Financial Perspective 43
2.7.2 Customer Perspective 43
2.7.3 Internal Process 44
2.7.4 A perspective of Learning and Growth 44
2.7.5 Developmental Perspective 44
2.8 Inhibitors of Strategic Implementation 45
2.9 Conclusion to Literature Review 46
CHAPTER 3: METHODOLOGY 48
3.1 Introduction 48
3.2 Research Method 48
3.3 Research Paradigm 49
3.4 Research Design 51
3.5 Population 52

3.6 Sampling Technique and Sample Size 52
3.7 Data Collection 53
3.8 Data Analysis 54
3.9 Validity and Reliability 55
3.9.1 Internal Validity 56
3.9.2 External Validity 56
3.9.3 Reliability 56
3.10 Limitations and Ethical Consideration of the Study 57
3.11 Summary 57
CHAPTER 4: PRESENTATION OF FINDINGS 58
4.1 Introduction 58
4.2 Sampling 59
4.3 Results of Qualitative Interviews 60
4.4 Research Discussion from Document Analysis 62
4.5 Conclusion 65
CHAPTER 5: ANALYSIS AND RESULTS 67
5.1 Introduction 67
5.2 Theoretical Framework 67
5.3 Strategy Implementation of Prepaid Water Meters in The City of Johannesburg 69
5.4 Areas of improvement 72
5.5 Chapter Conclusion 78
CHAPTER 6: CONCLUSION AND RECOMMENDATIONS 79
6.1 Introduction 79
6.2 Recommendations 81
6.2.1 Recommendation on Further Research 82
6.3 Conclusion 83
Interview Schedule – Consent Section 93
ANNEXURE 1: Access to Information 95

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction

The provision of service delivery has over the years evolved with most countries striving to provide high quality service. Globally most governments have decentralised service delivery to local government. This sphere of government is regarded as one that is closer to the people, and thus in a better position to understand and respond to the needs of the people, while the national sphere of government focuses on policy development. Literature on local government studies reveals that since the 1950's, local government, specifically in developed countries, has played a critical role in the provision of welfare services, and therefore there is currently pressure on local government to provide quality and valuable service at lower costs (Hulst, Van Montfort, Haveri, Airaksinen, & Kelly, 2009).

Due to the enormous pressure that local government is experiencing in this regard, various strategies were adopted in order to respond to the demand of improved service delivery. Some of the strategies include, amongst others, the restructuring of municipalities which resulted in larger municipalities. This restructuring of municipalities was predominantly implemented in countries such as Sweden, United Kingdom and Australia. In South Africa this system is similar to the establishment of metropolitan municipalities. This approach was met with great resistance in some parts of the world, due to the importance of citizen's participation and the independence of small communities. Another popular strategy involves the outsourcing of service delivery to private institutions. This approach gained momentum through the influence of neoliberal ideologies (Morris, 1997). The introduction of prepaid meters as an intervention was a result of the afore-mentioned ideologies. Prepaid meters were introduced in the electricity area and later in the water management, with the objective to improve efficiency and effectiveness in the provision of these services.

The introduction of this strategy by South Africa's water utilities was, however, welcomed with great resistance due to the perception that the implementing of prepaid

meters might have an effect on poor people. As a result municipalities such as the City of Johannesburg of Cape Town abandoned implementing the strategy in certain areas in the City of Johannesburg (Kumwenda, 2006).

The South African government is known for developing excellent strategies however, the execution of these strategies haves proven to be a problem. This problem is not immune to South Africa, as most developing countries face the same challenge. The report on the achievement of the Millennium Development Goals (MDG's) reveals some of the challenges which governments are facing currently (Millennium Developmental Goals report, 2015).

The City of Johannesburg through Johannesburg Water (JW) is one of the municipalities that continued with the implementation of the prepaid meter strategy. Of utmost significance to the researcher, is to determine whether the strategy was implemented successfully, and to identify the challenges and lessons learned, during the implementation of the above mentioned strategy.

1.2 Background of the Study

Population growth in urban areas placed the onus on local government to increase its resources responsible for the supply of services. The increased demand for power, and meeting this demand, proved to be a challenge to municipalities due to socio-economic and political factors. Non-payment of services, illegal connections by citizens and poor infrastructure are some of the challenges that local government had to overcome in order to provide a sustainable efficient service. As a result of this, new strategies had to be introduced to support local government in mitigating the challenges. Municipalities argued that the implementation of prepaid water meters will not only improve municipal finances, but will also improve the accessibility to services, as citizens take advantage of available technology.

1.3 Global View on the Implementation of Prepaid Water Meters

The concept of prepaid metering is not new, and has been utilised in many countries for some time. The availability of technology has further improved the accessibility of services offered through prepaid meters. Darby (2010, p. 445), defines prepaid meters as "advanced meters that identify consumption in more detail than conventional meters and communicate via a network back to the utility for monitoring and billing purposes". It can therefore be argued that efficiency is at the center of prepaid metering. Although the definition gives an impression that prepaid metering is just a tool that transmits water from the provider to the household, the concept is much broader than that. There are a number of elements involved with socio-economic factors being at the centre of it. Although municipalities may see prepaid water meters as an efficient strategy to manage the billing system, the socio-economic status of citizens will indicate that those who cannot afford prepaid meters, will always be victims of remote disconnections.

As mentioned, South Africa is not the only country which has been faced with the challenge of improving the financial state of municipalities. Literature reveals that there are similarities in terms of the drivers for installing prepaid metering. In countries such as Italy, Canada and Northern Ireland, the objective for the introduction of prepaid meters was to increase expected savings, demand management and improve customer relationship by reducing complaints and operational costs (van Gerwen, Jaarsma, & Wilhite, 2006). It can be concluded that there is synergy in terms of the strategic objective for the installation of prepaid meters which is economic management, rather than responding to the social issues that leading to the problems.

While the justification from municipal perspective may be reasonable, the concern remains that the privatisation of basic services may supersede the political responsibility that government has to its citizens, which is the responding to service delivery needs. It can be further argued that water pricing should be considered within the parameters of socio-economic and cultural factors (De Azevedo and Baltar, 2005). Chowns (2015) is of the view that the utilization of smart meters has generally been regarded as a change from a welfare service, to a more technical and procedural justice framework, which

focuses more on efficiency and is market orientated. Another argument is that prepaid water meters have been introduced as a mechanism for cost recovery, as a solution to the problem of non-payment. This confirms Chowns (2015), view of shifting from a welfare view to a more efficient service provision.

1.4 Water Service Delivery Needs in Africa

The report on the Millennium Developmental Goals (MDG's) placed the provision of water as one of the most important aspects that needed to be achieved by 2015. Eighty nine (89) percent of citizens in Africa have access to clean drinking water. Goal six (6) of the Sustainable Development Goals (SDG's), further emphasizes the importance of water provision as a human right.

Although it may seem that there is a political will by African leaders to support the developmental agenda in improving the lives of people; it is known that the African continent is still lacking in providing clean water to its citizens.

Earlier in this document the researcher mentioned the argument on the issue of responsibility between government and citizens. The reviewed literature explains that the provision of water has been viewed as a human right issue that cannot be compromised. The provision of clean water has an impact in the health of the citizens. Although both the United Nations and the African Union are silent about the sustainability of this health right, one can argue that the responsibility still lies within the government to ensure that, whatever measures are put in place for sustainability, the correct issue should always be prioritized.

1.5 Supply of Water in South Africa

After the 1994 democratic elections, the history of water provision in South Africa has been marked by a strong government assurance to increase access to water and progressively reduced the function of Water Boards and the national government. It has been evident in the past that there is tension between the objective of increased cost

recovery stipulated in the Water Service Act (WSA) of 1997, and the constitutional right of proving access to clean water including free basic water that was introduced in 2001. The installation of prepaid water meters has been one of the controversial strategies within the water sector. Municipalities found themselves in a position where they needed to balance all the provisions of regulations, but more specifically the objective to provide efficient service delivery and protecting the rights of citizens to drinking water. The next section will examine some of the legislative framework in South Africa that guides the provision of water.

1.6 The Constitution of South Africa

The literature reviews, revealed that there are few countries that enshrined the right to have access to sufficient water in the Constitution and SA is amongst them. After the 1994 democratic elections, government had a responsibility to ensure that this basic right was fulfilled. Busari and Jackson (2006) reported that before the democratic elections in 1994, about 15 million people in South were without safe water supply. As a result the democratic government was under pressure to deliver on their promise and to also meet the requirements of the millennium goals.

1.7 Water Service Act 1997

The 'White Paper on Water and Sanitation Policy' was published in 1994, and this led to the development of the Water Service Act of 1997. This act requires higher cost recovery which has proved to be a difficulty due to social factors such as poverty, unemployment and the culture of not paying for municipal services, which was the strategy to overthrow the apartheid government. The Act also differentiates the roles between municipalities and the Water Boards. In terms of the Act, the municipalities can develop their own bulk water supply infrastructure or buy bulk water.

1.8 Free Basic Water Policy (2001)

During 2001, National Government introduced a national policy on free basic water. A family, who qualifies in terms of this policy, receives 6 kiloliter of free water per month

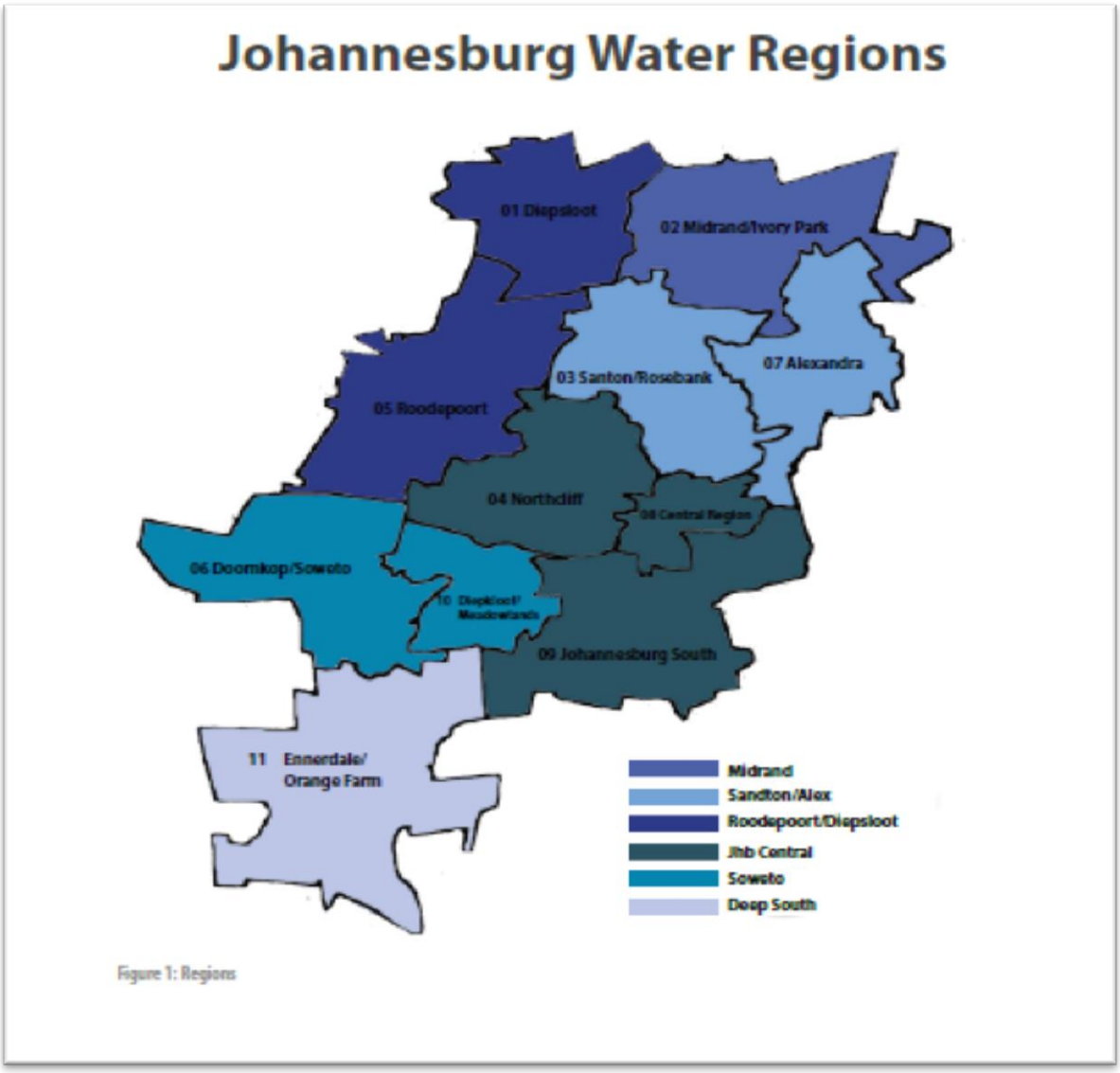
(40 liter capita per day for a family of five or 25 liter capita per day for a family of eight). Once qualifying families have exhausted their free basic water, the prepaid charge will kick in. One of the concerns that were raised was the fact that poor families, who could not afford to purchase more water, will find themselves without water.

1.9 The City of Johannesburg

The City of Johannesburg is a metropolitan municipality that is assigned to service a population of approximately 5.3 million within the City of Johannesburg. Similar to all government institutions, the City of Johannesburg has put the provision of basic services high on its agenda. Although the City of Johannesburg has done well in ensuring that all its residents has access to piped water, it has reported that the City of Johannesburg is still faced with the challenge of residents who will still be walking more than 200 meters to fetch water (The City of Johannesburg IDP 2012/16).

In 2000, the City of Johannesburg took a decision to decentralize municipal services and formed municipal owned entities that would directly provide services to residents. Johannesburg Water (JW) was one of these established municipal owned entities. Although some municipal owned entities were established as private companies, The City of Johannesburg still remains the sole shareholder. The mandate of Johannesburg Water was to accelerate service delivery and spearhead the provision of water services to the citizens of Johannesburg. Johannesburg Water provides services to approximately six (6) regions within the City of Johannesburg.

Figure 1: Johannesburg Water Regions



Johannesburg Water introduced the project of installing prepaid water meters during 2001 in Soweto. The project was received with much resistance from residents with the help of South African and International anti-privatisation activists, until the Constitutional Court declared the project lawful in 2009. Part of the issues that were initially raised, by the judge presiding over the case of Mazibuko, was that denying poor people the right to have access to water is similar to denying them access to health services (Mazibuko, 2009). The prepaid water meters project, however, continued to be implemented in other areas of Soweto.

Soweto is one of the oldest and biggest townships in South Africa, with a population of 1 271 628, with 355 331 households. The average household size is 3.4. 40.3 percent of these households are headed by females. Soweto has 84.2 percent formal dwellings. Fifty five (55) percent of the households have piped water inside the dwellings and 91.6 percent have flush toilets that are connected to the sewerage. 18.7 percent of the population in Soweto has no income (Statistics South Africa (2011)). In 2015 the City of Johannesburg recorded an unemployment rate of 35 percent in Soweto (Statistics South Africa, 2011).

The prepaid water project was initiated as a response to unacceptably high water losses in Soweto. According to Johannesburg Water the need for the Company to intervene in the Soweto water supply situation, was strongly motivated on financial grounds concentrating purely on savings in water purchases by Johannesburg Water from Rand Water and not persé on any improvement in payment percentages. This decision however, did not implicate that Johannesburg Water would not address the non-payment behavior in Soweto. The problem in Soweto has been attributed to a number of factors which included amongst other: neglect of billing, metering, customer management and customer service issues, and non-payment by customers for all services including water, as a result of both political influence and socio-economic conditions.

To worsen the situation, Soweto was regarded to be the highest user of water supply amongst other townships. Johannesburg Water reported in 2002, the purchasing of a yearly volume of 123 000 megalitres (ML) of water from Rand Water for the greater Soweto region, at a total yearly purchase cost of R285 million. The number of formal properties in Soweto derived from the billing system for the City of Johannesburg at the time was 121 000. When comparing Soweto with other areas in Johannesburg, the conclusion was made that the average supply figure of 85 kℓ per property for Soweto was, at the time, 400% more than areas such as Orange Farm and Ivory Park (Johannesburg Water Gcinamanzi Report, 2002).

Table 1: Comparison of Average Monthly Water Supply

DESCRIPTION	IVORY PARK	SOWETO	ALEXANDRA (old Alexandra only)	ORANGE FARM
Average water supply input per stand/month	18 Kℓ	85 Kℓ	98 Kℓ	12 Kℓ

Source: Johannesburg Report on Operation Gcin'amanzi' (Operation Conserve Water), October 2002

As one of the tools to support the financial model of improving water demand / savings, prepaid meters were introduced in Soweto by Johannesburg Water. This project has been implemented more than ten (10) years ago, and the researcher of this study seeks to assess the implementation of this project to determine its success, the challenges and the lessons learned. There are a number of key performance indicators that were set to be achieved at the beginning of this project, but for the purposes of this study only the three that are aligned to this study are indicated in the below table, and will be focused on.

Table 2: Project Logical Framework

OBJECTIVES	KEY PERFORMANCE INDICATOR	MEANS OF EVLAUATION FOR THIS STUDY
Reduce 'unaccounted for' water in Soweto.	Water purchased versus water sold for any period.	Document analysis of information on purchases vs. sales.
To reduce water demand in Soweto	Total volume of water purchased per month	Document analysis of information on purchases vs. sales
To improve overall payment percentages for water	Payment levels.	Overall payment levels and payment percentages.

Source: Johannesburg Report on Operation Gcin'amanzi' (Operation Conserve Water), October 2002

1.10 Problem Statement

During the past few years, South Africa has observed an increase in protest action emanating from lack of providing basic services. A number of households have experienced cut-off of services due to non-payment, which has led to conflicts between citizens and government. On the contrary Koma (2010), revealed that it has been established through the National Treasury report on the state of municipal finances, that the failure by municipalities to collect revenue has affected their ability to provide efficient and sustainable services. Municipalities generate their revenue from the services they provide to citizens, and when they fail to collect payment for the services provided this impact on the revenue.

The City of Johannesburg has on several occasions reported on challenges experienced with regards to revenue collection. The billing system has been identified as one of the biggest challenges facing the City of Johannesburg. During the State of the Nation's Address, President Jacob Zuma announced that the City of Johannesburg will be assisted to resolve problems with the billing system (State of the Nation's Address, (2014). According to the City of Johannesburg's annual reports, revenue collection is still problematic. As of 30 June 2016, the nett outstanding consumer debtors amounted to R6.2 billion [2015: R5 billion]. Water debtors account for 31% of the total nett consumers debtors balance. According to the City of Johannesburg's annual report the total consumer debtors increased by 24% from the previous year, driven mostly by the prevailing economic conditions.

When prepaid water meters were introduced, it was a proactive mechanism to mitigate this problem and provide households with the opportunity to monitor and manage their usage without incurring debts for the service.

The researcher is interested in exploring the success of the implementation of prepaid meters and to explore the challenges and lessons learned during the implementation of

this intervention. This study will furthermore assess whether or not the prepaid water meters can be rolled out to other Regions within the City of Johannesburg.

1.11 Purpose Statement

This study will assess the strategic implementation of prepaid water meters and determine its success, challenges and lessons learned during the implementation. Furthermore, the study will also assess whether or not prepaid water meters can be rolled out to other Regions of the City of Johannesburg.

1.12 Research Question

Birgam (2015), indicated that it is critical to ensure that the literature review is structured in such form, that there are linkages with the research questions. With the support of the reviewed literature, this study will seek to respond to the following questions:

Primary Questions

- What were the success factors during the strategic implementation of prepaid water meters?
- Was the intervention implemented in other Regions or similar services within the City of Johannesburg?

Secondary Questions

- Was the intervention a solution to The City of Johannesburg's billing problem?
- What were the challenges and the lesson learned during the implementation of prepaid water meters?

1.13 Significance of Research

The Auditor General reported in the report on the overall five year improvement in local government audit results (2015), that 92 percent of municipalities are either concerned about, or requested intervention with regard to water supply. One of the most

concerning indicators that transpired over the past three years, is the non-payment by ratepayers and consumers of water and electricity. There are a number of policies, plans and strategies in place that seek to assist municipalities to improve on service delivery. The integrated Development Plan is one mechanism that seeks to help municipalities to accelerate the implementation and shifting of targets beyond the basic delivery (The City of Johannesburg IDP 2012/16).

Strategy implementation remains the biggest challenge in South Africa, and municipalities are not exempted from this challenge. It should however, be mentioned that not all municipalities were successful in implementing the prepaid water strategy. Johannesburg Water was, however, one of the entities that continued with the afore-mentioned project and the entity has reported that at the end of the 2015/16 financial year more than 148 148 prepaid meters were installed in Soweto (Johannesburg Water Annual Report 2015/16).

This study will help to identify the success factors, challenges and the lessons learned by Johannesburg Water during the implementation of prepaid water meters. The study will also determine whether this project may be extended to other parts of The City of Johannesburg. Moreover other municipal entities may take note of the lessons learned that emanate from the outcome of this study, and this may determine whether this project can be implemented as such in their specific environment.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature related to the purpose of this study. It aimed to provide definitions of strategy implementation and strategic management. It further discussed the key success factors for strategy implementation. The chapter reviews the theory on strategic management, focusing on strategy implementation as a component of strategic management. Chapter 2 will also provide a review of the recommended approaches utilized in efficiently implementing a strategy for an organisation.

2.2 Purpose of Literature

A literature review is more than a search for information which comprises the identification and expression of relationships between the literature and what the researcher is researching about. A literature review provide a context for the research, justify the rationale for the research, identify whether this research has ever been done before, identify the gaps in knowledge or previous research, and how the study will add to the knowledge area, and explain the academic knowledge where the research fits (Ridley, 2012).

The literature reviewed for this study, was limited to the databases of Wits University, and in particular the e-journal articles, e-books, International, African and South African legislation, policies on water provision, reports and other relevant studies.

2.3 The Conceptual Framework

Melnyk and Overholt (2015), define a conceptual framework as a group of concepts that are related in providing guidance on which elements to include when designing a study.

On the other hand, Miles and Huberman (1994, p. 18), defines conceptual framework as a visual or written product which "describes the key factors, concepts or assumptions taken into account in the study as well as the assumed relationship among them". Both the afore-mentioned authors are in agreement that conceptual framework frames the parameters for the study. In some studies both the conceptual and theoretical framework are used interchangeably, in the sense that they both direct the study to the same direction. The conceptual framework helps to explain the findings that can be expected in a study or alternatively explain the unexpected findings. Taking into account what the authors have highlighted. The conceptual framework in this research study will be based on the concepts, process and the approaches of strategic management.

2.4 The Essence of Strategic Management

The concept of strategy has in the past been considered as a science used to plan the direction of the organization (Mišanková & Kočišová, 2014). Strategy has gradually become the integral part of the organization, and several authors have expressed strategy as a complex process, defining activities that need to be undertaken to achieve company objectives (Sadler, 2003). There are so many definitions and writings found on strategy.

Allio (2005) defines strategy as "the course of action which explains how organisations will move from the business it is in now to the business it wants to be in". Atkinson (2006) supports the above definition, defining strategy as "a unified, comprehensive and integrated plan that relates to the strategic advantages of the firm to the challenges of the environment". On the other hand Thompson, Strickland, and Gamble, 2007), define strategy as "consisting of the competitive moves and business approaches that managers employ to attract and please customers, compete successfully, grow business, conduct operations and achieve targeted objectives".

Davis and Davis (2004), define a strategy as an encompassing direction, setting broad aggregated agendas, a perspective to view the future and a template against which to

evaluate current activities. Furthermore, Grunig and Kuhn (2006), define strategy as a managerial directive or declaration, which serve as a decision support, providing the possibility of appeal.

Hough, Thompson, Strickland, and Gamble (2008), furthermore explain that strategy includes what, how and why management intends to grow the business; how it will improve its customer satisfaction and aim to be the best in the business. Mothae and Sindane (2007),"define a strategy as is a cluster of decisions on goals to pursue, actions to be taken and the manner in which resources can be used to achieve the set goals". These definitions reveal that a 'strategy' entails of a number of elements such as decisions, policies and actions.

In view of the context of the definitions above, a strategy for the City of Johannesburg is designed to ensure all its set objectives are achieved through proper execution by the entity. Therefore, the City of Johannesburg has to ensure that the prepaid water meters are successfully installed to every household and business premise.

There is no universal definition for 'strategy implementation' although several authors have written and published on the concept of 'strategy implementation'. Harpst (2008), defined 'strategy implementation' as the practice that management uses to turn plans into action and make sure that tasks are done in a way that realises the plans intended objectives.

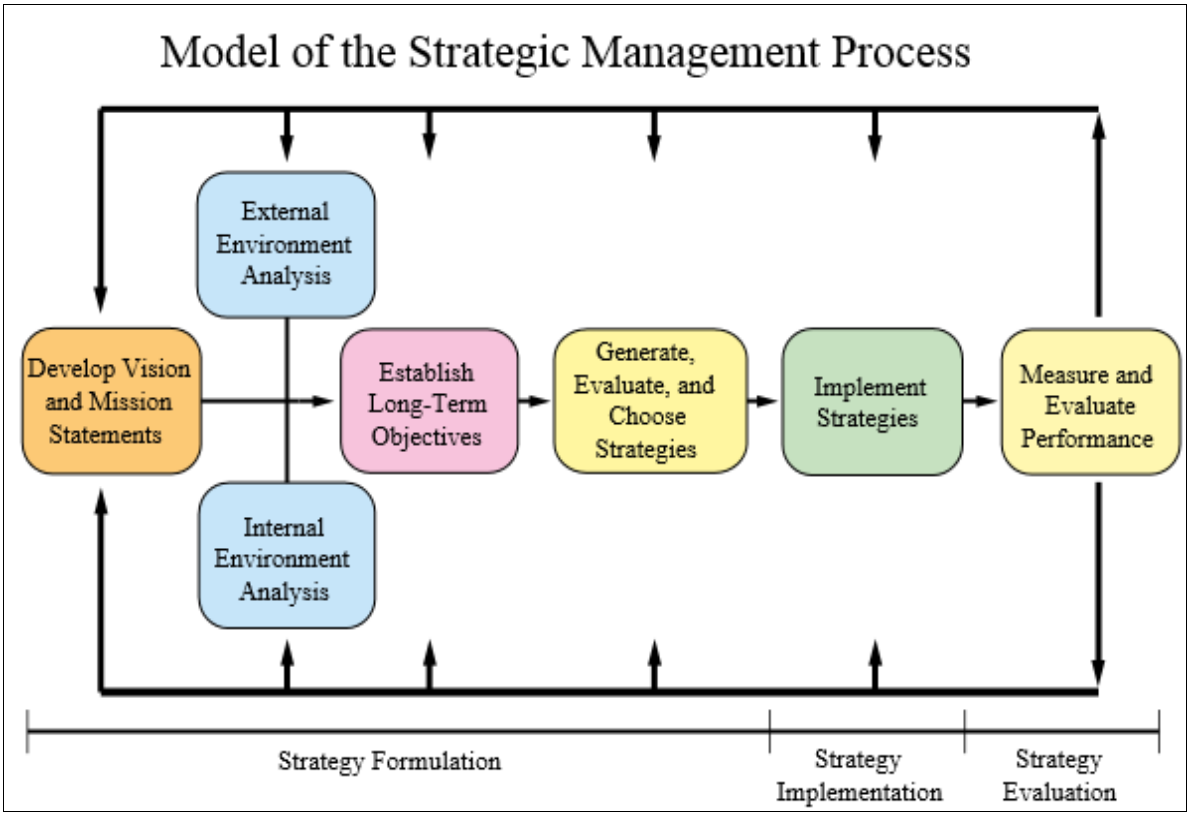
Similarly, Edmondson (2008), defines strategy implementation as "converting the strategy plan into action and then into results". Harrington (2006) goes further and includes environment in his definition, defining implementation as a reiterative process of implementing strategies, policies, programmes and action plans that allows a company to utilise its resources to take advantage of opportunities in the competitive environment.

Strategic implementation is a component that completes the strategic management process for an organisation. The process of strategic management begins with the

strategy analysis followed by strategy formulation and the implementation phase respectively. Therefore, this indicates that the City of Johannesburg is at the last phase of the strategy management phase which will enable it to achieve the objective of installing prepaid water meters.

A strategy is carried out through a strategic management process which has three fundamental processes that are interrelated to one another namely; strategic, planning, strategic implementation and strategic control (Mišanková & Kočišová, 2014). As mentioned earlier, strategic implementation is the most crucial part, and this is the stage where most governments found themselves stumbling. In executing the strategy it is important to have detailed operational plans, policies and other driving forces that will enable the achievement of the strategy (Allenby, 2014). Figure 1, below illustrates how the three (3) fundamentals are integrated to one another.

Figure 2: Model of the Strategic Management Process



Source: David, F.R. (2009). Strategic Management: Concepts and Cases

2.4.1 Strategic Implementation as a Key Component of Strategic Management

In understanding the concept of implementation, the most important question to be asked is, what happens between the planning and the result phase. Implementation is said to be that missing link between the two phases (planning and result). Mazmaniam and Sabatier as cited by Hope & Hill (2004), explain 'implementation' as the carrying out of basic policy and decision. They further indicate that it is preferably that the decision ascertains the problem(s) to be addressed, specifies the objective(s) to be pursued and the ways to be utilized, for implementation.

In agreement with this description Lazenby (2014), defines strategic implementation as the process that turns the selected strategy into action, to ensure that the stated goals are accomplished. Soanes and Hawker (2014), in the Oxford English Dictionary defined implementation as 'the means to complete, perform, or carry something into effect'. Henry (2001, p. 295), define implementation as 'the application and delivery of policies by the organisations or arrangements among institutions'. In union with the above Waters and Waters (2006), posits that implementing an operations strategy involves taking ideas, decisions, plans, policies, objectives and other aspects of the strategy and implementing them into actions.

When assessing the explanation from the authors there is one important aspect that underlies the definition; transferring the strategy into results. Unlike the other two initial phases, planning and formulation, which are taking place in an organisational structure, implementation is different. There are a number of role players that are involved in achieving results. In most cases implementation takes place from middle management downwards, with senior management overseeing the process. The setting of clear outcomes to be implemented emanates fundamentally from planning and formulation strategic implementation.

2.5 Key Factors to Successful Strategic Implementation

The focus of this section is to discuss the factors that support and identify those factors that limit successful implementation of strategy in the organisation. These will be discussed as supporting elements and/or limitations. Frankwick, Ward, Hutt, and Reingen, (1994), argues that researchers are in agreement that the phenomenon of strategy implementation is a complex concept that needs to take into consideration internal and external resource negotiations, and align the strategy process at all levels in the organization. A study conducted by Nutt (1989), reveals 94 percent success rate when tactics such as intervention, persuasion, participation and edict are utilized by managers to implement strategic plans. In corroboration with this study is Gavunova (2010), who describe several other principles that are useful to the achievement of a successful implementation strategy.

2.5.1 Enabling factors

2.5.1.1 Communication

It is known that employees are not always inclined to change within the organization as such employees may resent any change that involves the implementation of a strategy. It is therefore, imperative to have an effective communication of how the strategic goals will be achieved and the impact of the proposed changes to the employees' day to day activities (Gavunova, 2010). In order to ensure that prepaid water meters are installed successfully there has to be effective communication with all workers of the municipality, the City of Johannesburg's residents and all other relevant stakeholders. Communication can be effective if it is two-way, and if the parties involved in the communication respect and trust each other (Capon, 2008, p. 181). As such top management has to ensure that all stakeholders respect and trust each other (especially lower level employees) and lower level employees must be included in the implementation of the strategy, to eliminate any form of resistance from the employees.

It is crucial that the rational for the intervention, in this case the prepaid water meters, be communicated as early as possible to all stakeholders. David (2009, p. 229), also

emphasised that: “it should be communicated clearly and thoroughly throughout the organisation. Perhaps, when the rationale for implementing the strategy is grasped and appreciated, implementation may be well done”. Furthermore, the strategic planning committee should keep all record of its research and activities for the strategic plan. These records should be available for all to see and evaluate. Strategic planning should not be a secret, but should be transparent and available for all to review and be able to give their inputs (Lippitt, 2007).

2.5.1.2 Employee and Community Involvement

Allowing employees an opportunity to make suggestion and come up with better ideas of how implementation could be done, eliminate the possibility of resistance to the change (Gavunova, 2010). The involvement of residents of the community through their leaders and influencers in a project, such as the installing of prepaid water meters, in making the decision about the projects help to make strategy implementation become successful. Involvement of the community and employees ensures success as it lays the foundation for fostering a sense of responsibility amongst the participants. This also helps to avoid resistant to change from the workers and the community which may cause delays of the project as a result of massive demonstrations.

2.5.1.3 Resources

Kandeke (2015) pointed out that; when strategies have been planned competent, resources is required in order to carry them through to implementation. Therefore, without resources (human resource, financial and information resources), no strategies can be implemented.

By implementing a strategy, human resources become a significant need. David (2009) confirms that the true potential of strategy implementation resides in human resource. This is true because all other resources needed for effective strategy implementation cannot work unless people utilise them (Zambia Institute of Chartered Accountants, 2007). This statement confirms Fiddler *et.al*, (1996), assertion that, people and systems

are the most effective components in the execution of strategic change. Similarly David (2009) highlights the significance of the matter by submitting that a well-designed strategy system can fail if insufficient attention is given to the human resource dimension.

This can be proved from the findings of the study by Mate (2006), which was conducted to examine the implementation of Performance Management Package (PMP) in the Zambian civil service. In this study, it was found that human resources were among the major factors which negatively affected many operations (Mate, 2006). Although this is the case, Johnson, Scholes, and Whittington (2008), argued that the possession of resources, including people, does not guarantee successful strategy implementation. This statement therefore, indicates that, other resources that include physical and non-physical resources are also needed to succeed in strategy implementation.

Nonetheless material resources also hinder the implementation of strategy as seen in Zvaiwa's (1981), study on the implementation of the Zambia Primary English Course (ZPEC) guidelines. The results of this study revealed that ZPEC could not be fully implemented in schools because of lack of materials (Zvaiwa, 1981). These materials also cannot be optimally used without proper infrastructure or physical resources. This is an indication that different types of resources are needed to implement strategies in organisations. Furthermore Ranzik and Swanson (2010), suggested that resources include not only personnel and equipment, but also space, time and funds.

Also to note is that although funds may be made available, it does not guarantee that the strategy will be implementation successfully. As such, special consideration must be taken into account when allocating funds for the implementation of prepaid water meters by the City of Johannesburg. In the strategy implementation process, there should be allocation of sufficient funds and other resources to activities critical to the strategic process (Thomson, *et al.,* 2010).

2.5.1.4 Space and Time

Kandeke (2015), states that effective implementation of strategies can be hindered, or enhanced by the availability of space in the places where the strategies are to be

implemented. Where there is space, time will not be wasted to implement the strategies, but where space needed is either unavailable or inadequate, time is wasted as adjustments are made to have room for implementing a set strategy. The rush to catch up can lead to ineffective strategy implementation. UNESCO (2004), asserted that in order for focused change strategies to be implemented effectively, sufficient time should be allowed. It is in this context that it can be concluded that time and space, leads to a successful strategy implementation.

2.5.1.5 Leadership

Watungwa (2014) defines 'strategic leadership' as the ability to explain a strategic vision of the organisation, or a part of the organisation, and to motivate others to buy into that vision. The organisation's leadership should spearhead the process by giving direction, initiative and motivation. It is argued that no matter of the availability of resources, if there is an absence of effective leadership in an organisation the execution of the entire strategic plan may never be realized.

Therefore, the City of Johannesburg must adopt an effective leadership needed to drive implementation, and keep improving strategy execution in process to achieve all its strategic intentions (Thompson *et al,* 2010). According to Kandeka (2015), the importance of effective leadership in strategy implementation has brought about the formulation of leadership guidelines, as the adopted strategies move to implementation. Bryson (2004) posits that these required guidelines will assist in guiding the City of Johannesburg leaders to be strategic on how they do things, including: paying attention to critical aspects during the execution, trying out things, handling all resources and guarding the implementation in order to ensure the success of the installation of the prepaid water meters.

The afore-mentioned requires the City of Johannesburg's leader to be personally committed to the project in order for this guideline to be practiced by everyone in the organisation. Mulambya (1996), pointed out that a strategic leader should be a person of thought and action. In union, Cunningham and Cordeiro (2009) argued that currently, the internal, dynamic, systematic and complex threats to organisational survival require leaders who can think and act in an integrated, systematic and spiritual way.

Participative leadership should also be practised by the City of Johannesburg by involving all staff, peers, supervisors and other stakeholders in the decision-making process for the project (Capon, 2008). According to Ranzik and Swanson (2010), this calls for attributes of transformational leadership which include increasing awareness of what is right, good and important and showing the capacity for self-management, commitment and courage.

David (2009), points out that that managers can build support for strategy implementation not dictating decisions, while depending heavily on informal questioning and seeking to probe and clarify until a consensus emerges. Chang (2008) advised that consultations and negotiations with development partners can be used to mobilise support for the implementers of the strategies.

2.5.1.6 Control Through Monitoring, Feedback and Follow Up

Monitoring and feedback are vital aspects of the implementation phase as they enable corrective action to be taken to ensure that the planned strategies succeed. In line with this view, Fowler (2009), emphasised that there should be feedback on every stage of the installation of the prepaid meters to the management for them to have enough information and knowledge about the project. Bryson (2004), therefore, suggested that special monitoring teams should be assembled at all levels where monitoring is to be done to enhance control and stability in the project.

During the change process, control is applied to ensure that the desired change is on track (Fiddler *et al,* 1996). According to Johnson and Scholes (2002), strategic control in a change process enables the introduction, establishment and maintenance of a good culture in strategy implementation. They further explained that strategic control shapes the behavior of employees and the context of the organisation by ensuring that all that happens in the organisation does not negatively affect the implementation of strategies.

Mosley, Megginson, and Pietri (2001), stated that controls should be accepted by the people that are affected, and therefore, the applicability must be communicated clearly to those responsible for implementing them, and to those who will be controlled by

them. The control process must be coordinated carefully to avoid problems in strategy implementation.

2.5.1.7 Coordination

Coordination is vital for the effective implementation of a strategy plan; hence it should carefully executed (Kandeke, 2015). It is in this context that Steiner (1979) proposed that appropriate systems for coordinating effort and guiding individual activity must be devised and installed, for the implementation of strategic plans to succeed.

A review of literature on strategic management strongly recommends putting in place a coordinator to perform tasks such as monitoring progress, handling communication, taking the initiative to solve problems and providing training and other assistance to the implementers (Fowler, 2009). Further studies on appointing a coordinator, confirmed the importance of having coordinators for successful strategy implementation. In their study of the implementation of policy change in large urban high schools in the USA, Louis and Miles (1990), cited in Fowler (2009) found that the presence of someone who had assumed the major responsibility for coordinating the project was a major predictor of success.

2.5.1.8 Review Meetings

According to Kandeke (2015), when new strategies are embarked on, meetings should be held to review the implementation and necessary adjustments have to be made for the process to be successful. Scheduled meetings will address any obstacles or changes that have been noted during monitoring.

Thompson, *et al,* (2010), stated that when stumbling blocks are encountered, management has to see to it that they are addressed timely and effectively. Kandeke (2015), states that if reviews are not held to identify and address the problems, implementation may fail. Kelly (1999) recommended that it is necessary to review strategy implementation since circumstances may require a number of assumed strategies to be changed in order to cope with new factors and constraints bearing on implementation of the project.

2.5.1.9 Management by Walking Around (MBWA)

According to Digman (1990), MBWA is used to create a climate that matches the strategy. It is a technique used by effective leaders to keep them abreast of what is happening in the workplace, and to learn what issues they need to address (Kandeke, 2015).

By using this technique, leaders make regular visits to the field and talk with many different people at different times and on different levels. An example of where MBWA worked well is given from the Walmart Company in Amazon where the founder Walton insisted that top managers should get into the stores to talk to the stores managers and listen to what associates have to say (Thompson, *et al.,* 2010).

2.5.1.10 Sharing

Sharing is an enabling factor ensuring successful strategy implementation. Steyn (2005) contended that when employing new strategies for change to occur, there should be opportunities for operational workers to share their achievements and problems in installing the water meters. This notion cannot be doubted, because when these workers meet for this purpose, those who are achieving the set out strategies will motivate the colleagues who have problems in implementing the strategy. In agreement, Steyn (2005) added that sharing stimulates workers' reflections and broadens their perspectives. This is why it is better to share and describe what is desired, rather than instruct people what to do and how to do it (Purkey & Aspy, 2003).

2.5.1.11 Culture

Another important fact that enables a successful strategy implementation is the culture of an organisation. The City of Johannesburg's culture needs to be in line with the strategy that is being implemented. Sterling (2003), argues that managing the strategy-culture connection requires understanding of the link to the changes required to implement the new strategy and the appropriateness of these changes in relation to the organisation's culture. According to Ulrich and Smallwood (2004), power orientation,

role orientation, achievement orientation and support orientation are the four main forms of organisational cultures. Allio (2005), states that it is imperative for the culture of the organisation to be well matched with the strategy being applied. According to Thompson, *et.al,* (2007), there is a need to place more value on people being respected as human beings, and there is a need to recognise employees.

Creating a strategy supportive culture is essential to the success of strategy implementation. David (2009), stated that one way in which such a culture can be created is by role modeling or positive reinforcement. Therefore, the top management for the City of Johannesburg should 'walk their talk' concerning the culture of doing things in the implementation of its strategy. As strategists, they should strive to preserve, emphasise and build upon aspects of an existing culture that supports proposed new strategies.

2.5.1.12 Rewards

It is a general assertion that when workers are rewarded substantially, they perform tasks effectively and efficiently. Digman (1990), confirmed that managers and people in general, tend to do better when they are rewarded for doing well. According to Kandeke (2015), this is an indication that good performance can be enhanced greatly by more rewarding. Chanda (2009), adds that increased performance is only enhanced through rewarding of excellent performance. Therefore, key thrusts that succeed should be rewarded generously and visibly (Kandeke, 2015). Rewards are a crucial enabling factor in successful strategy implementation and therefore, they should be carefully linked to the performance of strategy implementers. Rewards must be linked to strategies in order for strategy to succeed (David, 2009).

Literature review on the importance of external factors on strategy implementation is not widely available. External factors are regarded as a threat to the success of the organisation's strategy, considering that the organization has minimum control over them.

Considering that the intervention was implemented to the community, this study will aim to reveal the influence that external aspects has in the execution of the strategy. A summary of the framework is discussed in the next section.

2.5.2 Summary of the Conceptual Framework

Table 3: Summary of the Conceptual Framework

	Concepts defined	Sources/Institutions	Brief relevance to the Topic
The Essence of Strategic Management	• Defining Strategy and its importance in the organization • The fundamental processes to strategic management: • Strategy Formulation • Strategy Implementation • Strategy evaluation	• Published articles • Journal Publication • Textbooks	It is key to understand the fundamental concepts, processes and assumptions upon which this study will be based on.
Strategic implementation as a key component of strategic management	Discuss the strategic implementation as a key component in strategic management in detail and its importance in achieving the overall strategy objective	• Published articles • Journal Publication • Textbooks	It is key to understand the fundamental concepts, processes and assumptions upon which this study will be based on.
Key factors to successful strategic implementation	Discuss the strategic implementation as a key component in strategic management in detail and its importance in	• Published articles • Journal Publication • Textbooks	This study is about strategy implementation of prepaid water meters and it is important to understand how literature debates

	Concepts defined	Sources/Institutions	Brief relevance to the Topic
	achieving the overall strategy objective		the expected execution of the strategy. The literature will assist in responding to the study's research questions on how JW successfully implemented the installation of prepaid water meters while there are other municipalities that abandoned the intervention.
Key factors to successful strategic implementation	• Communication of the strategy throughout the company • Involving employees in the implementation of the strategy • Assignment of responsibilities for strategic projects • Adoption of the organizational structures Implementation of effective controls	• Published articles • Journal Publication • Textbooks	Analysing different factors that have been suggested in implementing a strategy will help in responding to the research question and also assess the context in which those factors can be implemented

2.6 Theoretical Framework

Fain (2004), as cited by Green (2014), defines theory as "an organised and systematic set of interrelated statements that specify the nature of relationship between two or more variable with the purpose of understanding a phenomenon or a problem".

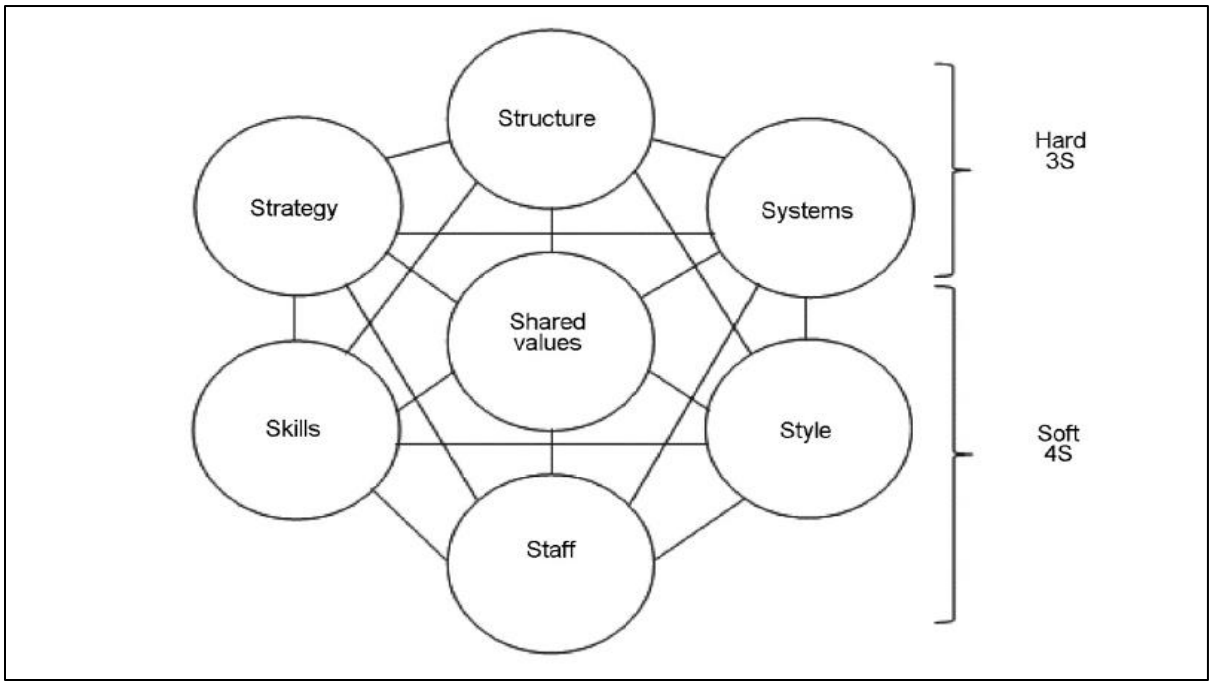
Theoretical Framework is very critical in any study, as it assists the researcher to frame the basis of their study. Merrian (2009), defines 'theoretical framework' as the body of literature and provide disciplinary orientation that the researcher draws upon to place the study.

2.6.1 Approaches to Strategic Implementation

There are a number of models that can assist companies to determine the main focus areas in implementing the strategy successfully. McKinsey 7's model, is regarded as the most popular model. This model consists of both hard aspects of strategy, structure and systems and the lower aspect being shared values, skills, staff and style (Heracleous, 2003). As indicated in Figure 3 below, it is understood that the hard elements of the model are quite easy to implement, and management has a better influence in terms of managing those elements. In contrast, the lower elements of the model have proven to be challenging in managing, as they are mostly driven by the culture of the organization (Papula & Papulova, 2012).

2.6.1.1 McKinsey 7S Framework

Figure 3: Model by McKinsey Company



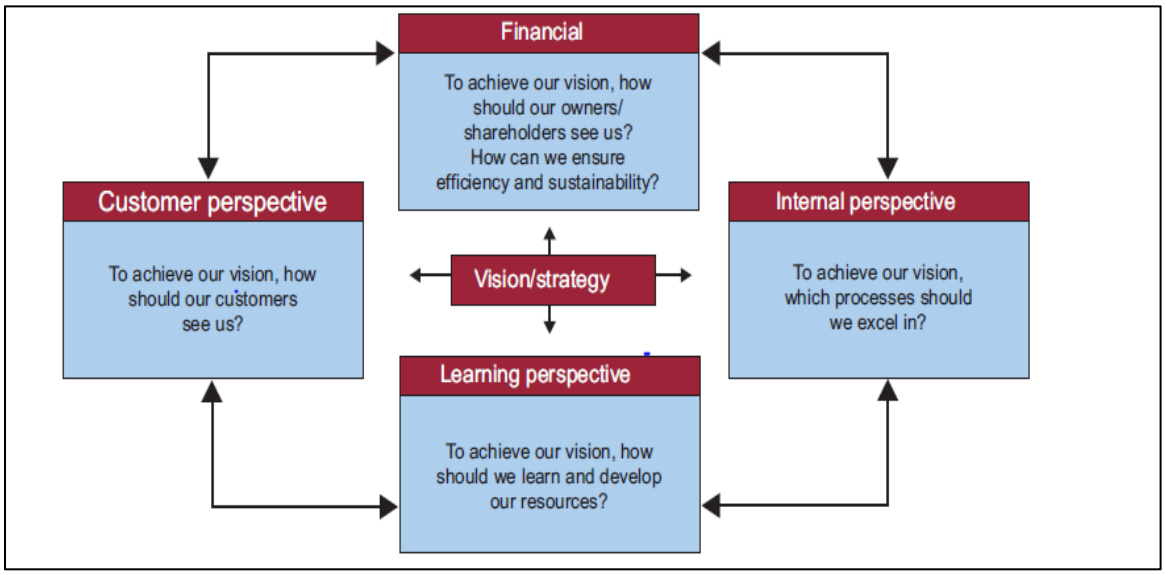
Source Mallya T, (2007)

According to Mišanková and Kočišová (2014), the above-mentioned model can be useful in improving the performance of the company, examining the possible changes in the company and determining how best to implement the strategy. From the literature reviewed, it is assumed that the implementation of the strategy is more often carried at an operational level and as such the softer aspects of this model become critical. If these softer aspects are not attended to, they pose a risk in the implementation of the strategy as a whole (Palatková, 2011). The capability of staff and their commitment in implementing the strategy will determine the success or failure of the strategy. The leadership style also plays a very important role on how staff receives the strategy and understand their role in implementing the strategy. Most importantly Singh (2013), indicates that this model is useful in comparing the current and desired state of affairs. From the reviewed literature, the downfall of this model is its failure to take into consideration the external factors. The utilization of the balance scorecard is regarded as the complementary factor in this regard.

2.6.1.2 The Balance Scorecard

The balance scorecard has over years emerged as another popular framework that companies use, not only to monitor the strategy, but to also operationalize the strategy by setting metrics. De Matos Nasser and da Costa (2013), describe the balance scorecard as a tool that helps in strategic management by taking into consideration the four perspectives: financial, internal processes, the growth and learning processes and clients.

Figure 4: Formulation of a Balanced Scorecard



Source: Bisbe and Barrubés 2012

The inclusion of clients into the system, already gives an indication that the focus is not only on internal factors that can make the strategy work, but also the services that the company provides to its clients. The understanding of the clients and how they will respond to the strategy becomes very important. Expressing the same sentiment is Bisbe and Barrubés (2015), who argue that strategies do not fail because they are poorly designed, but implementation always proves to be the biggest challenge. They further include leadership and stakeholder as the most important determinants of successful strategy implementation.

The balance scorecard has often been used as a monitoring instrument that supports the strategic planning and implementation through the coordination of activities (Brezuleanu & Brezuleanu, 2011). Of utmost importance about the balance scorecard, is the fact that it is able to specify the start and end dates and it translate the strategy into action by its design.

2.7 Measuring the Strategy using the Balance Scorecard

As discussed above the four perspectives of the balance scorecard brings about the stability between achievement of the short and long term objectives, as well as a balance between hard objectives and softer objective measures. All the measures in the balance scorecard are interlinked and aimed at achieving an integrated strategy.

2.7.1 Financial Perspective

Depending on the life cycle of the organization, financial perspective can be focused on different aspects such as growing the revenue/profit of the organization to sustainability and harvest (Kaplan & Roberts, 2006). When a financial focus area has been identified, it is important that all perspectives should be aligned to its achievements. This alignment can be achieved, by either developing specific measures that must be achieved by each unit of the organization, or measures that each unit will contribute towards the achievement of the financial goal. This study will analyse the three measures mentioned in Table 2 which has a bearing on the financial perspective of the organization.

2.7.2 Customer Perspective

Customer perspective of the balance scorecard, involves identifying the customers that are key to the business (Kaplan & Norton, 1996). In understanding its customers the Company is in the position to align its services to the needs of the customers. By doing this, the assumption is made that customers will value the services provided by the company.

Aligning this view to the current study, the most important aspect to note is that although government is not in the business of generating profit, revenue is however required to sustain service delivery. It is therefore imperative to identify and consult customers

when a change in service is proposed. This will ensure that they buy into the strategy and value the benefits of it.

2.7.3 Internal Process

Bisbe and Barrubes (2012), explain that in order to achieve the objectives of the strategy, emphasis should also be placed on the internal processes that must be enhanced to achieve this goal. To be noted is that the perspectives do not operate in a vacuum. Internal processes are expected to ensure that the services are efficient (financial perspective) and easily accessible (customer perspective). In this perspective of the balance scorecard, management is expected to identify the key processes and the measure for the processes (Kaplan & Norton, 1996). This is what differentiates the balance score card from traditional performance management. Indicators are identified upfront for the entire process. In this study (3) three measures were identified and are indicated in Table 2, and the achievement of these measures will be discussed in Chapter 4.

2.7.4 A perspective of Learning and Growth

For the long term sustainment of the organizational strategy, learning and growth perspective is very imperative. This perspective is driven by three enablers; employees, systems and organisational alignment (Norton & Kaplan, 2006). All three enablers are core to the organization achieving excellent performance. Employees ensure that the strategy is executed as planned

2.7.5 Developmental Perspective

Although the majority of the reviewed literature was focused on the four (4) perspectives of the balance scorecard, there is one different view that came out which indicated that the balance scorecard is not the ultimate, and that companies can redefine the perspectives in line with what they want to achieve in their strategy. Nieplowicz (2014), introduced a developmental perspective which focused more on growth within the organization as well as development from a client perspective. When

looking at the introduction of prepaid water meters, one can argue that the development perspective as explained by Nieplowicz (2014), would be effective, especially in aiding community involvement, by creating more awareness about the intervention and how it will change their lives.

2.8 Inhibitors of Strategic Implementation

Previous studies have identified that the main inhibitors to the implementation of a strategy includes; implementation taking longer than a planned period, lack of communication, lack of coordination and support from other levels of management, resistance from lower levels, lack of control systems and implementation being viewed as a set of discrete or isolated tasks (Alexander (1985); Kotter (2009); Strabel (1996); Eisenhardt (2002); Okumus (2003); Atkinson (2006); Hrebiniak (2008); Speculand (2011).

They further explain that the executives need to balance the demands of successfully executing complex change programmes with the demands of managing today's business performance. In situations where management is strongly tied to reward schemes based on today's performance, it is challenging to achieve active participation for the creation of tomorrow's organisation. However, as a result of the relentless pressure from stakeholders for continual high performance, executives cannot afford to dedicate their time, effort and resources to one set of demands exclusively (Franken, Edwards, & Lambert, 2009)). As a result of the large number of concurrent change programmes, it is often difficult to secure the resources to execute the strategy, as most of the organisation's resources have already been allocated. As such resources are limited, executives tend to compete fiercely for them, and once within their control, executives will endeavor to own them in order to secure their own goals (Lovallo & Kahneman, 2003).

The problems identified by different researchers (Aaltonen & Ikävalko (2002); Alexander (1991); Beer & Eisenstat (2000); Higgins (2005); Pellegrinelli & Bowman (1994), Verweire (2014), in the process of strategy implementation include the following:

- misunderstanding of the strategy,
- poorly documented strategy,
- not commitment to the implementation of the strategy,
- lack of communication,
- insufficient time allocation for strategy implementation,
- unaligned organizational systems and resources,
- poor coordination and sharing of responsibilities,
- weak management role in strategy implementation,
- inadequate capabilities (of both managers and employees),
- poor reward system,
- competing activities,
- failure by middle management to apply and implement the strategy properly,
- poor cultural and structural alignment and
- other uncontrollable environmental variables.

Cândido and Santos (2015), argue that whilst it is widely acknowledged that the implementation of a new strategy can be a difficult task, the true rate of implementation failure remains to be determined.

2.9 Conclusion to Literature Review

The reviewed literature has revealed that strategic implementation plays a very important role in the success of the strategy. Both internal and external factors cannot be ignored when planning, formulating and implementing a strategy. It has been observed through the literature review that there are a number of variables that influence the success of any strategy implementation. These may vary from leadership, communication, stakeholder involvement, staff participation and company systems.

This research study will establish how Johannesburg Water implemented their strategy on prepaid water meters, its successes, challenges and the lessons learned during implementation. Most importantly it will be recommended whether this strategy can be implemented in other regions of the City of Johannesburg.

Kaplan and Norton (2008, pp. 62-77), argue that the main challenge in structuring today, is not something which most organisation designers spend their time on by dividing up tasks.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter looks at the methodology of the study. In the research methodology, Chapter 3 will explain the concept of research paradigm and research design. The target population is defined as well as the sampling method which the researcher used in the study. Additionally this chapter also elaborates on the data collection method that was applied. The measurement instrument which was used in the study and its reliability are explicitly highlighted in this chapter. Chapter 3 also explains the data analysis methods, statistical tests, computer programmes and other technical information.

3.2 Research Method

The research method is, “a strategy of enquiry, which moves from the underlying assumptions to research design, and data collection” (Myers, 2009, p. 5). According to Bernard (2012), even though there are some other distinctions in the research modes, the most common grouping of research methods is those of qualitative and quantitative. The objectives set out for this research will be achieved through the use of a qualitative research approach.

Qualitative research involves a process of building a holistic image of the phenomenon being studied in a natural setup. It is also a research strategy that usually emphasizes words rather than quantification in the collection and analysis of data (Bryman and Bell, 2015). Furthermore, it is generally less structured than quantitative research, due to the details of data collected and the use of smaller sample sizes (Wild & Diggines, 2013).

The researcher used the qualitative method in-order to gain an in depth understanding of the process of strategy implementation in the installation of prepaid water meters by the City of Johannesburg. The context of the study was the strategically implementation of prepaid water meters in the City of Johannesburg. The qualitative research method was used in the study to assist in explaining the reasons why things happen like they do; enabling an understanding of meanings, experiences of people and excavated

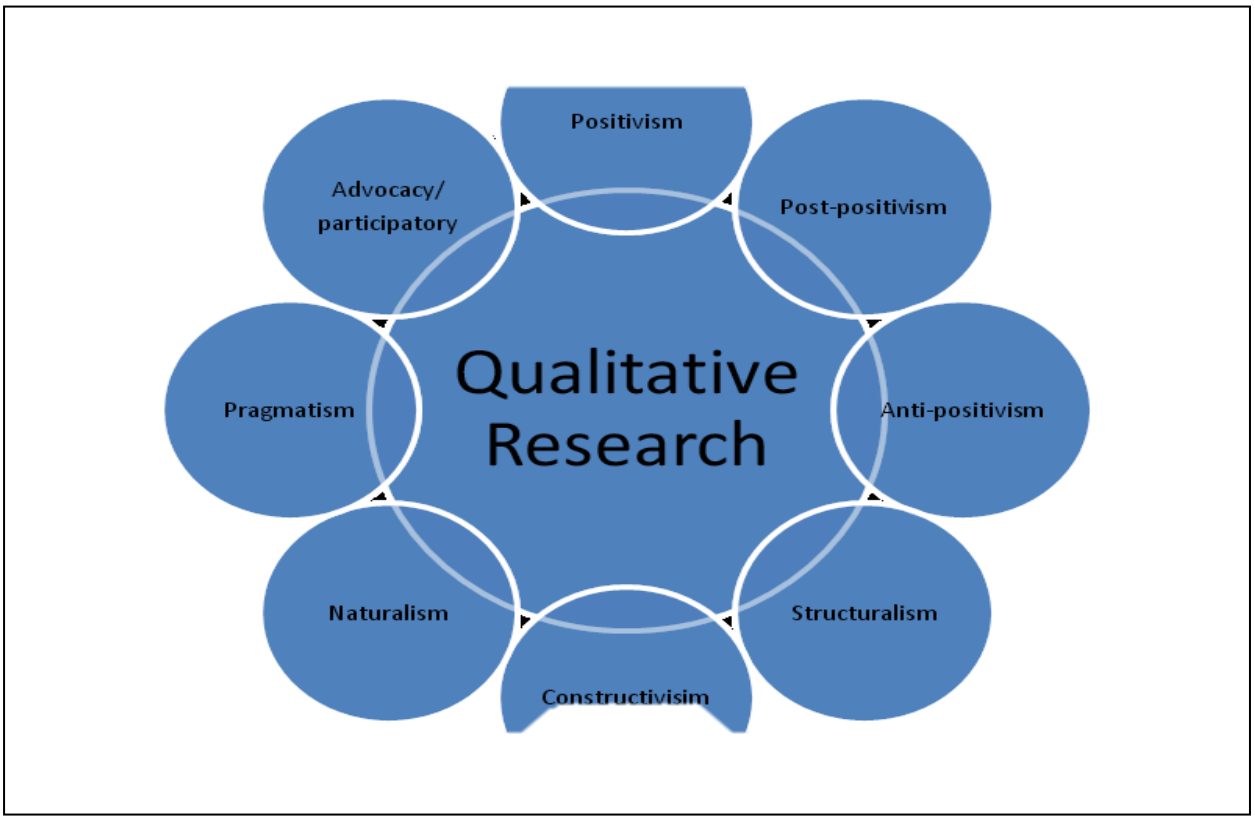
down deep into the participants and other stakeholders of the strategy implementation of the prepaid water meters by the City of Johannesburg.

Additionally the advantage of using the qualitative research method was that this research method allowed the researcher to understand the world from the viewpoint of those who were involved and this was achieved by collecting data from the role players involved in the implementation of prepaid water meters.

3.3 Research Paradigm

Morgan (2006) defines a paradigm as a set of theories and linked assumptions shared amongst a community of researchers. In choosing the research methodology for a research Wagner, *et al*, (2012), indicate that a research approach is influenced by three key aspects: firstly the theoretical framework, literature and research practice; secondly the assumption about the nature of reality and knowledge; and lastly the value system and ethical principles. These realities as identified by Wagner, *et.al,* (2012), are important in establishing the fundamentals of the study. The diagram in Figure 5 below shows these views as expressed by Lemanski and Overton (2011).

Figure 5: Qualitative Research Perspective



Source: Qualitative worldviews

From the above qualitative research paradigms, the constructivism research design was utilised in this study. The focus was to understand how the strategy for prepaid water meters was implemented and to determine the factors that lead to the success of this implementation. Wagner, *et.al*, (2012), explains 'constructivism paradigm' as a perspective that seek to understand the world as others experience it. In addition Bryman and Bell (2015), explain that constructionism is an ontological position which asserts that social phenomena and their meanings are continually being accomplished by social actors.

The constructivist paradigm was used since it involves an understanding of multiple participant meanings who participated in the data collection phase of the study. Neergaard and Ulhøi (2007), social constructivism entails a relativistic ontology and a subjectivist epistemology. An ontological position refers to the researcher relationship

with the reality of his study and realist ontology is objective (Creswell (2009)). However, 'subjectivist epistemology' is a theory of knowledge, and how achievement of such knowledge about the world is gained through self-analysis (Neergaard & Ulhøi, 2007). Therefore, social constructivism will also allow the researcher to drive meaning constructed by participants and stakeholders in the implementation of prepaid water meters of the City of Johannesburg.

3.4 Research Design

Bryman (2012), refer to 'research design' as a framework for the collection and analysis of data. It is a blueprint of how the researcher plans to conduct the research (Mouton, 2011). Most importantly Bryman (2012) indicates that the research design must be able to provide answers to the research questions. This study utilised a case study which is defined as an intensive description and analysis of a phenomenon or social unit such as an individual, group, institution or community (Merriam, 1998). The case in this study was the City of Johannesburg. Case studies are useful in studying the phenomenon within their context, considering that the case is bounded (Baxter & Jack, 2008).

The aim of this case study design was to establish how the prepaid water meters were implemented, and to establish what were the successes, challenges and lessons learned during the implementation. Furthermore the case study research design provided an opportunity to learn more from the process of executing a strategy for prepaid water meters by the City of Johannesburg. The researcher envisaged that this study will provide other cities in South Africa and across the globe, an opportunity to learn from the strategy implementation of installing prepaid water meters by the City of Johannesburg. The case study research design also provided the researcher an in-depth elucidation of the strategy implementation of the City of Johannesburg. Yin (2013), indicates that a case study should be considered when the focus of the study is to answer the how and the why questions.

3.5 Population

Wild and Diggines (2013), define ‘population’ as the total group of people or entities from whom information is needed. In this study the population of interest were the senior management of the City of Johannesburg.

3.6 Sampling Technique and Sample Size

The aim of a qualitative research is to understand the phenomenon under study through the perspective of the participant, and therefore a purposeful sampling was utilized for this study (Merriam, 1998). Patton (1990), as cited by Merriam (1998), argues that purposeful sampling provides information-rich cases, which can lead to lessons learned, that are important to the purpose of the research.

This sampling method was selected as it provided the researcher an opportunity to purposefully choose the respondents who were able to provide answers to the research questions for the study. This sampling method supported the sources of data and the researcher was able to gather information that will respond to the research questions. Therefore, the research questions guided the researcher on the category of the respondents that were to be sampled. The management for the City of Johannesburg were purposefully chosen as they exemplified the dimension of interest. They also fully participated in the strategy implementation and have enough knowledge about the process, as they also had access to the reports written to provide the status qou and feedbacks on the installation of the prepaid water meters.

The sample size in qualitative research tends to be small and this is due to the fact that the methods seek to obtain rich and deep data which is normally collected over a period of time in context (Wagner, *et al*., 2012)). In this study the following participants were sampled based on their involvement in the implementation of the project: Managing Director; Chief Operations Officer; and General Manager: CAPEX, Operations and Strategy and Monitoring and Evaluation; two (2) Senior Managers and Operations Manager: Prepayment.

3.7 Data Collection

Data collection is driven by the question of the study and determines which sources of data will provide the best information to answer the proposed question (Merriam, 1998). Data was collected using two methods, namely; interviews and document analysis.

Interviews were used as the primary source of collecting information. An interview, which is a two-way conversation between two people in which the interviewer (researcher) asks a set of particular questions with the intention of acquiring qualitative information from the respondents, was used to gather data (Collis & Hussey, 2003).

The reason for choosing interviews, as a source of collecting information, was that interviews also provide rich description data that assisted to see the world through the eyes of the participant (Wagner *et al.*, 2012). According to Blumberg, Cooper, and Schindler*,* 2008), interviews can be structured, semi structured or unstructured.

Semi structured interviews were conducted with senior officials from Johannesburg Water (JW) to understand how the strategy was implemented, its successes, challenges and the lessons learned. In a qualitative research, collection of information and its analysis can take place simultaneously during the interviews used for research. In the semi-structured interviews, questions were structured to suit the situation and comments of the respondents who were being interviewed (Blumberg, *et al.*, 2008).

In support to the interviews, document analysis was used as a secondary source of collecting information. Documents such as strategic plans, annual and progress reports, relevant policies and acts were analysed. The strength of using said documents is that they are already available in the situation and there is no intrusion or alteration of information (Merriam, 1998).

3.8 Data Analysis

Data collected from interviews and document analysis was analysed, using thematic analysis. Wagner *et al.,* (2012), explains that this approach involves identifying themes or patterns in the data that will help in answering the research questions. The analysis commenced during data collection, and the researcher coded the information from each interview as well as the documents in order to establish what has been discussed (Wagner *et al.*, 2012).

During the interview, participants were requested to record the interviews, upon which the information would then be transcribed later. The researcher also took excessive notes. In this study the key themes included: strategy implementation, key success factors, and challenges in implementing prepaid water meters, reduction in water demand and nonpayment.

The thematic analysis research method enabled the researcher to gather in-depth information from the data collected. A summary of the thematic analysis process followed in this research study is given in Table 4 below:

Table 4: Summary of the Six Phases of Thematic Analysis Process

Phase	Process
Becoming familiar with the data	The researcher immersed himself with the collected data in-order to ensure that he was familiar with the depth and breadth of the collected data. The researcher repeatedly read the data searching for meanings and patterns. The voice recorded data was transcribed into written formats to enable the researcher to conduct a thematic analysis.
Generating initial codes	Initial codes from the data were generated. The coding was done manually. The researcher worked systematically through the entire data set, giving full attention to each data item and identifying interesting aspects in the data items that formed the basis of repeated patterns across the data

Phase	Process
	set. Highlighters were used to indicate potential patterns. Codes were initially identified and then matched up with data extracts that demonstrated the codes.
Searching for themes	The researcher sorts the different codes into potential themes, and arranged all the relevant coded data extracts within the identified patterns.
Reviewing themes	Having devised a set of candidate themes, the researcher refined those themes. This was as a result that some candidate themes were not exact themes because they collapsed into each other. For example two apparently themes formed one theme.
Defining and naming themes	At this phase the researcher defined and further refined the themes that were presented for analysis. Each theme was also identified in-order to determine its meaning. The researcher revisited the assembled data extracts for each theme, and structured them into logical and internally consistent account with the accompanying narrative.
Producing the report	The final analysis was conducted and a report was written. The researcher used data extracts with the aim of providing a concise, coherent, logical non-repetitive and interesting account of the story the collected data tell about within and across themes.

Adopted from: (Braun & Clarke, (2006)

3.9 Validity and Reliability

'Validity' is defined as accuracy, meaningfulness and credibility of the study, and the extent to which the test measures what actually needed to be measured (Leedy and Osmond (2005). Based on this definition, data collection was very important to be able to respond to the questions that the study seeks to answer.

Whether the information is gathered through interviews or documents most importantly is that it must always be relevant to the objectives of the study. According to Leedy and Osmond (2005), when considering the validly of the study there are two things that must be taken into consideration i.e. internal and external validity.

3.9.1 Internal Validity

The 'internal validity' of a research is regarded as the extent to which the design and the data yield, to allow the researcher to draw conclusion about the study (Leedy & Osmond, 2012). During this study, different perspectives emerged, as expected from the different data source that was utilised. In order to ensure that the conclusions are valid, the researcher used strategies such as triangulation, member checks, and peer examinations to ensure the validity of the information.

3.9.2 External Validity

'External validity' of a study is the extent to which the results of the study apply to situations beyond the study itself (Leedy & Osmond, 2012). There are a number of studies that have been conducted on the installation of prepaid water meters. The findings of this research study also made a comparison to previous studies conducted on the same issue. The sample was purposefully drawn to ensure that it was well representative to the phenomenon understudy. Expert senior officials in Johannesburg Water (JW) were interviewed, and relevant documents pertaining to prepaid water meters were reviewed. This ensured that conclusions drawn from this research study are well represented and can be transferred in other areas as well.

3.9.3 Reliability

Lincoln and Guba (1985), as cited by Merriam (1998), indicate that qualitative studies are not looking at establishing whether the study can be replicated the same, but rather seek an understanding of the phenomenon drawn from the experiences of the persons involved. As a result, it has been established that qualitative studies consider the dependability or consistency of the study rather than focusing on the reliability of the

study. In ensuring the dependability and/or consistency of the study the same strategies used in validity were also utilised, e.g. triangulation, member checks, peer review, and also included an audit trail where the raw data used for the analysis is kept for record purposes.

3.10 Limitations and Ethical Consideration of the Study

Johannesburg Water has implemented the intervention in one region, and the findings have a potential to be biased to external factors specific to that specific area. Prepaid meters have the element of politics and some participants were cautious on how they engaged in some of the issues, especially discussion that involved cut-offs of water due to illegal connections. Interviews were done with senior managers, whilst securing interviews with these managers proved to be a challenge. The Financial Director, whom was supposed to be part of the interviews, declined stating that she was not part of the planning of the project, and the Department has just recently got involved in the implementation process and therefore an opinion could not be formed on the matter. The researcher was able to obtain the information needed during an interview with the Financial Director and from other managers including the Managing Director.

Although the researcher is an employee of Johannesburg Water all required information was requested in writing following the protocols of the Company and the request was granted in writing.

3.11 Summary

Chapter 3 explained the research methodology used in investigating the strategy implementation of prepaid water meters in the City of Johannesburg. It highlighted and motivated the use of the methods and tools of data generation, collection, the data analysis approach, presentation and enhancing reliability and validity of the study. The chapter also examined and discussed the ethical considerations that were observed in undertaking the research. Chapter 4, that follows presents and interprets the data collected in the field.

CHAPTER 4: PRESENTATION OF FINDINGS

4.1 Introduction

Chapter three (3) of the research methodology considered how the study will be executed and this included taking into account the validity and the reliability of data. This chapter presents the findings of the information collected from executive, senior and operations managers that are responsible for the implementation of the prepaid strategy. Secondary data was also reviewed. The researcher reviewed progress reports prepared by the responsible departments of the Company, strategic plans and the annual reports.

The formulation of the interview questions and data reviewed on document analysis was guided by themes such as: how the strategy was implemented, the successes, challenges, what were the lessons learned in the process, and whether or not the strategy can be replicated in other areas of the City of Johannesburg.

Interviews were carried out with the Managing Director; Acting Chief Operating Officer; Generals Managers of Capital Expenditure; Operations and Strategy; Monitoring and Evaluation, respectively, Senior Managers: Technical Services and New Service Development, respectively as well as Operations Manager: Prepayment.

The duration of the interviews were approximately 30 to 45 minutes for a sample of eight (8) participants concentrating on senior officials relevant to the study. All managers that were interviewed were involved in the implementation of the project.

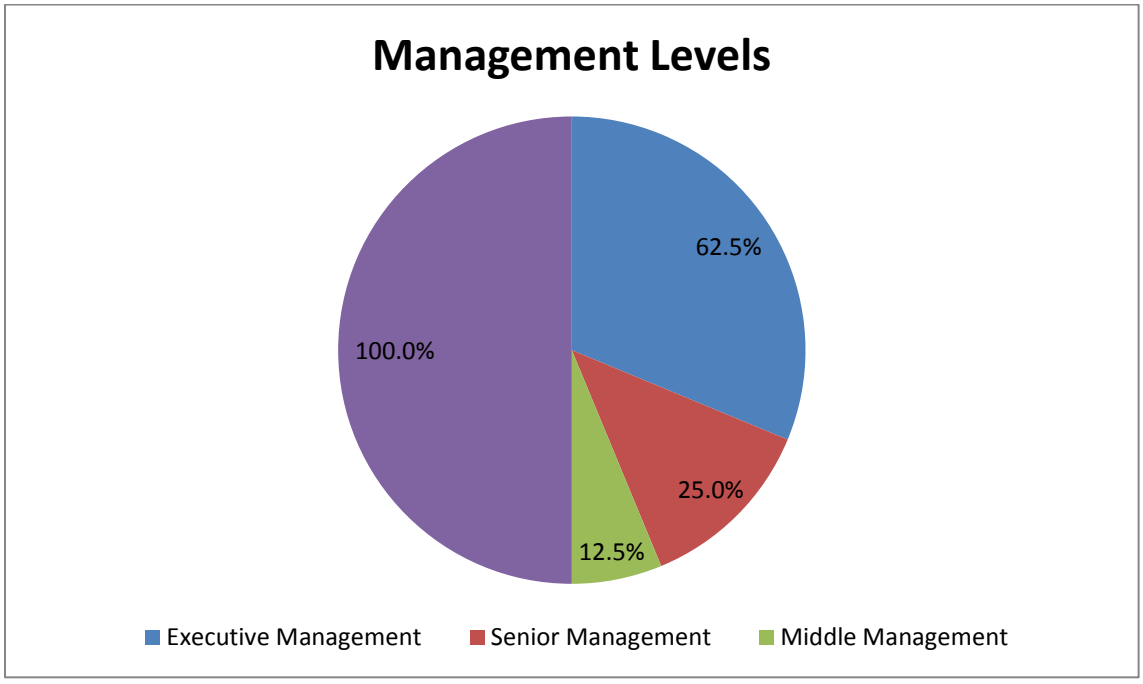
Interviews were carried out in an informal setting through an open discussion. The researcher explained the purpose of the study. The expertise of the participants in the specific area resulted in a better understanding of the concept used in the study. The discussion was not only limited to the current project, but the researcher aimed to understand the knowledge of the participant in the implementation of the strategy in general.

4.2 Sampling

A sample of eight (8) people from different departments within Johannesburg Water was interviewed. These interviewees consisted of the following people: Managing Director, Acting Chief Operating Officer, 3 Generals Manager, 2 Senior Managers and 1 Operations Manager. The discussion were around the implementation strategy of prepaid water meters, the success, challenges and the lessons learned during the project and whether or not the strategy can be rolled out to other regions of the City of Johannesburg.

Figure: 6 below indicate the Management Levels of the respondents that were interviewed. All the indicated managers have an in-depth knowledge about the project and how it was implemented.

Figure 6: Management Levels



4.3 Results of Qualitative Interviews

The following topics directed the discussion, or interviews with all the levels of managers that were interviewed:

- **Was the strategy implemented successfully**

  The majority of the respondents agreed that the strategy could have been implemented better. The lack of stakeholder involvement was raised, and it has been indicated that certain departments, e.g. IT and Operations were not involved in the initial planning. The respondents indicated that failure to involve all stakeholders at planning lead to some of the risks not being identified on time and hampered the implementation of the prepaid meters.

- **Determine the success factors in the strategic implementation of prepaid water meters**

  Apart from acknowledging the gaps identified more than 62.5% of the respondents felt that there was an average success to the strategy. One of the success factors were, that the strategy implemented, was able to reduce water demand in Soweto, despite urban growth in the area. 37.5% believed that the strategy was a success considering the history of non-payment in the area.

- **What were the challenges and the lesson learned during the implementation of prepaid water meters**

  Almost 100% of the respondents agreed that there were a number of challenges experienced in the implementation of the strategy. Some of the issues raised were; poor planning, not enough change management conducted when the project was introduced, funding for the project, lack of political will to change the mindset of communities, culture of non-payment, illegal connections, and reluctance in enforcing by-laws, literacy levels of communities, not being able to recover the expenditure for the implementation and that the project was taken as a solution for all the billings problem. On the lessons learned, respondents agreed that a thorough research should be done before the planning, in order to understand all elements involved and the risk of implementing the strategy and to also identify the mitigating factors as well. Due to poor planning the implementation took too long as it had to

be audited and the planning had to be re-visited. Other lessons raised by respondents are that prepayment is not the only financial solution to the billing challenges. Credit control measures still need to be in place, meter reading need to be done and it had to be ensured that there are no illegal connections.

- **Was the project successful in reducing unaccounted for water in Soweto?**
  The majority of the respondents agreed that unaccounted for water was reduced, however illegal connections were still a problem. By-law enforcement was also raised as a challenge.
- **Was the project successful in reducing water demand in Soweto?**
  All respondents agreed that water demand in Soweto has reduced, despite the new housing developments in the area.
- **Did the overall payment percentages for water improved**
  Almost 75% of the respondents believed that the payment percentages have not improved and this is still a challenge. The respondents cited illegal connections and by-passing of the electrical system as the biggest challenges in this regard.
- **Establish whether the intervention can be implemented in other Regions and similar services within The City of Johannesburg**.
  While 87.5% of the respondents supported the roll-out to other regions, crucial elements were raised, that had to be taken into consideration, e.g.: the planning stage must be done thoroughly, infrastructure funding is critical to the success of the project and IT system has to be compatible to the project. 12.5% of the respondents believed that currently the system is not user friendly, taking into consideration that there are not enough vending stations and customer were struggling to understand the meter description, as well as the continuous upgrading of the system
- **Determine whether the intervention can be a solution to the City of Johannesburg's billing problem**
  Almost 75% of the respondents believed that the strategy can be a solution to the billing crisis experienced by the City of Johannesburg, however it must be implemented in a different format, taking into consideration all the improvements that were done to the Soweto project. Table 5 below is a summary of the results from the interviews:

Table 5: Results from Interviews

Level at Organization	Ex	Ex	Ex	Ex	Ex	SM	SM	MM
Duration in minutes	37	31	45	30	35	30	30	45
Was the strategy implemented successfully	S	AS	AS	AS	S	AS	S	S
Were there any success factors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Were the challenges identified during the implementation of the strategy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Was the project successful in reducing unaccounted for water in Soweto?	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Was the project successful in reducing water demand in Soweto?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Did overall payment percentages for water improved	No	Yes	Yes	No	No	No	No	No
Can the intervention be implemented in other Regions and similar services within The City of Johannesburg?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Can the intervention be a solution to The City of Johannesburg's billing problem	Yes	Yes	Yes	No	Yes	Yes	Yes	No

Alphabetical letter representing levels in the organization: Executive Manager: Ex, Senior Manager: SM
Alphabetical letter representing the success level of the participants: Successful: S, Average Success: AS

4.4 Research Discussion from Document Analysis

The researcher also considered the review of the following documents for the purpose of this research study: project planning document, strategic plan, monthly and quarterly reports and the annual reports.

The City of Johannesburg has adopted nine (9) priorities that it intends to achieve by 2021 as stipulated in the City of Johannesburg's National Development Plan. Johannesburg Water has stipulated in its Business Plan 2017/18, that it has adopted the City of Johannesburg's priorities as its key strategic priorities to maintain sustainability in water service provision as well to assist the City of Johannesburg in addressing the challenges it faces. Johannesburg Water has stated in the 'Gcinamanzi

Report' that some of the key performance indicators that needed to be achieved by the implementation of prepaid water meters, included the reduction of water demand, unaccounted for water, as well as improving the payment levels. This does not solve the billing crisis and addressing the culture of non-payment that the City of Johannesburg is experiencing.

The discussion below indicates the extent to which Johannesburg Water has progressed towards achieving the above mentioned indicators.

Figure 7: Soweto Region Consumption

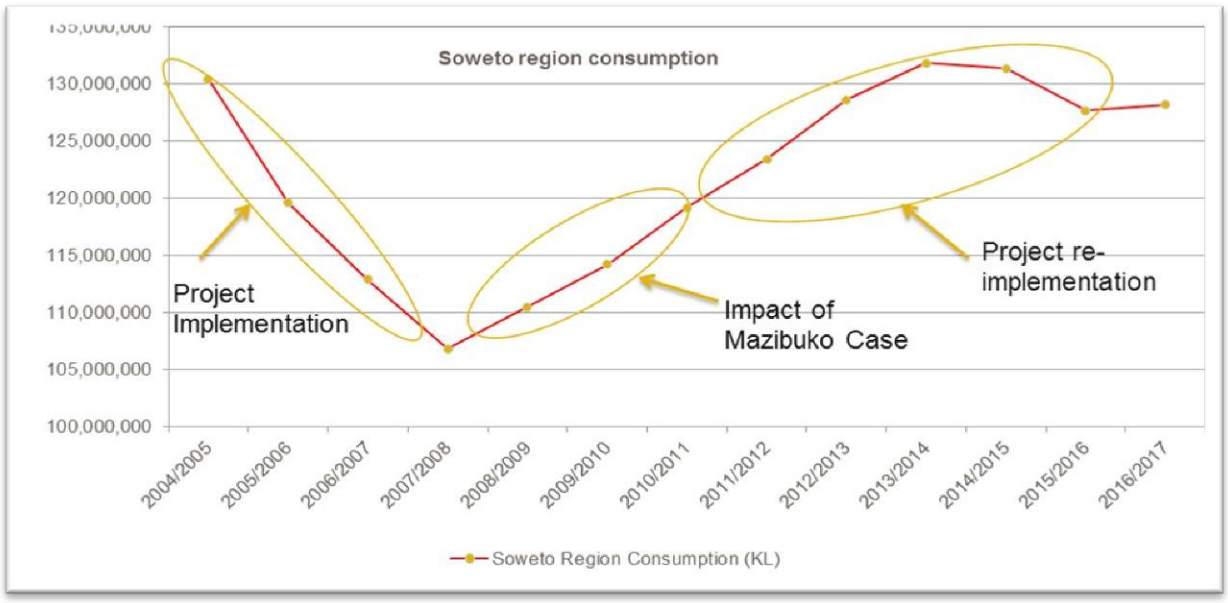
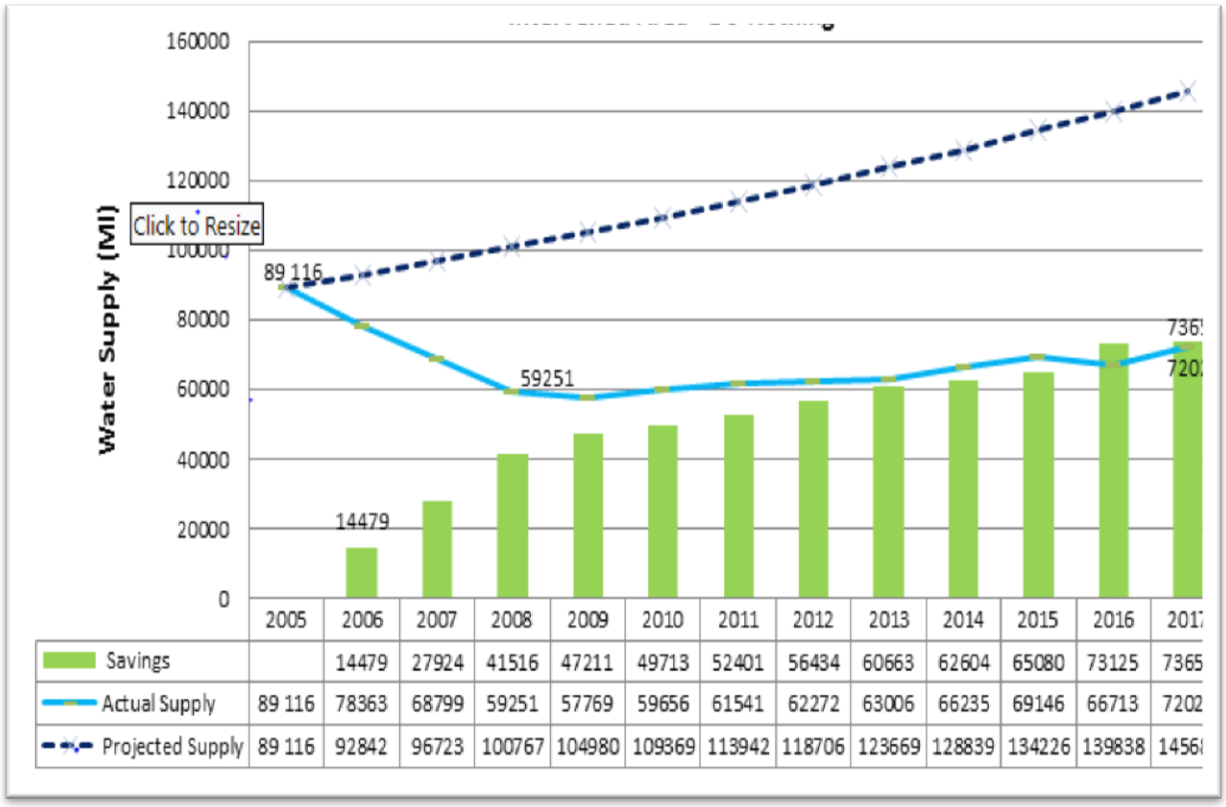


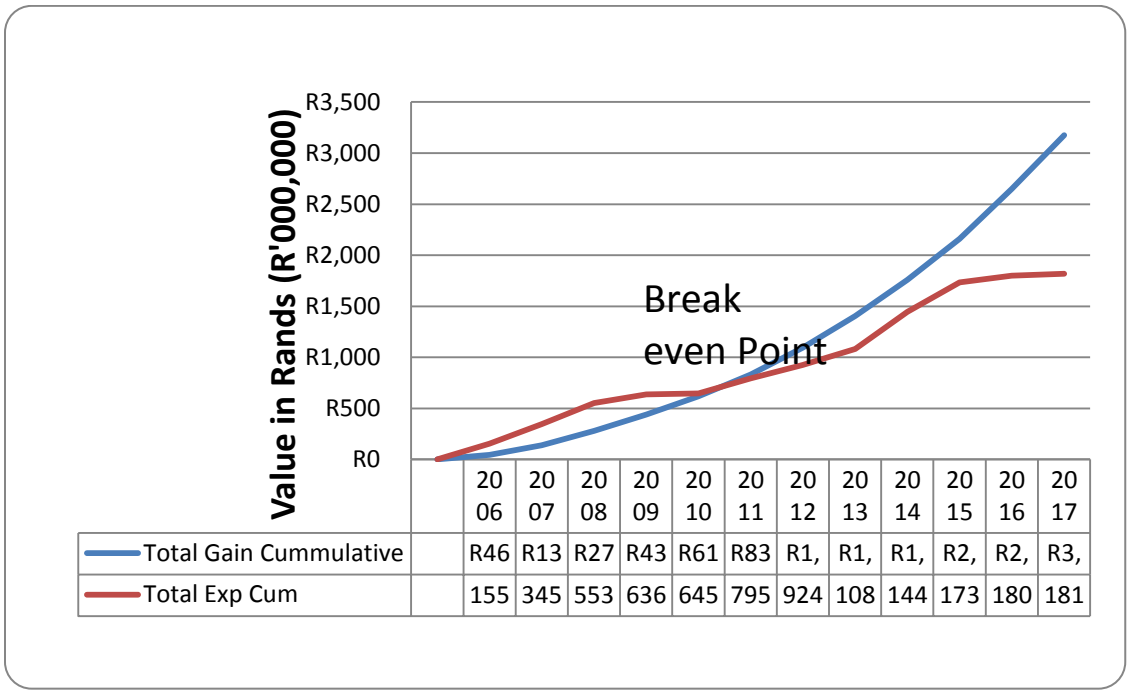
Figure 7 above, indicates that the total water supply just remained below the highest supply of 130 359 Ml in 2005 for more than 10 years. To be noted is that the statistics reveals that the Mazibuko case in 2009 has an effect on the execution of the strategy, whereby the courts first decided against the Company until the matter was later taken to the Constitutional Court where Johannesburg Water was given the go ahead to implement the strategy.

Figure 8: Water Savings



Johannesburg water reported that the total water saved since inception is 624 808 Ml which is equivalent to R3.09 billion.

Figure 9: Return on Investment



During 2009/2010 Johannesburg Water managed to achieve the breakeven point at R794 million. The statistics indicates that since then, the impact of water savings has been higher than the investment.

The 2016/2017 Johannesburg Water's Annual Report mentions that the project entailed amongst others the installation of prepaid meters to 183,945 stands in Soweto. In the 2016/17 financial year a cumulative total of 149,292 prepaid meters were installed. The overall project progress is at 81% (149,292) of the targeted 183,945 prepaid meters. The non-achievement of targets for the year was attributed to delays due to socio-political challenges, project interruptions due to community protests.

4.5 Conclusion

This chapter highlighted the results of the respondent interviews and provided an in-depth discussion of what emanated from the interview process. Furthermore an analysis

from the reviewed documents was also presented. The analysis of the results with reference to the literature review will be discussed in the Chapter 5.

CHAPTER 5: ANALYSIS AND RESULTS

5.1 Introduction

This chapter responds to the research questions as outlined in Chapter 1. Furthermore it presents an analysis and interpretation of findings as presented in Chapter 4. Chapter 5 provides an in-depth analysis of the data collected through interviews and document analysis. Content analysis is utilized to ascertain key themes that indicate the strategy implementation of prepaid water meters. The findings reveal the gaps in the implementation of the strategy. The responses deal directly with the open ended structured questions that the participants responded to.

The findings are analysed and interpreted taking into consideration the reviewed literature in chapter two and the overall research questions.

5.2 Theoretical Framework

The literature review that is outlined in chapter two considered the different theories behind strategic implementation including factors that lead to the success of strategy implementation. As indicated in Chapter 2 (Literature Review), the execution of the strategy is critical to the achievement or success of the overall strategy. The literature revealed that most companies spend more time on planning and formulation, however implementation is cascaded down with minimal mechanism to measure progress.

In order to deal with the challenge it is important that strategic implementation processes are improved. Strategic implementation involves taking into consideration both internal and external factors when planning the execution of the strategy.

This study is supported by the theory which illustrates that strategy implementation is the method of explaining the strategy formulation into positive actions by establishing programs, determining budgets and creating procedures (Pournair, 2013). A number of scholars concur with this theory where Lee and Puranam (2016) indicates that accuracy

of strategy implementation is the degree to which an organization's actions match to its strategic objective.

As a significant of strategic management many authors and research for decades attempted to identify and evaluate the factors which have influenced on strategic management implementation (Pournarist, 2013, p.67). A summary of some of these authors is illustrated below in Table 6.

Table 6: Factors Influencing Strategy Implementation

Researcher / Authors	Factors / Element
Skivington & Daft (1991)	Intended strategy, structure, systems, interactions, sanctions
Roth, *et.al,* (1991)	Coordination, managerial philosophy, configuration, formalization, centralization, integrating mechanisms
Yip (1992)	Organisational structure, culture, people, managerial processes
Bryson & Bromiley (1993)	Context, process, outcome
Lingle & Schieman (1994)	Market people, finance, operation adaptability and environmental factors
Okumus (2001)	Content, context, process, outcome
Higgins (2005) 8's	Strategy and purposes, structure, systems and processes, style of leadership, staff, resources, shared values, organizational culture, and strategic Performance.
Birnbbaum (2007)	Action planning organizational structure, human resource, the annual business plan monitoring and control, the linkage – The foundation for everything else
Birnbbaum (2007)	Action planning organizational structure, human resource, the annual business plan monitoring and control, the linkage – The foundation for everything else
Pournarist (2013)	Financial resources, environmental factors, monitoring and control, staff (human resources) and motivation of employee

5.3 Strategy Implementation of Prepaid Water Meters in the City of Johannesburg

- **Successful implementation of the strategy**

  As discussed earlier, strategy implementation begins by defining the objectives that the organization aspires to achieve long, medium or short term basis. This is a process undertaken during the planning stages. Both the planning and the formulation stages are crucial in laying a framework for implementation. There are a number of factors that should be outlined during planning and formulation which have a bearing on the successful implementation of the strategy. In the Literature Review (Chapter 2) the two approaches to strategy implementation were discussed i.e. McKinsey 7's Models and the Balance Scorecard. Table 6 above outlined other factors that drive the success of a strategy. The results reveal that there are crucial elements that were not considered during planning and formulation which impacted the implementation. The outcomes showed that the planning and formulation of the strategy is mostly done by the concerned department which provided a gap in implementation.

- **The success factors in the strategic implementation of prepaid water meters**

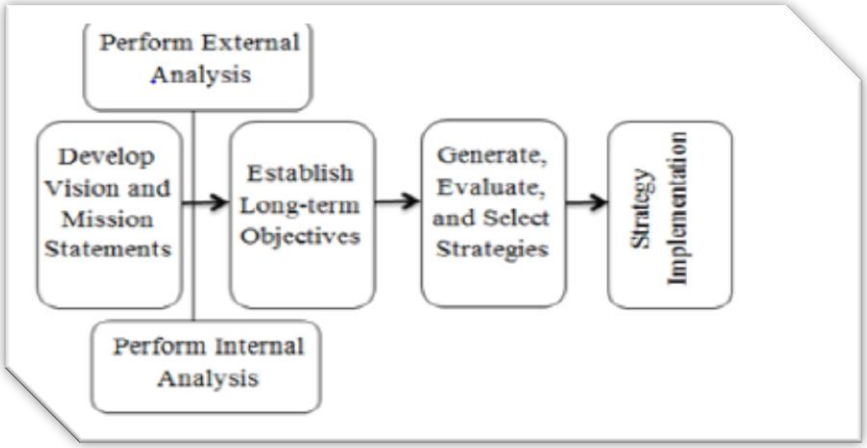
  It has emerged during the interview process and document analysis, that key factors were not considered during the planning phase which later impacted the success of the implementation, e.g. the issue of stakeholder involvement, risk assessment and budget were critical to be addressed during the planning stage. Hrebiniak (2008), indicates that successful strategic outcomes are best achieved when the people responsible for implementation are also involved in planning and formulation.

  Apart from these challenges the study found that there were positive results that were achieved as part of the strategy implementation of pre-paid water meters, e.g. the reduction in the water demand.

- **The challenges and the lesson learned during the implementation of prepaid water meters.**

During the strategic formulation stage, both internal and external analyses should be included (Baroto, Arvand and Ahmad, 2014). They further explained internal factors as cultural, management factors, customer analysis, financial production and operational factors. External factors include economic, social, cultural demographic and natural environment political, governmental, legal and technological factors.

Figure 10: Strategy Formulation Stage of Comprehensive Strategic Management Model



Source: *Journal of Advanced Management Science*

The study revealed mostly that the challenges that were experienced during the implementation were failures from the integration of planning, formulation and implementation.

Issues raised, ranged from poor planning, not enough change management conducted when the project was introduced, funding for the project, lack of political will to change the mindset of communities, culture of non-payment, illegal connections, and reluctance in enforcing by-laws, literacy levels of communities, not being able to recover the expenditure for the implementation and that the project was taken as a solution for all the billings problem.

On the lessons learned it transpired during the interviews that the diagnosis and research should be done before the planning, in order to understand all elements involved and the risk of implementing the strategy and to identify the mitigating factors as well.

- **Implementation of pre-paid water meters to reduce unaccounted for water in Soweto**

  As discussed in the literature that has been reviewed, the balance scorecard advocates that in order for the strategy to be successful there should be clear measures that can be monitored. When the outcomes are stipulated upfront it is possible to put in place corresponding measures. The study reveals that the outcome of the unaccounted for water was reduced, however illegal connections were still a problem. By-law enforcement was also raised as a challenge.

- **Implementation of pre-paid water meters to reduce water demand in Soweto?**

  The Literature review indicated that the implementation of pre-paid water meters was as a result of high demand in Soweto. The implementation was a mitigating strategy to deal with this challenge. However, as stipulated, there were a number of challenges that impacted on the achievement of this objective. The findings noted that despite these challenges, water demand in Soweto has reduced despite the new housing developments in the area.

- **Impact of pre-paid water meters on payment percentages**

  The reviewed literature acknowledged that the legacy of 'apartheid' in SA played a significant role on the payment of municipal services. While water demand has reduced the study found that payment percentages have not improved and this is still a challenge. Illegal connections and by-passing of the electrical system were cited as the biggest challenges in this regard.

- **Implementation of pre-paid water meters as a solution to the City of Johannesburg's billing problem**

  This study has identified one of the problems being the billing issue in the City of Johannesburg. The decrease in revenue collection poses a threat in the provision of services. This was also outlined in the Auditor-General reports. An analysis from the interviews reveal that the strategy can be a solution to the billing crisis experienced by the City of Johannesburg, however, it must be implemented in a different format, taking into consideration all the improvements that was done to the Soweto project.

5.4 Areas of improvement

It is critical for municipal entities to ensure that the strategy implementation is formulated correctly in order for the public to have confidence in obtaining efficient service delivery. This study has identified a number of gaps on how the strategy was implemented, and the achievement of the expected objectives from the intervention. The applications that were identified also originated from the problems statement referring to the challenges faced by the City of Johannesburg in collecting revenue. The gaps identified in the implementation of prepaid water meters, which were meant to assist in mitigating the problem, proves that there is still a challenge in implementing a strategy and the ability to achieve the intended results. A discussion in some of the areas of improvement, as identified by this study, is presented below.

- **Involvement of all stakeholders when formulating and implementing the strategy**

The 'Stakeholder theory' indicates that an organisation is a social construction made up of interactions of various stakeholders (Chepkoech and Waiganjo, 2015). Stakeholders are distinguished in various ways. Some are defined in terms of effect and they are categorised by either primary or secondary stakeholder. Primary stakeholders are regarded as those who are directly affected either negatively or positively by the actions of the organisation. The participation of the primary stakeholders is key to the survival of

the organisation. These stakeholders include shareholders, customers, suppliers and employees. Secondary stakeholders include individuals, groups or organisations that indirectly influence o can be influenced by the actions of the organisation (Matten & Crane, 2005). These stakeholders are not essential to the operations of the organisation, however their actions can significantly damage or benefit the organisation (Freeman & McVea, 2001). These stakeholders include public groups such as community.

The interpretation of the responses from the interviews and the reviewed documents revealed that the formulation and implementation of the strategy was done at a departmental level with the exclusion of key departments or stakeholders that were not part of that particular department. It is only later in the implementation process that it was realized that certain key stakeholders were required. The failure to include key departments such as the Operations Department, which is responsible for the maintenance of infrastructure proved to be a critical error when dealing with illegal connections of prepaid water meters. This lead to the fact that a financial loss was experienced on the revenue collection, as residents was not paying for the water that they were utilizing. The failure to involve the IT Department also proved to have a significant impact in ensuring that the system is customer friendly. If during the planning phase all key stakeholders were identified and a proper risk analysis was done, this could have eliminated some of the challenges experiences during implementation phase.

- **Change Management**

Municipalities operate in a very political environment. The literature that has been reviewed indicated that the culture on non-payment for services has been identified as one of the threats for municipalities in providing efficient service delivery. Changing this culture requires effective communication and stakeholder management. Before any intervention is implemented in the community, proper consultation and awareness must be conducted. Moreover communities need to understand how the intervention will

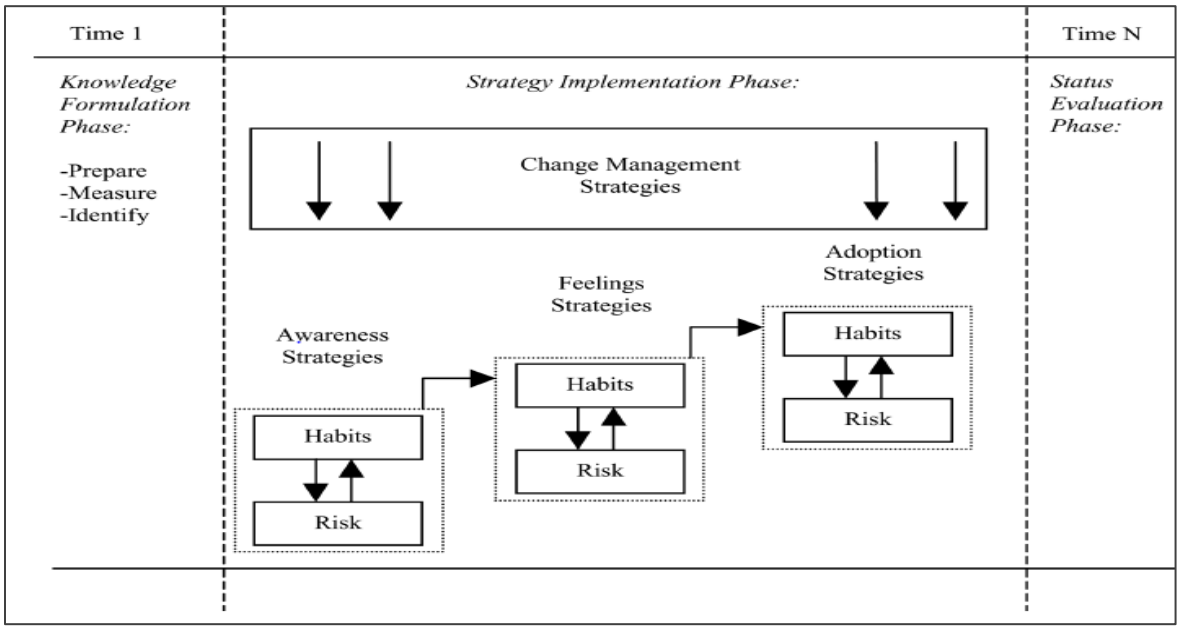
benefit them and bring about change in their lives. It is important that politicians be at the forefront of any change in society, especially when the intervention has political elements in it.

The studied literature also revealed that when strategy implementation involves customers, organizations should take into consideration the external factors that may impact on its implementation during the planning phase. As a result of this view the researcher is also of the opinion that the McKinsey 7 S model alone would have not been the best approach to implement such a strategy.

This study also revealed that there is a challenge with change management approach that should be put in place when a new strategy is implemented. Bossid and Charon (2002), explain that “a bulk of strategy implementation is about change management and launching new initiatives”. Effective change management will contribute to the success and the achievement of the implementation results. Hrebiniak (2013), made it clear that the whole process of implementing strategies is done within the context of the organisation or the environment in which the organization operates. The implementation takes into consideration change management context, the culture of the organization, the organizational power structure and the leadership context. According to Hrebiniak (2013), the inability to manage change is the biggest obstacle to successful strategy implementation

It is common practice that when implementing a new strategy, most companies face resistance from potential users. As suggested in the afore-mentioned, proactive mechanisms will assist in mitigating with resistance to change rather than responding to it. Aladwani (2001) identified three (3) strategies to a successful change management before the implementation phase commences. Figure 10 below illustrates these strategies and will be explained in detail in the next section.

Figure 11: A Suggested Framework for Managing Change



Source: Business Process management journal,

- **Knowledge Formulation Phase**

The first step in managing change is to identify and assess the attitudes of users (Aladwani, 2001). In doing so, the company will be in the best position to identify the source of resistance. Throughout the study it has been mentioned that municipalities are faced with a big challenge of non-payment. If users of prepaid water meters view its installation as a strategy that will challenge this culture, they are likely to show an attitude of resistance. The change management process should therefore pre-empt this reaction and develop strategies that will respond to this likely resistance.

- **Strategy Implementation Phase**

In implementing the change management process, the Company can use the knowledge of users that has been gathered from the previous phase (Aladwani, 2001). There are a number of factors that can be implemented to achieve this. The first step is to communicate to the users the benefits of this intervention, which in this case is the installation of prepaid water meters. This is where key stakeholders such as politicians become critical in relating the message to the users, or residence in this case.

Secondly the Company must be able to describe to the users how the intervention will work, i.e. how prepaid water meters will work. It is more than likely that when people see that the new intervention will make their lives easier, they are will respond positively to the change. Linked to this is the cost factor. The new intervention must be able to show cost minimization. In this instance users must be able to identify the benefits of using prepaid water meters, compared to the utilisation of conventional meters.

In concluding the importance of change management in strategy implementation Markiewicz (2011), also agrees with the above discussion and further indicated that the essence of strategy implementation is the relocation of the model of a dead system to a live system. This required not only change in the static organizational structure but also change in the methods of approach that are based on an efficient communication system.

The findings of the undertaken study indicate that the residents of Soweto did not view the project as beneficial to them. The lack of awareness and consultation by the City of Johannesburg also had an impact to them resisting the change. As a result of this residents sought alternative illegal mechanism to bypass the intervention.

- **Status Evaluation Phase**

Once the change management strategies have been implemented, the process of monitoring and evaluation will be the final phase of this framework. This process provides the Company with feedback information on whether the change management was received positively or negatively. This will afford the Company an opportunity to put appropriate actions in place.

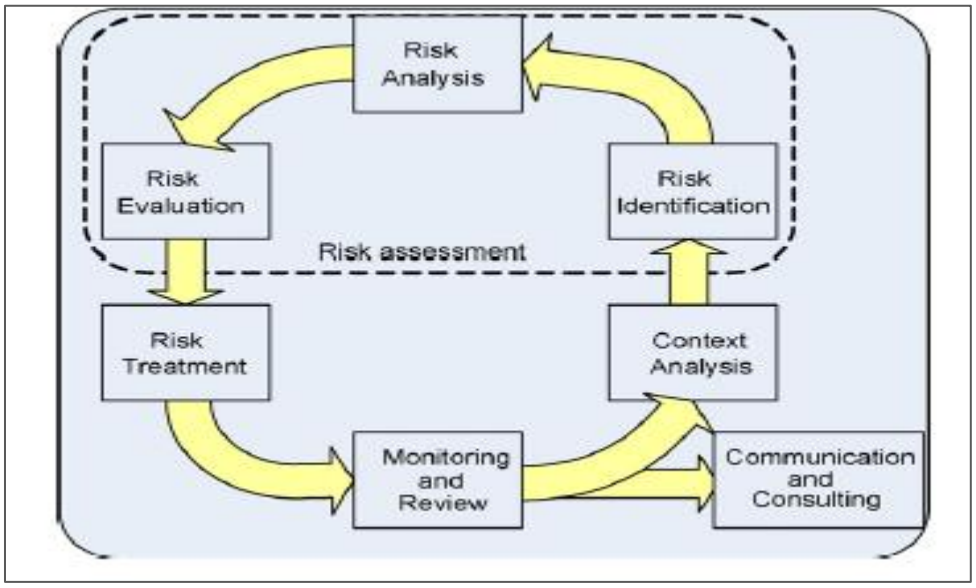
- **Risk identification and management**

Strategy risk management is viewed as the method of identifying and handling risks that are likely to have a material impact on the ability of the organization to achieve its objective. Even though risk identification can be done during strategic planning, it is important to note that strategy implementation has its own risks that also need to be

identified during implementation. One of the reasons that are often mentioned in determining the failures or the successes in the implementation of a strategy is the ability for the organization to assess and manage the risks involved in the achievement of the objectives of the strategy.

Aloini, Dulmin, and Mininno, (2007), explain the seven phases to risk management as depicted in Figure 11 below. It is to be noted that these authors acknowledge that these phases are interdepended to other areas as well.

Figure 12: Risk Assessment Phases



Source: Review of the literature. Information & Management

In order for the strategy risk assessment to be effective the evaluation method should consider a number of possible aspects such as; operational, financial, technology, organizational, market, and connect them to the strategy implementation life cycle (Aloini, *et al.,* 2007).

The above discussion was evident in the findings of this study, where issues of infrastructure maintenance, budget and illegal connection, were identified as some of the challenges encountered during implementation. These are factors that could

have been identified during the planning stage if a proper risk assessment was conducted and treatment could have been identified.

5.5 Chapter Conclusion

This study deliberated and provided the breakdown of the research findings. It also emerged during the analysis that strategy implementation is to be preceded by proper strategy planning. If planning is not done properly the gaps will show during implementation and will have an impact on the success of the implementation.

It was furthermore, revealed that positive steps are being taken by municipalities in mitigating the problem of revenue collection. The findings of this study revealed that the implementation of prepaid water meters have the potential to assist in mitigating the problem. However, there is still room for improvement in during the integration of all the phases of strategic management. Strategy implementation is a crucial phase within strategic management, and if the initial phases are not conducted properly gaps are likely to show during implementation which will hamper the intended results of the strategy.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This research study endeavored to provide an assessment of strategy implementation of prepaid water meters in the City of Johannesburg. With the problems that the City of Johannesburg is experiencing with regards to revenue collection, the study assessed whether the implementation of prepaid water meters can assist in reducing this problem. In determining that the study focused on assessing the success factors, challenges encountered during implementation; lessons learned and established whether the strategy can be rolled out to other areas of the City of Johannesburg.

In Chapter 6, the researcher reviews and concludes the connection between the literature review and the findings of the study. The implications of the findings are discussed in detail. This chapter also provides some recommendations for possible future research.

This study reviewed literature on strategy implementation process, linking it to the whole process of strategic management. A strategy is regarded as the key direction of any organisation which is mostly done by senior management and has major significance for the existence of the organisation. Studies have shown that much of what is put down into the strategy, was not implemented and realised. This research paper attempted to assess the implementation of a strategy, using the prepaid water meters installed by the City of Johannesburg.

At first the literature introduced the importance of strategic management and discussed strategy implementation as a key component of strategy. What came out of the discussion was that companies spend a lot of time on strategic planning, but in essence the important aspect about strategy is the implementation.

From the existing literature and previous studies this research paper collected factors that contributed to the successful implementation of the strategy. These factors includes: communication of the strategy, involvement of key stakeholders, assignment

of responsibilities and putting in place control measures to monitor the implementation progress.

These factors are further supported by a discussion of the two key approaches or models to strategy implementation, the McKinsey 7's model as well as the balance scorecard. Both models provided a guide on the important aspect of the business that needs to be considered when implementing strategies. Managers are also expected to know these factors and consider them when planning and implementing strategies. The literature review also revealed some of the challenges that could inhibit the implementation of the strategy. Both internal and external factors are equally important in the implementation of the strategy and if they are not considered properly during the planning stage they have the potential to contribute severely to the challenges experienced during implementation.

As part of the study semi structured interviews were conducted with executives and senior managers that were involved in the installation of water meters in the City of Johannesburg. The interview questions were based on the knowledge acquired from the reviewed literature and basically linked the theory part of the research to how the strategy to install prepaid water meters was implemented.

The interviews that were conducted revealed that there were elements of the strategy that were implemented successfully, however there were challenges experienced within the municipalities and lessons were drawn for future reference. Most of the challenges experienced were similar to those that were identified in the literature review as inhibitors to the successful implementation of a strategy and these included issues such as; stakeholder identification and management, change management, risk identification and management. The afore-mentioned were some of the challenges identified during the implementation of the strategy. These challenges had an impact in terms of the budget and the duration of the implementation. It was revealed in the findings that the project took longer than expected. All the factors that were not considered had to be relooked and attended to during the implementation phase.

The findings revealed that the respondents had confidence in the fact that if the strategy takes into consideration the challenges that were identified in the roll-out out of the prepaid water meters in the City of Johannesburg, this could be successful in addressing the billing problems that the City of Johannesburg is currently experiencing.

6.2 Recommendations

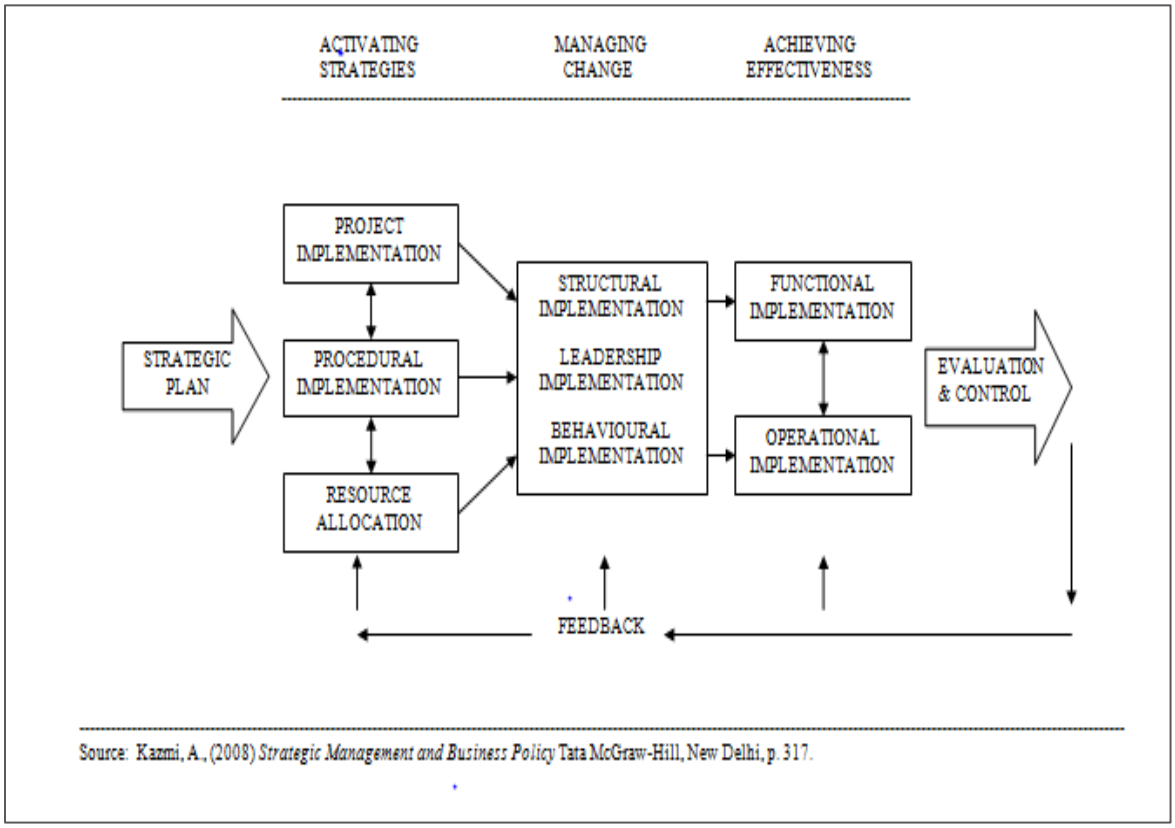
In the case of the City of Johannesburg, a framework is needed which will summarise a comprehensive process of effective strategic implementation. The City of Johannesburg's mandate involves provision of service delivery to the citizens of the City of Johannesburg and therefore its strategy will always have to take internal and external factors into cognisance. The framework must take cognizance of issues such as: leadership, stakeholder involvement, and change management control systems, which will always impact the success of strategy implementation.

Okumus and Roper (1998, p. 219), note that "despite the importance of the strategy execution process, far more research has been carried out into strategy formulation rather than into strategy implementation", while Alexander observes that literature is dominated by a focus on long range planning and strategy content, rather than the actual implementation of strategies, on which "little is written or researched" (Alexander (1985, p. 91)). The apathy to strategy implementation can be ascribed to several reasons, such as: greater likelihood of failures in implementing strategies; higher complexity in the process of strategy implementation; strategy implementation being considered to be less glamorous than formulation; and practical difficulties in research involving middle-level managers. (Alexander, 1985; Aaltonen & Ikavalko, 2002).

Apart from the above mentioned challenges, the City of Johannesburg is faced with many service delivery challenges where there is a growing need to provide quality service while ensuring sound financial management. These are complex obligations to deal with as such efficiency and effectiveness becomes an imperative.

The proposed implementation framework is regarded as a tool to ensure that there is an alignment between strategic planning, implementation and control. This will ensure that the intended results can be achieved as recommended by the strategic implementation framework of Kazmi (2008).

Figure 13: The Proposed Strategic Implementation Framework



The proposed framework is suggested for is simplicity and that it is able to link both the internal and external factors. It also considers the operational and behavioral aspects, as they serve as fundamental principles in strategy implementation.

6.2.1 Recommendation on Further Research

For future research the following recommendation are given:

- The study focused on one case which implemented the prepaid water meters. A comparative study can be conducted with similar intervention in other entities.

- Additional research is recommended to broaden the current practice of municipality with regards to strategic implementation to assess the models that are working for these institutions and further capture how strategic implementation is conducted.
- Duplicate the study in other areas to assess the validity of the findings in a broader context.

6.3 Conclusion

This study has provided a broad review of strategic implementation. Using both the data collected from interviews and document analysis, the study proposed a framework that can be used to provide guiding factors on how strategy implementation can be done.

Similar to other study frameworks, the above proposed framework may consist of restricted application. Future research may be conducted in order to test its application on a broader scale in different organizational environment. The strong argument of the proposed framework is that it attempts to put together the various factors in the implementation of a strategy.

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INTERVIEW GUIDE

Interview Schedule – Consent Section

I am conducting research on strategy implementation of prepaid water meters in the City of Johannesburg. To that end, you will be asked to participate in an interview to better understand the implementation of this intervention specifically the success, challenges and lessons learned in the process. The interview should take no more than 45 minutes of your time. Your participation is voluntarily and you can withdraw at any time without penalty. All data will be kept confidential. By agreeing to be interviewed, you indicate that you voluntarily participate in this research. If you have any concerns, please contact me or my supervisor. Our details are provided below:

Researcher: **Nontsikelelo Loteni**
Email: ntsikieloteni@gmail.com
Phone: **083 555 5530**
Research Supervisor: **Dr Manamela Matshabaphala**
Email: Manamela.Matshabaphala@wits.ac.za
Phone: 082 341 6102

Department
Position Title
Number of years in the Company
Number of years in the position

1. What is your role in the implementation of the project
2. How would you rate the success of the project?

5 = Very unsuccessful	4 = Unsuccessful	3 = Average Success	2 = Successful	1 = Very Successful

3. What are the success factors that came out of the Project?
4. What are the challenges that the Company encountered in implementing this project
5. How did you overcome these challenges?

6. Were the challenges unique to Soweto or these are generic challenges in all areas
7. What have you learned from this project
8. Was the project successful in reducing unaccounted for water in Soweto
9. How would you describe water demand in Soweto after the implementation of the project
10. Have overall payment percentages for water improved in Soweto since the project was introduced
11. Linking this project to the Billing problems faced by The City of Johannesburg. Do you think this can be a solution if the intervention is rolled out throughout The City of Johannesburg?
12. Would you consider rolling this project to other areas as well IF NOT Why
13. Any other comment

ANNEXURE 1: Access to Information

City of Johannesburg
Johannesburg Water SOC Ltd

17 Harrison Street
Johannesburg

Johannesburg Water
PO Box 61542
Marshalltown
2107

Tel +27(0) 11 688 1400
Fax +27(0) 11 688 1528

www.johannesburgwater.co.za

Access to Information for Research Purpose
Summary of Proposed Research

Researcher:		Nontsikelelo Loteni			
Date:		**Cell:**	0794697838	**E-Mail:**	**ntsikieloteni@gmail.com**
University/ Organisation:		University of Witwatersrand			
Research Supervisors:		Dr Manamela Matshabaphala			
Research Level:		Institutional		**E-Mail:**	manamela.matshabaphala@wits.ac.za

Research Summary*:	Title:	**STRATEGY IMPLEMENTATION OF PREPAID WATER METERS IN THE CITY OF JOHANNESBURG**
	Objective:	Assess the strategic implementation of prepaid water meters and determine its success, challenges and lessons learned during the implementation. The study will further assess whether prepaid water meters can be rolled out to other Regions
	Data Requirements:	Interviews and Document analysis– Annual reports, Strategic Plans
	Known Sensitivity or Ethics Issues?	None other than that the Researcher will be interviewing Management within the same Company she works in.

**** Please attach a copy of the approved proposal***

Recommendations *(for JW use only)*:	
Department to supply data:	• Acting MD • COO • FD • GM's Operations, Capex and Strategy and Monitoring • Senior Manager: Technical Services
Any salient points of the research? Special conditions?	Prepaid Water, Revenue Collection & Service delivery enhancement. The research is conducted by a manager within JW. The interviews will be arranged by the researcher.

Directors:
Ms Getty Simelane (Chairperson), Ms Busisiwe Shongwe (Financial Director), Ms Gugu Moloi, Adv John Mateya, ,
Ms Khanyisa Mdutshane, Mr Maselaganye Matji, Mr Simphiwe Kondlo, Mr Brandon Furstenburg, Ms Azwiedziswi Tshivhunge,
Mr Ryan Mudliar

Mr Graham Luden (Company Secretary),
Johannesburg Water SOC Ltd
Registration Number: 2000/030274/07

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Recommendations *(for JW use only)*:	
Any privacy, sensitivity issues?	Ethics clearance will be submitted by researcher once the university clearance committee sits, however, the proposal is sensitive to privacy.
Value of Research to JW?	**Revenue Collection & Service delivery enhancement** – Assess the strategic implementation of prepaid water meters and determine its success, challenges and lessons learned during the implementation. The study will further assess whether prepaid water meters can be rolled out to other Regions of the City.
Additional comments:	
Decision	
~~**Recommended**~~**/ Recommended with Conditions**~~**/ Not Recommended**~~	~~**Approve**~~**d / Approved with Conditions** ~~**/ Not Approved**~~
Manager: Innovation & Technology 5/9/2017	Ad **Chief Operating Officer** 2017-09-18

Directors:
Ms Getty Simelane (Chairperson), Ms Busisiwe Shongwe (Financial Director), Ms Gugu Moloi, Adv John Mateya, ,
Ms Khanyisa Mdutshane, Mr Maselaganye Matji, Mr Simphiwe Kondlo, Mr Brandon Furstenburg, Ms Azwiedziswi Tshivhunge,
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