

Investigation of Kaizen Strategy as Business Strategy at EThekwini Municipality to Improve Business Productivity

by

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This dissertation is submitted in fulfilment of the requirements for the degree of Master of Commerce in Leadership Studies in the

Graduate School of Business and Leadership

University of KwaZulu Natal

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2019

DECLARATION

Mr. N Buthelezi	Date
any other University.	level been submitted for any degree and to
•	that this dissertation is authentic and is the never been submitted for any degree and to

ACKNOWLEDGEMENTS

I would like to acknowledge the support I received from my supervisor Dr Bhasela Yalezo. I was re-assigned to Dr Bhasela Yalezo around mid-June 2018 after I was informed that I had major corrections from my fist submission. He had to put in more time providing guidance so that I could submit this dissertation on time. I would also like to acknowledge my administrative officer Mrs Khanyo Mthanti Mthethwa for her continuous administrative support in terms of promptly addressing all the queries I had, follow-ups and constant updates during the course of my research. I would like to further extend my sincere gratitude and acknowledge co- operation I received from all respondents who participated in this study and EThekwini Municipality, the gatekeeper for granting me access and permission to conduct the study and utilizing its resources in conducting the research. Lastly but not least, I would like to extend my gratitude to my current employer, EThekwini Municipality for affording me some time and a chance to pursue my studies on part time basis.

ABSTRACT

Public sector is one of the biggest employer in South Africa and contributes significantly to the national economy. It is therefore essential to ensure that all public sector entities like Metropolitans are managed well to remain efficient and sustainable at all times. EThekwini Municipality took a decision to implement Economic Development and Job-Creation Strategy in year 2013 that was set out to specifically revive the economy of the Municipality and decrease unemployment rate. However, six years later EThekwini Municipality's Gross Domestic Product growth rate had decreased from 2.6 % to 0.4% between 2013-2016. It is therefore clear that the Economic Development and Job-Creation Strategy did not deliver on the expectations of EThekwini Municipality as was originally anticipated, hence the need for this study. The study seeks to determine if Kaizen strategy can potentially be a solution to EThekwini Municipality's ongoing problems. By definition, Kaizen means continuous improvement through minor incremental changes. This strategy originated in Japan and is famous in the manufacturing sector; however, case studies have revealed that it can be successfully applied in the public sector despite public sector challenges. The study had three research questions that were constructed to achieve the objectives of this study. The study was conducted following the qualitative approach where twelve respondents were purposively selected from EThekwini Municipality to participate in the study. The data that was collected through in-depth interviews was analyzed using thematic approach to deduce three findings of the study. The study revealed that employees working for EThekwini Municipality do believe that Kaizen strategy can increase productivity in the Municipality. Study also relieved that there is theoretical evidence supporting that EThekwini Municipality can benefit from implementing Kaizen strategy. Lastly, the study revealed that there are two challenges that may potentially be a threat to EThekwini Municipality's successful application of Kaizen strategy. These threats include varying management models within EThekwini Municipality and current organizational culture which is not customer-driven.

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LIST OF ACRONYMS

SYMBOL DESCRIPTION

AIDA Accelerated Industrial Development For Africa

AU African Union

AUC African Union Commission
BIAT Boosting Intra-African Trade

CAADP Comprehensive Africa Agriculture Development Programme

CAQDAS Computer Aided Qualitative Data Analysis Software

CFTA Continental Free Trade Area
GDP Gross Domestic Product
EDU Economic Development Unit

FMEA Failure Mode And Effects Analysis

GDP Gross Domestic Product

JICA Japan International Cooperation Agency

KICG Kaizen Institute Consulting Group

KZN Kwazulu Natal

ICC International Convention Centre

ICT Information And Communications Technology

IDP Integrated Development Plan MSA The Municipal Systems Act

MTSF Medium Term Strategic Framework

NDP National Development Plan

PGDP Provincial Growth And Development Plan

PIDA Program For Infrastructure Development In Africa RDP Reconstruction And Development Programme

SA South Africa

SABS South African Bureau Of Standards
SDEA Second Decade Of Education For Africa

SDGs Sustainable Development Goals

SWOT Strengths, Weaknesses, Opportunities And Threats

UK United Kingdom UN United Nations

CHAPTER 1: INTRODUCTION

1.1 Introduction

According to Fourie and Poggenpoel (2017), government entities around the globe strive to deliver better education, better health, better pensions, better transportation services, etc. Government entities understand that impatient public citizens constantly demand to see positive change. However, the funds associated with such demands are usually enormous and this usually imposes a limiting factor in fulfilling those demands and needs, especially in developing countries like South Africa. In a country like South Africa in particular where unemployment rate is very high the need to get value for money from all public entities is therefore imperative (The World Bank, 2016). The study seeks to determine if EThekwini Municipality can potentially benefit or in increase productivity by adopting Kaizen strategy.

The Japanese word "Kaizen" translates to continuous improvement which is a philosophy that embodies continuous improvement at work, home and social life (Corbell, 2016). According to Coetzee, Van Merwe and Van Dyk (2016), the application of Kaizen strategy is not popular in the public sector that is why this study was conducted through in-depth interviews where a sample of twelve respondents from three different departments participated in the study which is that of qualitative nature.

1.2 Background to the Study

According to the Department of the Economic Development and Investment Promotion Unit of EThekwini Municipality (2017), EThekwini Municipality which is located in the South African province of KwaZulu-Natal provides a wide range of services from twenty-six different departments to its citizens. The EThekwini Municipality has made serious strides in the past in bettering the lives of its residents; however, the Municipality continues to encounter a number of challenges such as high unemployment rate, declining Gross Domestic Product(GDP) growth rate and continued urban migration. These challenges are briefly outlined below.

1.2.1 High unemployment rate

According to SA Cities Network (2017), EThekwini Municipality has the highest number of poor people compared to other metropolitans. This problem translates to the high number of people that are dependent on the Municipality for basic services such as water and Reconstruction and Development Programme (RDP) houses. As shown in the 2017/18 capital budget overview presented by Figure 1.1 below, it is evident that EThekwini Municipality spends most of its capital budget (76%) funding human settlement programs which mainly benefit the poor in a form of various social housing projects.

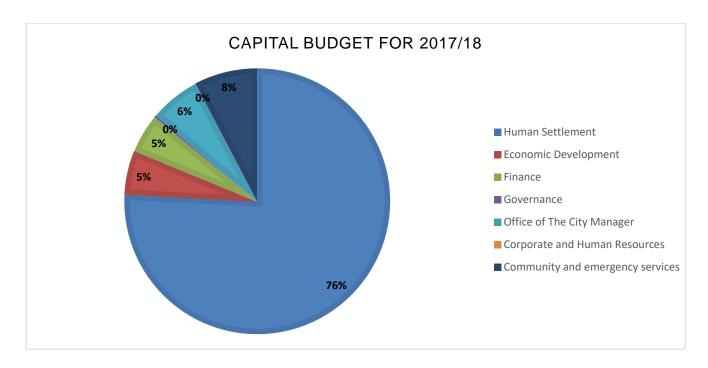


Figure 1.1: EThekwini Municipality Capital Budget Distribution for 2017/18 Financial Year

Source: EThekwini Municipality's Service Delivery and Budget Implementation Plan 2017/2018, page 11.

1.2.2 Declining Gross Domestic Product(GDP) Growth Rate.

Another main challenge for EThekwini Municipality is the GDP growth rate which has been continuously declining since 2010, refer to Figure 1.2 below. According to Department of the Economic Development and Investment Promotion Unit of EThekwini Municipality (2017), this decline can be attributed to various factors such as unfavorable economic conditions in South Africa, decline in number of tourist visiting Durban and increase in population, i.e. increase in a number of people that are dependent on the Municipality for free basic services.

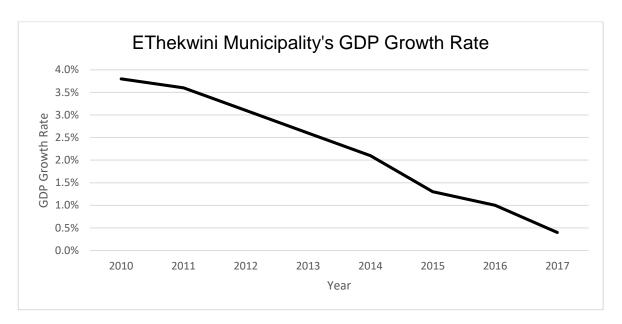


Figure 1.2: EThekwini Municipality GDP Growth Rate Profile for the Past 7 Years.

Source: State of The EThekwini Economy 2016/17, page 31

1.2.3 Continued urban migration

Informal settlements at EThekwini Municipality have been reported to have increased from 24.9% to 27.4 % between 2014-2016 with no sanitation services provided to approximately 75 % of those informal settlements (The World Bank, 2016). This is mainly as a result of continued urban migration problem the Municipality is facing and is deemed as one of the biggest threats to the Municipality's long-term sustainability (The World Bank, 2016).

Despite these challenges the Municipality has encountered over the years, there are some positives that the Municipality can build on moving forward. These positives include EThekwini Municipality being the leading metropolitan in South Africa when it comes to delivery of basic and free services to the poor within the Municipality such as free water supply services (Department of The Economic Development and Investment Promotion Unit of EThekwini Municipality, 2017). EThekwini Municipality also continues to be the strongest destination of local visitors compared to other metropolitans in the country (Department of The Economic Development and Investment Promotion Unit of EThekwini Municipality, 2017).

1.3 Problem Statement

The EThekwini Municipality took a decision to implement Economic Development and Job-Creation Strategy 2013-2018 in year 2013 with a hope of reviving the economy of the Municipality and decrease an unemployment rate (Department of The Economic Development and Investment Promotion Unit of EThekwini Municipality, 2017). Some of the key projects that formed part of this five-year turnaround strategy include extension of Durban harbor, extension of Durban International Convention Centre (ICC), Durban Solar City (Department of The Economic Development and Investment Promotion Unit of EThekwini Municipality, 2017).

However, six years later EThekwini Municipality's GDP growth rate has decreased from 2.6 % in 2013 to 0.4% in 2016 and similarly the informal settlements have been reported to have increased from 24.9% to 27.4 % between 2014-2016 with no sanitation services provided to approximately 75 % of those informal settlements (The World Bank, 2016). It is therefore evidently clear that the Economic Development and Job-Creation Strategy has not delivered on the expectations of EThekwini Municipality as it was originally anticipated. To this end, the study seeks to identify if continuous improvement strategy like Kaizen can potentially be a solution to EThekwini Municipality's ongoing problems.

1.4 Aim of the Study

The aim of this study was to establish if EThekwini Municipality can potentially benefit from adopting Kaizen strategy and thus taking the Municipality closer towards resolving some of its current challenges such as high employment, declining growth rate, etc. and also to highlight some of the potential challenges that may arise should EThekwini Municipality decide to embrace Kaizen strategy in the future.

1.5 Objectives of the Study

- 1.5.1 To understand perceptions of EThekwini Municipality towards Kaizen strategy as a potential solution to increase productivity in the Municipality.
- 1.5.2 To establish if implementing Kaizen strategy as a strategy could be of benefit to EThekwini Municipality looking at the existing conditions.
- 1.5.3 To establish the challenges that could arise when implementing Kaizen strategy as business strategy at EThekwini Municipality

1.6 Research Questions

- 1.6.1 How is Kaizen strategy accepted by EThekwini Municipality as a potential solution to increasing productivity in the Municipality.
- 1.6.2 Are there any indications that implementing Kaizen strategy as business strategy at EThekwini Municipality could be of benefit?
- 1.6.3 What could be the challenges of implementing Kaizen strategy at EThekwini Municipality?

1.7 Significance of the Study

EThekwini Municipality continues to be the main economic hub for the province of KwaZulu Natal and also contributes significantly to South African economy (EThekwini Municipality, 2017). Despite the recent decline in the EThekwini Municipality's GDP growth rate, the Municipality managed to contribute close to 10 percent into South African economy in year 2015 (EThekwini Municipality, 2017). Furthermore, EThekwini Municipality (2017) indicates that EThekwini Municipality provides 10 percent of employment opportunities in South Africa annually. These two facts strongly suggest that EThekwini Municipality has a significant and vital role to play in South African economy where South Africa's unemployment rate has been ranging between 24-28

percent in the last five years with an average national GDP growth rate of not more than 3 percent from 1993-2016 (EThekwini Municipality, 2017).

The EThekwini Municipality on the other hand is currently facing serious challenges in meeting the needs of all the people with its population growth rate of 1% per annum and the declining local GDP growth which is threatening long-term sustainability of the of the Municipality (The World Bank, 2016). In light of all these challenges currently faced by EThekwini Municipality and the significance of the Municipality's contribution into national economy, it is paramount that sustainable, cheap and innovative strategies like Kaizen strategy be considered in an attempt to achieve economic growth that will meet the demands of the local residents without having to inject massive capital investment.

Furthermore, the Metropolitan Municipalities in South Africa are collectively managing a combined budget larger than that of individual provinces and provide services to at least 40 percent of South African's total population (SA Cities Network, 2017). Strategies like Kaizen that systematically seek to improve efficient use of the resources are therefore imperative.

1.8 Delimitations of the Study

EThekwini Municipality is inevitably susceptible to political dynamics and therefore its systems and priorities may change with new leadership coming on board (EThekwini Municipality, 2017). By definition, the philosophy of Kaizen strategy is based on identifying an opportunity on a unique existing process or system (Coetzee, et al., 2016). Therefore, the findings of this study will be limited to the current leadership arrangement of the Municipality.

Furthermore, this study did not entail evaluation of the strategy currently employed by the Municipality with respect to its effectiveness nor did the study seek to compare Kaizen strategy and against the Municipality's current strategy, i.e. Economic Development and Job-Creation Strategy 2013-2018.

Lastly, as to whether Kaizen strategy will work or not for EThekwini Municipality is beyond the scope of this research. However, this research will give EThekwini Municipality valuable information that may be used to set up Kaizen model in the future.

1.9 Assumptions

There is one major assumption that was made in this study. The study assumed that all respondents that participated in the study had a basic understanding of what the concept of Kaizen strategy is all about. This assumption was affirmed by giving a presentation on the principles of Kaizen strategy in a manner that is simplified, interactive, practical and in preferred language, i.e. IsiZulu or English.

1.10 Limitations of the Study

This study is limited to the views and perceptions of Kaizen strategy as a concept. This is because Kaizen strategy is not widely used in the public sector, especially here in South Africa (Coetzee, et al., 2016). This limitation implies that the views of the selected respondents will be purely based on theoretical understanding or framework of the strategy as it was anticipated that none of the respondents will poses prior active experience in using Kaizen strategy.

1.11 Structure of the Dissertation

This dissertation is made up of six consecutive chapters, see summaries below. The same summaries also serve as introductions to these chapters to outline the content for each chapter.

Chapter 1: Introduction

This chapter introduces the study by setting up the scenery and informing the reader of what the study is all about. The chapter covers research background, problem statement, aim of the study, research objectives, research questions, significance of the study and format of the study.

Chapter 2: Literature Review

Chapter one explained above introduces research objectives of the study and its corresponding research questions. This chapter looks into these research questions

and gives responses from literature point of view. This chapter serves as the baseline which was used to benchmark and deduce the findings. It covers numerous relevant case studies on global scale highlighting potential benefits, challenges, recommendations and general perceptions of Kaizen strategy within the public sector setting.

Chapter 3: Research Design and Methodology

This chapter serves as a blueprint of the study detailing how the study was conducted. It looks into various options/methods/approaches the study could have taken and the rationales behind selecting certain options over the others in an attempt to best respond to the objectives of this research. The chapter covers research approach, research population and sample, sampling techniques, sources and collection of data, data analysis, reliability and validity of the research, limitations of the study, resources and ethical considerations which governed the proceedings of this study.

Chapter 4: Data Presentation and Analysis

This chapter entails a presentation of the actual data collected from the respondents through the interviews and highlight certain patterns or themes that were identified during data analysis. These themes will then be used to deduce findings of the study.

Chapter 5: Discussion

Based on the study findings that emanated from data analysis in Chapter 4, this chapter compares study findings against previous studies or literature framework to deduce the final conclusions. However, the conclusions of the study will be presented separately in the final chapter together with recommendations and suggestions for future research.

Chapter 6: Conclusions and Recommendations

This is the final chapter of the study which will cover conclusions, recommendations and suggestions for further studies based on the limitations identified in this study. In addition, this chapter will also include the summary of the study up to this point in order to put the content of this final chapter into perspective.

1.12 Chapter 1 Summary

The main objective of Chapter 1 was to introduce the reader to what this study is about and the questions it seeks to answer, i.e. aim of the study, research objectives and research questions. Furthermore, this chapter briefly introduced the reader to Kaizen strategy which is driven by the principles of ensuring continuous improvement in the work place. In light of how Kaizen strategy by its definition can be of benefit to any entity, this chapter also introduced the reader to some of the core challenges that are currently facing EThekwini Municipality which include high unemployment rate, declining economic growth and high urbanization. These core challenges together with the influence of EThekwini Municipality into national economy were major factors which motivated the need for this study.

According to Dondofema, et al. (2017), Kaizen strategy is still not very popular in South Africa especially in the public sector. The next chapter, i.e. literature review, will therefore seek to give the reader a more comprehensive and in-depth insight into what Kaizen strategy is all about. This chapter will further extensively and critically review previous research on the application of Kaizen strategy particularly in the public sector under the context of the objectives for this study to provide better perspective for the reader and establish a baseline or framework for deducing findings of this study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Chapter one introduces research objectives of the study and its corresponding research questions. This chapter looks into these research questions and gives general perspective from literature point of view. This chapter also serves as the baseline which was used to benchmark and deduce the findings. It covers numerous case studies on global scale highlighting potential benefits, challenges, recommendations and general perception of Kaizen strategy within the public sector environment. Since this study is centered around a strategy called Kaizen, this chapter will also look at various theories of strategy and the evolution over the years.

2.2 Theories of Strategy

Gerry, et al., (2013) defined strategy as a coherent narrative about the future direction of an organization which provides the entire workforce with framework that will guide their decision making processes. A strategy must clearly and explicitly outline strategic objectives and goals an organization aspire to achieve (Gerry, et al., 2013). For an example, EThekwini Municipality aspire to be the most liveable City in Africa by year 2030 (EThekwini Municipality, 2017). Traditionally, various text books on strategic management have presented strategy as an abstract phenomena and as something that an organization possesses (Dinnie, 2015). Most textbooks over the years have presented strategy where strategy formulation is separated from implementation (Dinnie, 2015). In other words, the traditional view of strategy suggested that the planning function of the strategy, i.e. strategy formulation is strictly reserved for management.

Scase and Goffee (2017) described the traditional view of strategy as outdated. Strategy today is described as what people do in an organization on daily basis as opposed to a set of procedures an organization possesses (Scase and Goffee, 2017). Alvesson and Sveningsson (2015) described strategy not as a sole domain for top management anymore. Alvesson and Sveningsson (2015) further added that while top managers still play a vital role in the overall success of strategy, the emerging theories

support the view that managers should not be the only strategists in an organization. Lastly, Alvesson and Sveningsson (2015) described strategy as a phenomenon that is about ideas and choices that are fueled by both cognitive and political processes.

2.2.1 Strategic Management in the African context

African strategy revolves around the concept of Pan-Africanism which is based on the belief that unity is a vital component that is required to work towards economic and social prosperity particularly for the benefit of African descent people (Gerry, et al., 2013). African Union which has fifty-five member states plays a key role in setting up and coordinating African social and economic growth programs (Gerry, et al., 2013). African Union carried out SWOT (strengths, weaknesses, opportunities and threats) analysis to identify key performance areas that its member countries are expected to embrace by incorporating those areas into their respective national strategies (Venter, 2014). Those identified areas are in turn expected to filter down as policies to individual businesses and public sector entities within that particular nation (Venter, 2014). Venter (2014) emphasized that the identified strategic objectives of the region can only be achieve through a close working relationship between government and the private sector.

Improving of infrastructure has been identified as one of the high priority strategic objectives that African Union member states need to work in order to attract investment and thus improve their economic and social standing (Madlala, 2018). The decision to prioritize this area was taken by the African Union following SWAT analysis which revealed that lack of infrastructure like harbours, electricity, ICT, railways, water, sanitation and roads present serious challenges for the investors and businesses in African continent (Madlala, 2018). For an example, Madlala (2018) found that rural areas in Africa have 34 percent road access compared to 90 percent in the rest of the world and that only 17 percent of the roads are paved in the sub-Saharan region of Africa. African Union Commission (2015) listed several other strategic initiatives that were launched by the African Union since it was instituted in 2001. These initiatives include: Second Decade of Education for Africa (SDEA), Comprehensive Africa Agriculture Development Programme (CAADP), Program for Infrastructure

Development in Africa (PIDA), Accelerated Industrial Development for Africa (AIDA), Boosting Intra-African Trade (BIAT), Continental Free Trade Area (CFTA) initiative and Agenda 2063 – The Africa We Want (African Union Commission, 2015).

African Union Commission (2015) presented the following set of challenges that are usually encountered by many African nations including South Africa in rolling out their programs to achieve the set strategic objectives.

- There are still significant qualitative and quantitative gaps in human resources which includes skills, professionalism, commitment and motivation.
- Poor administration and leadership resulting on poor communication and implementation of programs or policies to achieve the set strategic objectives.
- Weak processes, systems and information technologies in most of the institutions
- Poor public sector governance

Despite these challenges as listed above, Africa has made serious strides in changing the status quo for the better. To name a few examples, the African Union in partnership with the United States has instituted several initiatives aiming at boosting labuor productivity and human capital through Power Africa, Feed the Future and other various health and educational initiatives (Venter, 2014). The life expectancy of African people five decades ago was averaging below 45 years, however according to the statistics published by Madlala (2018) in 2016, life expectancy has improved to 59 years for males and 62 years for females. Lastly, collaborating with the United Nations (UN) the African Union has endorsed the global goals by synchronizing its Agenda 2063 with seventeen Sustainable Development Goals (SDGs) that were introduced in year 2016 (Madlala, 2018). The SDGs were instituted to end poverty, protect the planet and ensure that all people enjoy peace and prosperity (Stewart, 2015).

2.2.2 Strategic Management in the South African context

National strategy

The section above briefly outlined how South Africa gets some of some of the strategic mandate from taking part in African Union and United Nations. Apart from participating in these intergovernmental organizations, South Africa has devised its national strategic plan which was designed to strategically guide all entities in South Africa (National Plannig Commission, 2011). This national strategic plan is referred to as National Development Plan (NDP). The former president Jacob Zuma in 2010 appointed a commission that was tasked to draft a vision and a national plan 2030 (National Plannig Commission, 2011). The commission was also tasked to look back and identify shortcomings and achievements since 1994 (National Plannig Commission, 2011). The commission identified failure to implement policies and lack of broad partnerships as the main cause for slow socio-economic development is South Africa. The plan was officially endorsed late in 2011 as the national blueprint to year 2030 (National Plannig Commission, 2011). The main objective of NDP is to eliminate poverty and reduce inequality in South Africa (National Plannig Commission, 2011). The NDP seeks to achieve the following objectives by year 2030 (National Plannig Commission, 2011):

- Uniting South Africans of all races and classes around a common programme to eliminate poverty and reduce inequality.
- Encourage citizens to be active in their own development, in strengthening democracy and in holding their government accountable.
- Raising economic growth, promoting exports and making the economy more labour absorbing.
- Focusing on key capabilities of both people and the country.
- Capabilities include skills, infrastructure, social security, strong institutions and partnerships both within the country and with key international partners.
- Building a capable and developmental state.
- Strong leadership throughout society that work together to solve our problems.

Challenges

The study conducted by Chilenga (2017) found that the NDP fails to detail critical factors that will affect the strength and achievability of the plan. Other studies such as the one conducted by Naidoo and Mare (2015) have revealed that slow progress on the implementation NDP can be attributed to challenges such the implementation of policies that are not aligned with NDP, lack of capacity and commitment within the state institutions.

Benefits

According to Chilenga (2017), some of the benefits that have been achieved since the implementation the NDP in 2011 include improved life expectancy, more children are now attending school and access to basic services such as housing, water and electricity has also increased.

2.2.3 Provincial strategy

For the purposes of this study, this section will particularly focus on the province of KwaZulu Natal where EThekwini Municipality is located. The province of KwaZulu Natal in 2013 constituted a Provincial Growth and Development Plan(PGDP) for 20 years which has strategic objectives aligned with that of NDP (KZN Provincial Planning Commission, 2016). Some of the objectives contained in PGDP include job creation, human resource development, strategic infrastructure development (KZN Provincial Planning Commission, 2016). This provincial strategy also takes into account international community objectives such as the ones from African Union

Challenges

The challenges encountered in the implementation of PGDP were found to be very similar to the ones encountered nationally (KZN Provincial Planning Commission, 2016). The challenges include poor implementation of the policies that are meant to achieve the targets, lack of commitment from the officials and shortage of skills in the public sector institutions (KZN Provincial Planning Commission, 2016).

2.2.4 Local strategy

Local government in South Africa like EThekwini Municipality utilizes Integrated Development Plan(IDP) to fulfill strategic objectives of provincial and national government, i.e. PGDP and NDP respectively (EThekwini Municipality, 2017). The Municipal Services Act (No. 32) 200 (MSA) requires that local government official must compile an Integrated Development Plans for the areas they operate in (EThekwini Municipality, 2017). The EThekwini Municipality's vision of becoming the most caring and liveable City by 2030 was at the center of the 2017/2018 IDP review with the main aim of re-aligning the Municipal vision with the implementation of IDP (EThekwini Municipality, 2017). In year 2013, EThekwini Municipality formulated five-year Economic and Job Creation Strategy 2013-2018 from IDP objectives. This strategy was instituted to assist in expediting economic programs and create job opportunities (EThekwini Municipality, 2017).

The following section looks at some of the strategic projects that were executed by various units within EThekwini Municipality in the past five to ten years as part of the turnaround strategy to the declining economic growth and high unemployment rate (EThekwini Municipality, 2017). These projects and initiatives are in-line with the five-year Economic and Job Creation Strategy 2013-2018 which was implemented in year 2013 by EThekwini Municipality's Executive Council (Economic Development in Municipalities: Case Study Development, 2018).

Electricity unit

This unit is mandated to provide electricity, public lighting and other energy related requirements to businesses and the communities (EThekwini Municipality, 2015). As highlighted from an annual report for 2014/2015 financial year, this unit carried out twenty-four major projects during this year. All those projects were capital projects, which entailed upgrading of the old infrastructure and establishment of new the infrastructure.

Economic Development Unit

This unit is mandated to promote economic development through job creation, economic transformation and economic intelligence within the Municipality (EThekwini Municipality, 2015). Similarly, in the past recent years, this unit has undertaken a number of capital projects which were deemed key projects in developing the economy of the city. These projects included projects like extending the Durban harbor which had started to reach its maximum capacity, extension of Durban International Convention Centre (ICC) in order to accommodate more conference activities.

EThekwini Energy Office Unit

This office is mandated to initiate and administrate projects under the following fields: renewable energy, energy efficiency and climate change mitigation (EThekwini Municipality, 2015). Some of the major recent projects undertaken by this office in the past few years include: Durban solar city, EOS, green corridor and wind repowering program. Similarly, these are all major capital projects or initiatives.

The discussion and statistical evidence as detailed above clearly indicates that EThekwini Municipality has not succeeded in concurring fundamental challenges such as high unemployment rate, declining Gross Domestic Product (GDP) and increase in informal settlements. This is despite all the projects, initiatives and programs the Municipality has implemented over the years as part of turnaround strategy.

Challenges

Despite the strategic plans that have been instituted by EThekwini Municipality, the evidence has shown that the Municipality has not succeeded in concurring fundamental challenges such as high unemployment rate, declining GDP and increase in informal settlements (EThekwini Municipality, 2017). IDP review for the year 2017/2018 points out at lack of marketable and skilled work force as the major challenge for EThekwini Municipality.

Conclusion

From the numerous discussions on strategic management at various levels as covered in this section, it was apparent that various public institutions from continental level down do local government here is South Africa are doing fairly well when it comes to formulating strategies. However, the common theoretical theme from the top down the local government is that implementation of plans, policies, initiatives is very poor. Challenges that tend to impede implementation of plans range from application of policies that are not aligned to strategic objectives, lack of commitment from some of the officials, officials in the public institutions lacking necessary skills to interpret and implement the plans. Perhaps it's time for the public entities to consider change in trajectory and explore other strategies like Kaizen.

2.3 Kaizen strategy and the origin

This entire section, Kaizen and the origin simply defines and introduces the concept of Kaizen strategy solely for the benefit of the reader. This section does not add any value with respect to the objectives of this research but nonetheless deemed necessary with an understanding that the concept of Kaizen principles is not popular in the public sector, especially here in South Africa (Coetzee, et al., 2016). This section will allow the reader to relate and understand the findings with ease.

2.3.1 Definitions of Kaizen Strategy

Kaizen is a Japanese word meaning "change for better" where "Kai" and "Zen" stand for "change" and "good" respectively (Macpherson, et al., 2015). According to Corbell (2016), Kaizen strategy takes into account collaborative and holistic approach to changes for the better involving the whole team, i.e. teamwork among management and employees. Fundamentally, this approach yields continuous process improvement and quality control in a timely fashion without major capital investments and improvement is achieved through optimally organizing the existing equipment, facilities, people and resources (Corbell, 2016).

Mora (2015) described Kaizen as the use of common sense in a systematic way to ensure that both management and employees commit towards minimizing

inefficiencies within an existing system. Kucińska-Landwójtowicz (2015) described Kaizen as a culture of continuously and systematically seek for opportunities of improvement. The concept of Kaizen is that the people that undertake certain tasks are the most knowledgeable about those tasks and therefore involving them and showing confidence in their capabilities promotes sense of ownership to its highest (Barraza and Smith, 2016). By definition, it is thus a requirement that people that are involved during implementation of Kaizen strategy are people from within an organization and with adequate experience to fully understand end-to-end operations. This critical strategy requirement was taken into account when selecting the best sampling technique for the purposes of this study; more details will be covered in Chapter three, i.e. Research Design and Methodology.

All these different definitions given by various authors above make it very clear that Kaizen strategy is "cheap", i.e. does not require massive investment, requires teamwork and needs to be consistently practiced as an organizational culture in order to prevail and yield positive results.

2.3.2 History of Kaizen Principles

The concept of Kaizen principles originates from Japan and was first implemented by one of the biggest Japanese automotive manufacturer, i.e. Toyota shortly after World War II and hence sometimes referred to as Toyota Production System (New, 2016). This strategy contributed significantly towards Toyota dominating the United States consumer market in the 1970s and today Toyota is regarded as one of the most successful multinational automotive manufacturers in the world (New, 2016). In 1985, a Japanese expert in quality management named Massaki Imai founded a program called Kaizen Institute Consulting Group(KICG) which was aimed at disseminating Kaizen strategy to Western companies (Yokozawa, et al., 2017). It is mainly because of this program that Kaizen strategy is now popular around the globe; particularly in the private sector (Yokozawa, et al., 2017). Studies have showed that there was sudden increase in the United States manufacturing sector soon after they started embracing Kaizen strategy (Bwemelo, 2016). Looking at the performance of these

world economic leader today, i.e. Japan and United States, clearly there is a lot developing countries like South Africa can gain from Kaizen strategy.

2.3.3 Principles and critical elements of Kaizen strategy

Coetzee, et al. (2016) named two key features of Kaizen which constitute a foundation of Kaizen philosophy; namely incremental and continuous improvement and the involvement of the entire workforce. In other words, Kaizen requires continuous effort and commitment from every level of the workforce to propose and practice the use of the existing resources to attain improved quality and productivity (Coetzee, et al., 2016). The concept of Kaizen is process-based; meaning there must be a process that is taking place (Hameed, et al., 2016). According to Hameed, et al. (2016), the main objective of applying of Kaizen strategy is to improve that process without introducing additional resources into the process, i.e. making it more efficient by involving people that are already working in that process.

Fritze (2016) described the philosophy of Kaizen not just as a systematic tool that improves efficiency of processes but as a culture that demands the entire workforce to understand how and why processes work. As the starting point, Fritze (2016) recommended that a process flow diagram be created showing all the processes and steps involved from the beginning until the stage where products are being produced or service being delivered. Kaizen strategy makes use of certain tools that assists both operators and supervisors to easily detect deviations or problems and quickly come up with action plans (Zailani, et al., 2015). Zailani, et al. (2015) referred to these tools as '9 tools' and include things like process flow diagrams, histograms, check lists, data collection, etc. According to Zailani, et al. (2015), organizations are however not limited to these tools as mentioned above, i.e. organizations can choose to utilize any tool that will assist in tracking of problems or threats which may arise.

Kaizen strategy as a concept directly promotes visual management (Al Smadi, 2015). Al Smadi (2015) further elaborated by stating that Kaizen strategy requires that both

management and employees be in constant communication which is key in identifying problems, reviewing performance data and coming up with ideas to keep improving. Al Smadi (2015) referred to constant communication between management and the workers as one of the crucial elements of Kaizen strategy which can be the difference in an organization realizing the expected benefits or total failure.

Another extremely essential aspect of Kaizen strategy is that in order for the strategy to yield positive results it has to be an ongoing exercise where continuous improvement is always maintained (Fritze, 2016). Fritze (2016) discovered that it is common that introducing something new is relatively easy but the most challenging part is to sustain the momentum of that change. That's usually where some of the companies have failed when it comes to implementing Kaizen strategy (Fritze, 2016).

Macpherson, et al.(2015) described Kaizen strategy as a systematic approach that requires management of the changes and promotes continuous improvement of the processes by following the steps as represented in Figure 2.1 below.

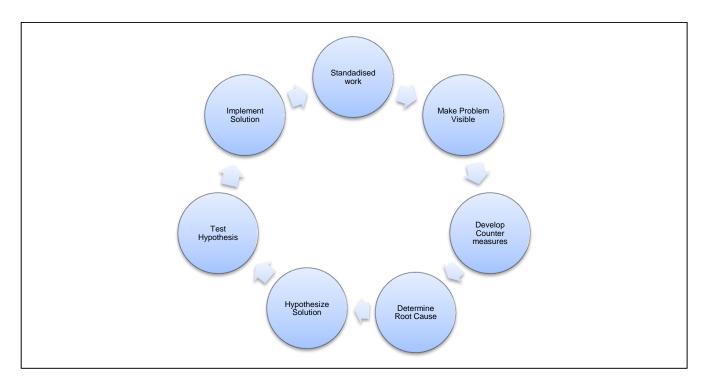


Figure 2.1: Kaizen principles typical continuous improvement steps

Source: Adapted from Macpherson, et al.(2015) page 78

The following section gives a brief overview of five general principles an organization can follow when implementing Kaizen strategy in order to achieve continuous improvement.

Principle No.1: Go to *gemba* first when deviations or problems arise.

Gemba is a Japanese word which refers to the actual work of place (Omotayo, 2017). According to Omotayo (2017), managers in most cases are not informed timeously when problems or deviations arise in the process or work place. Simmons (2018) found that in some cases it takes days or even weeks before managers are made aware of the problems have occurred. There isn't much a manager can do to correct or reverse deviations if communication of problems is delayed; hence the introduction of Kaizen Principle No.1. First principle of Kaizen states that managers or supervisors must timeously and physically report to the actual work place where a deviation has occurred in order to fully understand the problem in all possible angles (Simmons, 2018). Further to that, first principle requires managers to meet with all relevant employees at the actual work place where a problem has occurred to also get an insight on how employees view the problem, study their behavior and observe corrective actions (if any) that are being executed (Estrada-Robles, 2015). This first principle of Kaizen, i.e. gemba will allow both employees and managers to obtain better view of the problems that have occurred and therefore be able to come with prompt solutions and controls that can be used to prevent similar problems from recurring in the future (Estrada-Robles, 2015).

Principle No. 2: Check with gembutsu

Similarly, *gembutsu* is another Japanese word meaning "real thing" (Imai, 2012). In the context of Kaizen, *gembutsu* or "real thing" refers to things like machines, computers, tools, customer complaints, rejects, and other tangible records (Imai, 2012). Principle no.2 of Kaizen states that both managers and employees whilst at the actual work place must check the state of machines, equipment, computers, operating, manuals, customer complaints and other relevant records (Singh, 2017). These actual records must then be checked against the prescribed methods, operating rules and standards

in order to determine the epicenter of the problem. These accurate and comprehensive observations at the affected workplace will assist in bringing out ambiguities that need to be resolved (Singh, 2017).

Principle No. 3: Execute temporary remedy measures on the spot.

Principles No. 1 and 2 of Kaizen as briefly discussed above are generally adequate in identifying where the problem is coming from (Gowen, 2015). However, Gowen (2015) further mentioned that merely identifying the problem is not adequate if immediate corrective actions are not implemented to remedy the situations, hence principle no.3 of Kaizen. Principle No. 3 of Kaizen requires that immediate temporary actions be taken as soon as the problem is detected (Sisson, 2015). Sisson (2015) discussed common examples of immediate temporary actions which include writing down instructions, altering of shift arrangements, conducting frequent meetings and introducing new checklists for enhanced monitoring. Sisson (2015) also discovered that temporary plans in most cases can yield permanent effects.

Principle No. 4: Find the root cause of the problem or deviation.

Now that the problem has been identified and temporary controls have been implemented to remedy the situation; the next step is to find out what led to this problem from the first place. Gao (2015) defined this as principle no.4 of Kaizen and involves finding the root cause of the problem so that preventative control measures can be put in place. Finding the root cause to the problem generally entails a comprehensive investigation into the problem, i.e. questioning the people involved, analyzing historical data and sequence of events leading up to the problem (Gao, 2015).

Principle No. 5: Standardize for prevention of recurrence.

Principle no. 5 of Kaizen states that once permanent solutions have been devised the next step is to standardize these solutions across similar applications in an organization for further improvement (Vagnoni, 2015). This process entails conveying changes to all the employees and providing them with necessary training.

According to Marques (2018), Kaizen is based on the fact that in real life there is no process or system that is perfect or operating at an ideal state and thus there exists an opportunity for improvement at all times. Five Kaizen principles as discussed above make it much easier to identify opportunities for improvement and areas that can potentially cause problems (Al Smadi, 2015) The following section focuses on two pillars of Kaizen strategy as described by (Marques, 2018). The two pillars forming Kaizen which will be discussed below are elimination of waste (muda) and housekeeping. It is essential that commitment from both management and the workers be maintained in both aspects (Thakkar, 2015). Thakkar (2015) further mentioned three factors that need to be taken into account to ensure success when executing activities under these two pillars of Kaizen. These factors include visual management, responsibility of a supervisor and realizing the need for the training (Thakkar, 2015).

2.3.4 Housekeeping using Kaizen Strategy

Singh, et al. (2018) defined housekeeping within Kaizen context as the management of the work place which is sometimes referred to as Gemba. The widely used tool or system for housekeeping in Kaizen is called 5S (Singh, et al., 2018). In English 5S stands for Sorting, strengthening, shining, sanitizing and sustaining (Singh, et al., 2018). The 5S tool of Kaizen assists in improving condition of the work place such that it stays in order which ultimately have an impact on how employees feel about their work place, services they render and the products they produce (Singh, et al., 2018). Chourasia and Nema (2016) discovered that the practice of 5S system nowadays has become so popular in the manufacturing industries such that it has now been deemed as a requirement in order for the manufacturing company to be recognized as worldclass. Various case studies have shown that 5S system can similarly be applied in the service sector with beneficial effects despite the fact the 5S system is yet to be popular in the service/public sector (Chourasia and Nema, 2016). 5S system apart from improving the cleanliness of the working environment or Gemba is also known to be an effective tool in improving safety of the working environment (Gupta and Jain, 2015). 5S system components are briefly discussed in the following section.

Sorting

Sorting which is referred to as Seiri in Japanese is the first step of 5S system and is defined as the removal of unnecessary items from the work area (Chourasia and Nema, 2016). Tagging method is commonly used when sorting items where occasionally used items are labeled and removed to a storage area nearby the workplace while items which are found to be completely unnecessary are disposed appropriately (Singh and Singh, 2017). There are generally three questions one should ask when applying tagging method to sort items, i.e. how much is needed? how often is it needed? and is it useful? (Gupta and Jain, 2015).

Strengthening

Strengthening which is referred to as Seiton in Japanese focuses on putting items that are that are required in specific positions (Chourasia and Nema, 2016). Strengthening which is sometimes referred to as "set in order" entails locating items in order of work flow (Chourasia and Nema, 2016). Macpherson, et al., 2015 described strengthening as a way of arranging items in the most efficient and usable way through organizing and labeling item locations. Common activities entailed when strengthening the workplace include labelling of each item, use of different colours for ease of identification and storing of similar items together (Macpherson, et al., 2015).

Shining

Shining which is referred to as Seiso in Japanese is defined as the maintenance of work place or gemba with already sorted and set in order items to ensure that the work place remains safe, conducive for the employees to perform at their best and appealing to the eyes of the consumers (Agrahari and Dangle, 2015). Agrahari and Dangle (2015) added that keeping a clean working environment must be a habit for all the employees. Chourasia and Nema (2016) recommended that an organization needs to set up standards and controls that will ensure that cleaning is done effectively at all times. In addition to just maintaining clean working environment the 3rd component of 5S system also assists in identifying root causes of dirt and residuals in the work place (Macpherson, et al., 2015)

Standardizing

Standardizing which is referred to as Seiketsu in Japanese entails developing a set of procedures that assist in preserving and monitoring the status quo of the first 3S of the 5S Kaizen system (Patel and Thakkar, 2017). Standardizing ensures that best practices are continuously maintained and enforced (Patel and Thakkar, 2017). Ghodrati and Zulkifli (2016) strongly emphasized that the set standards must be set out clearly, in a manner that is easy to understand and communicated well to every employee.

Sustaining

The application of the first 4Ss as described above has been found to be a powerful and cost effective system when it comes yielding measured and visual results (Veres, et al., 2017). However, it has also been discovered that if the first 4S are not embraced with discipline and in a sustainable manner then the entire 5S system is bound to fail and the original unorganized state will be attained all over again (Patel and Thakkar, 2017). This is the basis of the 5th S in 5S system which is called sustaining and referred to as Shitsuke in Japanese. Several studies have found this stage of the 5S to be the most challenging one and requires more attention (Veres, et al., 2017). Veres, et al. (2017) described the last stage of the system as the stage which requires persistent commitment from management to continuously instill and enforce the culture of sorting, setting aside, cleanliness, etc. Furthermore, employees may need to be trained so that they can understand the value of 5S system with respect to the objectives of an organization (Coetzee, et al., 2016). Tools such as posters, slogans and newsletters sharing achievements are commonly used to promote and raise awareness of 5S system (Coetzee, et al., 2016). The following section focuses on another essential pillar of Kaizen strategy which is called waste elimination.

2.3.5 Waste elimination using Kaizen Strategy

Shah and Pandya (2015) discovered that in any process or organization, resources like people and the equipment either add value or take value away. In the context of Kaizen, all activities that are not value-adding are classified as waste, also known as

'muda' in Japanese language (Shah & Pandya, 2015). Rotter, et al.(2018) described waste elimination as one of the easiest activities to attain improvement since generally it doesn't cost much. Rotter, et al. (2018) further defined "work" in the context of Kaizen strategy as a combination of value-adding activities where raw materials are being converted into the final products. Chiarini, et al.(2018) named the following examples as the sources of waste in an office environment, i.e. passing of work that has numerous mistakes, bureaucratic barriers and unnecessary documentation. It is essential that organizations be aware of these potential sources of waste when deciding to embrace Kaizen; i.e. it assists in identifying opportunities for improvement (Chiarini, et al., 2018). Typical sources of waste common in a production environment will be discussed briefly in the following section.

Over production

Jayswal, et al. (2017) discovered that over production usually takes place when a utility is worried about equipment failures that may arise and opt for overproduction. Unfortunately, as stated by Jayswal, et al. (2017), this type of operation can lead to additional storage space requirements, additional manpower, usage of raw materials before time and additional transportation requirements.

Inventory

According to Lacerda, et al. (2016), any inventory whether finished products or semi-finished products do not add any value. Instead, inventory results on additional costs in terms of space requirements and extra machinery to move products around (Lacerda, et al., 2016). Furthermore, depending on the environment the quality of certain products may start deteriorating which will then constitute wastage (Lacerda, et al., 2016). In order to minimize this type of waste Lacerda, et al. (2016) recommends that organizations need to try producing the products as per demand and adjust accordingly when the demand changes such that minimum inventory is maintained. Furthermore, stored finished products are always at a risk of total loss due to accidents like fire and other unforeseen disasters (Lacerda, et al., 2016).

Processing

Processes that are not synchronized and bottlenecks within the process can lead to significant wastage (Chiarini, et al., 2018). Chiarini, et al. (2018) further stated that such waste can be eliminated through process re-configuration in favour of synchronized production. This is one of the reasons why it is imperative that the people that participate in carrying out Kaizen must the people that understand the process thoroughly and thus able to identify problems and areas of improvement with ease (Al Smadi, 2015). Akaranga (2016) also pointed out that excessive manpower on the same processing line could have wasteful results as that increases probability of making human errors and high variance in terms of carrying out work activities, i.e. inconsistent production. Furthermore, unreliable equipment within a process could be the cause of wasteful operation (Bora, et al., 2017).

Transportation

Transporting finished/semi-finished products does not add any value and thus similarly classified as wasteful operation (Kisalu, 2015). In some instances, products do get damaged during transiting process (Kisalu, 2015). As recommend by Estrada-Robles (2015), organizations should consider avoiding the need to use transport or shorten the distances as much as possible in order to minimize wastage as a result of transportation.

Defects or Rejects

Rejects result on interrupted production, additional monitoring, additional time to fix the problem and usually the paper trail increases (Veres, et al., 2017). Veres, et al. (2017) described defects management as managerial responsibility. Thakkar (2015) added that management has a responsibility to instill a culture where systems are seen as cause of the problems and not the workforce. Management therefore has a responsibility to ensure that the good systems are devised to ensure that defects are minimal and if they occur the system must be such that defects can be rectified quickly and on the spot (Veres, et al., 2017). One of the most traditional techniques which can be used to analyze quality of the defects is called Failure Mode and Effects

Analysis(FMEA) (Hachkowski, et al., 2017). Systems such FMEA can be used to gather more information on the nature of defects which can later be utilized to devise new preventative systems or improve on the existing systems (Hachkowski, et al., 2017)

Waiting

Waiting for a piece of equipment within a process to be repaired and the operator solely watching the machine in operation are described as two classic examples of wasteful operation (Estrada-Robles, 2015). This type of potential waste has been described as one of the golden opportunities for the application Kaizen (Estrada-Robles, 2015). Other sources of waste which are common in the municipal environment include delayed payments from the customers as a result of poor communication and follow-ups (Alvi, 2016). In the office environment Alvi (2016) gave an example under this category where documents unnecessary stay on the desk without being processed on time. This is also common if an organization is not flexible enough; i.e. documents may remain unprocessed for weeks simply because whoever is meant to process them is not available at the time and there is no one to process them (Akaranga, 2016).

This concludes the introduction part of literature review which entailed various definitions of Kaizen strategy, the origin of the strategy and finally principles and critical elements that form part of Kaizen strategy. As stated at the beginning of this chapter, the main objective of this entire section above was to give a reader a comprehensive insight into what Kaizen strategy is all about. The following sections will now focus on literature review in relation to the objectives of this study. The main objective of these sections is to establish the current general state of knowledge, possible limitations and how this research fits in the wider scheme of knowledge (Saunders, et al., 2009)

2.4 Perception of Kaizen Strategy within Public Sector

According to Barraza and Smith (2016), some people from the public sector tend to feel that their priority should be the matters of policy and not operations and others resent the idea of being part of production line. Some managers from public entities tend to believe that they have no reason to pursue Kaizen approach, i.e. continuous

improvement, especially if there is no incentive of the monetary gain involved (Ramis-Pujol, 2017). However, practical experience has proven that Kaizen strategy in the public sector can be as equally successful as it is in the private sector provided all the essential elements of Kaizen strategy are being followed (Barraza and Smith, 2016). Some studies have shown that some employees in the public sector tend to feel that strategies similar to Kaizen strategy were simply developed to cut down manpower (Fryer and Douglas, 2018). Fryer and Douglas (2018) has argued that this an incorrect perception of Kaizen strategy since the main objective of the strategy is to increase efficiency in an existing set-up and if it happens that operating efficiency increases to an extent that some of the manpower can be freed, that manpower should be relocated or re-aligned to other areas within an organization and thus making an entire organization more efficient. What is described by Fryer and Douglas (2018) above is a historical general perception from the global community when it comes to the application of Kaizen strategy in the public sector. It is essential that organizations that seek to employ Kaizen strategy first re-align their growth strategies in favour of its employees and take their interests into consideration in order to avoid this wrong perception by employees in the public sector (Walley and Radnor, 2018). This perception was used as a baseline to examine how EThekwini Municipality feel about Kaizen strategy, i.e. research objective 1.5.1. Two research questions were composed from this section.

Walley and Radnor (2018) presented the following two case studies as examples where Kaizen strategy was successfully applied in the public sector setting.

• "After applying Kaizen strategy, the United Kingdom(UK) government office processing large volumes of standard documents achieved double-digit productivity gains in the number of documents processed per hour and improved service delivery by decreasing lead times to fewer than 12 days from about 40 days, i.e. eliminating backlogs. Furthermore, the proportion of documents processed correctly the first time increased by 30%, lead times to process incoming mail decreased to 2 days from 15 days." (Walley and Radnor, 2018, page18)

"In the UK military armored-vehicle repair shop, Kaizen strategy accomplished 44
percent increase in the availability of equipment, 16 percent increase in reduction
turnaround times and 40 percent increase in production." (Walley and Radnor,
2018, page18)

From the two cases studies above, it is very clear that the Kaizen strategy which is famous in the manufacturing industry can be applied successfully in the public sector as well and the principles remain the same. Agrahari and Dangle (2015) discovered that Kaizen is not only limited to the manufacturing industry but also applicable to everybody's business because its concept is based on the fact that everybody has an interest in improvement. Similarly, Bwemelo (2016) found that although application of Kaizen in the public sector environment may be slightly different from that of the manufacturing industry, the principles of workers, waste elimination, quality control, process standardization and process simplification are still the fundamental elements of Kaizen strategy which are also applicable in the public sector. Therefore, irrespective of how EThekwini Municipality feels about Kaizen strategy it's been proven that this strategy can work in the public entity like EThekwini Municipality. As to whether this strategy will definitely work for EThekwini Municipality; that is beyond the scope of this research.

Besides perceptions of Kaizen strategy in the public sector as highlighted by various authors at the beginning of section 2.3, Lewis and Williams (2016) presented Table 2.1 on the next page which shows more incorrect perceptions by most of the public sector entities with respect to the application of Kaizen principles in the public sector.

Table 2.1: Common Public Sector Perceptions of Kaizen Principles

Public sector perceptions	Facts			
Kaizen system is costly to implement.	Kaizen system can yield savings more than it cost to implement			
The concept of Kaizen is about getting rid of the employees	The concept is about efficiency and minimizing waste, no getting rid of the existing manpower			
The concept of Kaizen and its associated tools cannot be transferred nor relevant in the public sector	Every entity is different in some way and faced with its unique set of challenges. Some tools might work and might not. It mainly depends on the set of challenges an organization is faced it.			
Kaizen is for the manufacturing industry and can never be able successfully applied in the public sector	Kaizen is the global concept and can be applicable to any setting.			

Source: Adapted from Lewis and Williams (2016) page 660

Despite the historical perception by the public sector, Quayle (2017) discovered that this negative perception on the application of Kaizen strategy in the public sector is slowly changing with time. This is a result of enormous pressure arising from public demands for better service delivery now that public sector leaders have started showing interest on Kaizen techniques which have been long used in the private sector (Quayle, 2017). Quayle (2017) found that cost savings between 15-30 percent could be dramatically attained by simply re-organizing or aligning current assets and other resources. A number of case studies (some of them covered in this section) have been reported on showing growing interest on Kaizen by the public sector entities.

Concluding this section of literature review, it is clear that historically Kaizen was not accepted well in the public sector for a number reasons, of which most of those reasons come from incorrect perception of the strategy or lack of understanding. However, recently due to aging systems and population growth (increasing demand) public sector has started looking into Kaizen principles. The next section focuses on some of the potential benefits a public sector entity can capitalize on from applying Kaizen strategy.

2.5 Benefits of Kaizen Strategy in Public Entities

It has been discovered in a number of publications that various non-manufacturing entities particularly within the public sector in some countries have improved and earned many benefits through embracing Kaizen strategy (Bwemelo, 2016). Bwemelo (2016) discovered that all inefficiencies common in the manufacturing industry such as errors, delays and bureaucratic procedures could also be found in public sector setting and thus can similarly be addressed through application of Kaizen. After looking at various case studies Bwemelo (2016) found that application of Kaizen in the public sector had positive impacts in productivity, cost savings, customer waiting times and handling of emergency situations. Besides cutting down costs, application of kaizen can also yield other incentives such as meaningful work, autonomy and an opportunity to develop new skills (Walley and Radnor, 2018). Typical benefits highlighted by Bwemelo (2016) above were used to deduce potential benefits EThekwini Municipality could obtain if successfully employed Kaizen strategy, i.e. research objective 1.5.2. Six research questions were composed from typical indicators presented by Walley and Radnor (2018) at the end of this section.

This section also highlights some of the case studies demonstrating some of the typical benefits gained through successful application of Kaizen strategy in the public sector and further looked at essential indicators which can be used to tell if application of Kaizen could be of benefit in a particular organization or not. Only case studies with similar functions as that of the three selected departments (research sample) were looked at under this section to allow fair cross-comparison and credibility of the findings thereafter.

Case studies

Bwemelo (2016) presented a study which was carried out in the Mexican human resource services. The study revealed that implementation of Kaizen approach helped human resources services (HR) to achieve reduced cycle time for selection and hiring process, maintaining good performance, stable service processes and minimal complaints from the customers (Bwemelo, 2016).

Gupta and Jain (2015) found that all the funds that were accumulated from improved efficiencies in the United Kingdom and Germany after applying Kaizen principles were re-invested in new services. This is a classical example demonstrating how developing countries like South Africa can develop further without having to inject massive capital, i.e. only by putting systems in place that will maximize the use of existing resources.

Scottish public sector organizations also decided to adopt Kaizen approach at an operational level as opposed to strategic level (Miguel-Dávila and Suárez-Barraza, 2015). Miguel-Dávila and Suárez-Barraza (2015) presented the research findings which revealed a wide range of benefits earned by various organizations, these include improvement of customer appointment awaiting times in the heath sector from an average of 23 days to 12 days, improvement of service failure from 82% to 15% within four weeks, improvement of processing times by 67% percent in the local government service delivery and bringing public services up to acceptable standard.

Finally, Arimoto and Kurata (2017) reported on the study which was conducted in Malaysia. The study was aimed at identifying the effectiveness of Kaizen approach within Federal and state agencies of Malaysia which are particularly involved in activities such as building and maintenance of roads, water and sanitation services and health care. After analysis the study showed improvements in the following areas: improved performance from a number of state organizations on the aspects of quality, productivity, safety cost and waste reduction in a systematic way (Arimoto & Kurata, 2017).

There are several other case studies in literature and from these case studies above it is clear that it is indeed possible to successfully apply Kaizen strategy in the public sector despite the negative perceptions by some of the public sector officials as outlined under section 2.3. The cases studies covered under this section were selected on the basis that these organizations are similar in terms of operations to the ones which were selected at EThekwini Municipality to participate in this study. These case studies allowed for fair comparison between the findings and thus adding towards the validity of the findings for this research as a whole. Arimoto and Kurata (2017) further indicated that successful application of Kaizen approach is not limited to technical

practices but also requires integration of non-technical aspects such as daily human practices. This statement effectively suggests that Kaizen strategy can be successfully applied to any organization irrespective of the technical complexity of its daily operations.

Walley and Radnor (2018) gave the following list of indicators which can be used to tell if Kaizen strategy could be of benefit /help in a particular organization. These six indicators were also used to compose six research questions which formed a basis of the findings with respect to research objective number 1.5.2:

Indicator No.1: Processes take longer than necessary and frustrate both customers and employees.

Traditionally, government entities around the world have a primary responsibility of ensuring that law and order is maintained in order to determine eligibility; and the idea of customer satisfaction hasn't been given superior priority for a very long time in this sector (Hodgkinson, et al., 2017). With increasing demands in South Africa today as manifested by service delivery protests witnessed every day, perhaps it is about time that public entities especially the municipalities consider reducing and harmonizing bureaucratic procedures in order to improve service delivery with respect to turnaround times (Reddy, 2016). Kaizen strategy which is the main subject in this research could be the solution to this problem. A study conducted by Assefa (2016) at African Union Commission showed that application of Kaizen strategy yielded some positive results in minimizing delays as result of bureaucratic barriers. It was discovered that the structure of an organization was not structured such that approvals could be processed quicker (Assefa, 2016). Other benefits obtained included meetings taking place as scheduled, feedback to relevant liaison offices was given on time and the troops to the areas were deployed on time (Assefa, 2016).

Besides frustrations as a result of common delays, bureaucratic barriers and unhappy employees have been closely associated to be the main cause of making organizations uncompetitive in the public sector (Odaro, 2017). Even though every employee has a responsibility to improve their attitude and level of happiness in their work place,

attitude of employees has been found to be largely dependent on management styles (Proctor, 2014). Various studies including Proctor (2014) have shown that corporations or organizations with happy employees are likely to be successful; companies like Google and Yahoo are prime examples of these organizations.

Two elements that are critical towards the attitude of employees have been discovered, namely: job satisfaction and job dissatisfaction (Proctor, 2014). Proctor (2014) further argued that factors leading towards jobs satisfaction are totally different to the ones leading towards job dissatisfaction. He used motivation-hygiene theory to explain his findings. Proctor (2014) described needs like money, food and shelter as factors that would lead to job satisfaction while needs like growth opportunities and company policies as factors that could lead to job dissatisfaction but not necessarily job satisfaction even if the company has good policies in place.

From the brief discussion above, it is clear that an employer has a superior role in making sure that employees are satisfied. Some companies have set their policies to prioritize satisfaction of their employees by enforcing that managers involve employees in decision making and other critical aspects of an organization (Irawanto, 2015). The overall objective behind this aspect is to create an environment where employees are free to express their ideas, get creative and contribute towards continuous improvement of an organization (Irawanto, 2015).

Indicator No.2: Work practices vary widely across individuals and groups and it is not known how much they vary.

By definition, Kaizen strategy is fundamentally designed to address the following aspects; cut down waste, reduce variability and promote flexibility (Agrahari & Dangle, 2015). If work practices/ culture do vary from one person to the next, that is a clear indication that there is a problem and Barraza and Smith (2016) argued that such an organization can certainly benefit from employing kaizen strategy.

Standard operating procedures (SOPs) have been used by many organizations globally as the management tool for business consistency and maintaining the standard / quality (Amare, 2016). In order to have a good performance comparison

between different individuals or sections or shifts within the same organization, it is important that documented work practices be established and kept the same across the board (Amare, 2016). Documented standard operating procedure can also be of great assistance in minimizing mistakes by new employees (Barbé, et al., 2016).

The culture of varying work practices within South African government agencies has been identified as one of the challenges negatively affecting service delivery (Peter, 2017). One particular example which has been studied is the implementation of Supply Chain Management policies within the public sector. Amongst other objectives of SCM tool established as a standard operating procedure is to ensure uniformity during procurement process and value adding procurement (Ambe and Badenhorst-Weiss, 2015). Ambe and Badenhorst-Weiss (2015) established that there is still a challenge within South African government entities when it comes to maintaining common work practices within the work place. Some of the causes leading towards this deficiency include poor management systems in place and personnel incompetence within the public sector (Ambe and Badenhorst-Weiss, 2015).

Indicator No.3: People struggle to describe how their day-to-day efforts link to organizational goals.

According Bora, Borah and Chungyalpa (2017), it is imperative that employees must first understand goals and objectives of an organization they work for in order to have a sense of direction and understand fully what is expected of them on daily basis. It has been found in many occasions that most of the employees within the public sector do not fully understand how their daily performance links to the performance of an organization and this may lead to lack of interest by the employees, i.e. poor (Bora, et al., 2017). Taiwo, et al., 2016 added that this phenomenon is usually a symptom of poor communication of organizational objectives by management. In many instances these objectives could be set out and documented properly and only to find that employees still don't understand the "bigger picture" because of poor communication (Taiwo, et al., 2016). Similarly, application of Kaizen strategy can be of great value in dealing with this problem as the strategy fundamentally enforces communication by management (Ghodrati and Zulkifli, 2016).

Indicator No.4: No one has a clear view of the organization's historical performance or what "good" looks like.

Over the years, performance management has been increasingly gaining a lot popularity around the globe as one the critical elements in achieving quality improvement (Van der Waldt, 2017). Performance data is important in indicating how well or efficient an organization is being operated and provide useful information in the interpretation of the results after making changes (Van der Waldt, 2017). It is thus of utmost importance that employees do understand historical performance of their respective organizations/ sections. Van der Waldt (2017) discussed the following elements as critical factors in ensuring continuous quality improvement:

Performance measures

These are parameters to be monitored with an objective to populate data to use in evaluation performance of an organization (Sefali and Bekker, 2015). Because of poor management Sefali and Bekker (2015) found this element to be still lacking in the public sector, especially here in South Africa.

Performance measurement

This entails a process where an organization evaluates its processes, systems and its programs using performance measures (Sebola and Manyaka, 2016). Similarly, this element has been found to be lacking in the public sector because of the fact that baseline performance records are missing in most cases (Sebola and Manyaka, 2016).

Performance management

Performance management entails setting up targets and frequent checking if those targets are met and performing necessary adjustments (Cameron, 2015). By virtue of how performance management is reliant on both performance measures and performance measurement it is clear that performance management in the public sector is still falling behind (Sebola and Manyaka, 2016).

Indicator No.5: Managers rarely discuss team or individual performance and struggle to match resources to demand.

Fourie and Poggenpoel (2017) defined communication as medium which can be used to either destroy or build relationships between individuals. Fourie and Poggenpoel (2017) further described communication it as a critical tool for any organization, i.e. it is deemed as a prerequisite for efficient business operation. It is the employer's duty, i.e. the managers to ensure that adequate channels of communication exist and remain active at all times, i.e. downwards, upwards and sideways (Anderson and Zbirenko, 2014). The main idea behind the concept of performance based communication or just communication in general is to provide confirmations, clarifications, giving directions, feedbacks, updates on new developments and staff motivation (Anderson and Zbirenko, 2014). Anderson and Zbirenko (2014) further emphasized that downward communication is as important as upward communication, very often managers and supervisors in the public sector tend to focus more on upward communication. It is clear that poor communication can have a significant negative impact in any organization, specifically on production and efficiency.

While poor performance in the public sector could be related to the shortage of skills, some of the failures can be attributed to performance of the officials themselves (Fourie and Poggenpoel, 2017). According to the study conducted by Fourie and Poggenpoel (2017), in South African public sector most managers or supervisors do not discuss performance often enough. The main reason behind this is that mechanisms to hold managers or supervisors accountable in the public sector are either lacking or not sufficiently enforced (Sardar & Farooq, 2015). Most of the government entities in the public sector have adopted the so called Performance Management System (PMS) (Sardar and Farooq, 2015). A study conducted by Fourie and Poggenpoel (2017) has revealed that this system can be the cause of poor performance in some instances. The underlying reasons for this include inconsistent application of the system, inadequate understanding of the system, lack of feedback on performance and managers not providing good leadership to motivate employees (Sardar and Farooq,

2015). Looking at the list of the reasons above, it is clear that the system has failed because of poor implementation.

Indicator No.6: Employees are not encouraged or able to conduct work more efficiently over time.

The discussion below focuses on why encouragement of employees is an essential indicator as listed by Walley and Radnor (2018) to determine whether an organization is likely to benefit from employing Kaizen strategy or not.

According to Chua, et al. (2015) both employee empowerment and recognition are two main instruments for motivating and encouraging employees. Chua, et al. (2015) found that motivated employees through empowerment and recognition result on increased organizational performance. However, Chua, et al. (2015) further discovered that different empowerment and recognition strategies will have to be employed for different individuals since people are generally different. All organizations strive to grow and be successful in order to remain competitive in the market. One way of doing this is to retain and attract best employees; and in order to achieve that organizations need to create positive relationship with the employees and one of the tools is through employee recognition which will be discussed briefly below (Fourie & Poggenpoel, 2017).

Bhati and Sharma (2017) described recognizing employees and the success as an essential tool to strengthen the culture of an organization. It is also an opportunity for management to demonstrate its support and commitment to improve performance of an organization (Bhati and Sharma, 2017). An organization also needs to give special attention to individual employees when it comes to recognition because what may be deemed as a recognition to one employee may be an insult/trivial to another employee (Bhati and Sharma, 2017). According to Fourie and Poggenpoel (2017) the main objective is make employees feel personally comfortable and genuinely appreciated in their work place.

Rostami, et al. (2016) discovered most of the companies within the private sector are seen to be encouraged to continuously improve as a result of tough competition and

in some cases management is forced to increase productivity. The harder they try to gain more profits the harder they try to eliminate inefficiencies even if it means trying out best practice strategies from other organizations (Rostami, et al., 2016). Unfortunately, the same drive or motive is not as apparent in the public sector, especially in South Africa (Imran & Elnaga, 2017). Some government departments like South African Police Services (SAPS) render services which are not influenced by conventional market forces (Imran & Elnaga, 2017). According to Imran and Elnaga (2017) the ultimate challenge the public sector still needs to overcome is to create an environment where there is competition or pressure which will automatically promote continuous improvement. This is one of the reasons why most employees within the public sector are naturally not striving for continuous improvement (Rostami, et al., 2016)

2.6 Challenges Associated with Implementation of Kaizen in the Public Sector.

Similar to potential benefits covered in section 2.4 above, this section focuses on potential challenges that could a threat should EThekwini Municipality or similar entities decide to embrace Kaizen strategy in the future. The section only discusses commonly encountered challenges and this study sought to reveal which of these challenges described below could be of concern to EThekwini Municipality. Four research questions were composed from these typical challenges that will be discussed in the following sections and the findings with respect to research objective 1.5.3 were deduced thereafter.

Studies have shown that even though Kaizen strategy is yet to be popular in the public sector, the strategy is increasingly being embraced by more and more of government entities around the world (Asnan, et al., 2015). However, it has been found that most of these entities have failed to implement and sustain benefits of this strategy (Asnan, et al., 2015). This is because of a number of challenges which have been discovered to be fundamentally arising from the operating nature of most government entities globally (Asnan, et al., 2015).

A classical example is the study that was recently conducted by Assefa (2016) in the African Union Commission which had decided in good faith to adopt and implement the concept of Kaizen strategy from year 2014 to year 2017. African Union Commission is the public sector entity represented by 54 African counties. The commission is mandated improve integrations, promote peace and economic development for all African citizens (Gottschalk, 2017). The objective behind implementation of Kaizen strategy at African Union Commission was to improve service delivery in terms quick turnaround times, satisfying its customers and quality assurance (Assefa, 2016). As result of various challenges, implementation of Kaizen strategy in the African Union Commission for so many years proved to have been a simple waste of time as no improvements were observed Assefa (2016). Assefa (2016) decided to conduct a study to found out exactly why the strategy failed in the African Union Commission after having tried it for four years. The findings will be discussed in the following sections. The study conducted by Assefa (2016) was specifically looked at in greater detail since it looked at Kaizen strategy in the public sector and in African environment and thus deemed relevant for the objectives of this study in terms of understanding the challenges that may arise.

Assefa (2016) found that about 92.5 percent of the respondents that were interviewed in the study believed that Kaizen strategy can indeed bring about continuous improvement if applied correctly. This finding suggests that people irrespective of whether they are from private or public sector, indeed in principle do believe in the idea behind Kaizen strategy. The only part most people tend to doubt is the practical application, especially in the public sector Assefa (2016). By virtue of the fact that most people do believe in the idea of Kaizen, this finding suggests that one needs to make sure that all the other Kaizen requirements are dealt with and not worry much about convincing people to buy into the idea.

Contrary to what people believed about Kaizen strategy in theory, in practice the study found that the majority of the participants, i.e. 45 percent believed that application of Kaizen at the African Union Commission brought about very week changes, see Figure 2.2 in the next page.

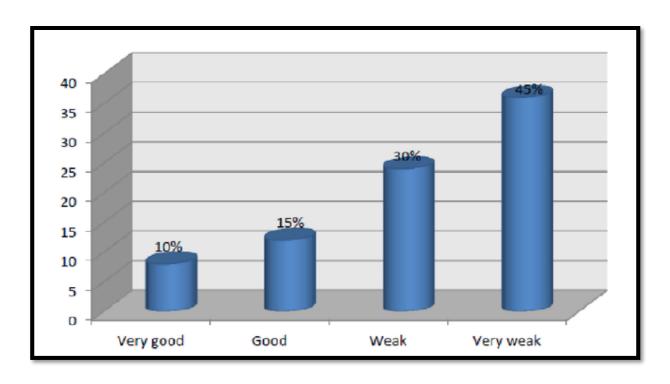


Figure 2.2: Degree of changes brought by Kaizen at African Union Commission

Source: Adapted from Assefa (2016), page 32

This section presents some of the challenges the study revealed which were encountered by Kaizen team when trying to implement Kaizen at African Union Commission. One of the prime challenges that contributed to the failure of Kaizen strategy at African Union Commission was the lack of training and the distribution of information about Kaizen in order to effect the change on the operating culture to suit Kaizen (Assefa, 2016). As a result of this, the operating culture did not change as expected and this contributed to failure of Kaizen strategy (Assefa, 2016). Translating Kaizen ideas into practice proved to be a very complex task for the Kaizen team that was appointed for this pilot project (Assefa, 2016). This is also linked to the fact that the nominated team lacked professionalism and did not prepare sufficiently to handle most of the challenges that arose during the implementation (Assefa, 2016). Arimoto and Kurata (2017) stressed the importnace of ensuring that Kaizen team is professional and get enough training to deal with all the challenges that may arise during the course of implementation. Hodgkinson, et al., (2017) further recommended that a Kaizen specialist be hired to lead the team when introducing Kaizen for the first

time. Some problems which hindered Kaizen relate to not clearly defining roles of all the parties involved like team leaders, Kaizen specialists and section managers (Assefa, 2016). Similar to any setting, if roles of the parties involved are not very clear it is difficult to hold parties accountable (Ambe and Badenhorst-Weiss, 2015). Despite all these challenges, the study found that 63 percent of the participants actually believed that if these problems were addressed Kaizen strategy could have produced sustainable and significant improvements within the operations of African Union Commission (Assefa, 2016). Assefa (2016) pointed out that some of the failures were attributed to the following factors:

- Poor communication between employees and the managers with no performance feedback in certain instances.
- Staff empowerment and recognition was very poor and as a result employees were not motivated to participate in Kaizen activities.
- Employees were not trained on how Kaizen philosophy operates and how to carry out identified improvement activities as set out by the Kaizen team.
- Setting up of the objectives and putting in place of measures to achieve those objectives was also very poor.

Furthermore, the study revealed that most of the employees (76 percent) felt there was a huge gap between Kaizen as explained in theory and the Kaizen they experienced at African Union Commission during the pilot study (Assefa, 2016). Respondents identified the following gaps:

- The nominated Kaizen team was not very active and lacking leadership skills
- Low sense of ownership for this new initiative was observed amongst employees at African Union Commission.
- Lack of understanding of how Kaizen strategy works proved to be another challenge at African Union Commission.
- Staff members at African Union Commission had different views and ideas about Kaizen strategy with some employees believing that Kaizen strategy is not applicable in the public sector.

Attributed to the challenges as discussed above at African Union Commission, the study revealed that implementation of Kaizen strategy resulted on irrational changes as opposed to improved service delivery as expected (Assefa, 2016). The findings of this study can be used as a learning curve by any public sector entity considering embracing Kaizen strategy. The remainder of this section focuses on three challenges that are commonly encountered by public sector entities when embracing Kaizen strategy (Nguyen, 2015).

2.6.1 Commitment from Management

Japan International Cooperation Agency (2016) described Kaizen strategy as incremental effort involving all individuals from top managers to those working at lower levels within organizations. Japan International Cooperation Agency (2016) further emphasized that commitment from top management is imperative. Many managers in a public sector still view their organizations as a series of functional process or activities as opposed to viewing organizations as system with expected production (Bhati and Sharma, 2017). Lower level staff will play a major role in providing insight around this point at EThekwini Municipality. It is essential that managers understand end-to-end processes within organization and start by looking at the needs of their customers when developing Kaizen strategy (Agrahari and Dangle, 2015). This usually poses a challenge in a public sector environment as many managers still lack skill and experience to perform this task (Agrahari and Dangle, 2015). In private sector it is common that managers first need to supervise and manage operations in order to gain that end- to-end understanding of an entire business (Japan International Cooperation Agency, 2016). However, in the public sector it is common that a manager is managing a section without full understanding of all aspects involved in the operation of business and that is why most managers in the public sector often lack that end-to-end understanding which is crucial in developing Kaizen strategy (Arimoto and Kurata, 2017).

2.6.2 Performance measurement tools and monitoring systems

Another essential requirement when using Kaizen strategy is an ability to identify potential threats and non-conformance within operations at an early stage (Micheli and Kennerley, 2015). Again due to skill gap, studies have shown that most managers in the public sector lack an ability to identify potential problematic areas (Arimoto and Kurata, 2017). Wynen, et al. (2016) similarly discovered that managers in the public sector tend to react to the problems once they surface out as they lack a skill to notice potential threats and deal with them at an early stage. Part of this problem is associated with the problem discussed earlier where managers lack an end-to-end understanding of how their organizations operate (Arimoto and Kurata, 2017).

Wynen, et al. (2016) augured that changing the process and how it operates will not be enough to effect improvement if an operating culture of an organization hasn't change. Some of the changes might be overwhelming but are necessary in order for Kaizen strategy to work and be sustainable (Wynen, et al., 2016). The first step when developing Kaizen strategy is to clearly outline goals and objectives of an organization into simple and measurable targets every employee within an organization will be able to understand (Assefa, 2016).

2.6.3 Operating culture in the public sector

The environment in the public sector is often controlled by the policies as opposed to the dynamic needs of the customers, i.e. the workers within the public entities respond to management requirements rather than the customers (Cross and Mavunga, 2017). In the retail sector if the product does not add much value to its customers that retailer is likely to lose its customers to other retailers (Cross and Mavunga, 2017). This is called taking the customer's perspective approach (Barraza and Smith, 2016). The retailer would normally have to identify this using performance measurement tools and act accordingly to change the situation (Barraza and Smith , 2016). However, in the public sector, it is not always that simple to put the customers first even if one is able to identify areas that can be improved to satisfy customers (Nguyen, 2015). One of the challenges that has been identified in the public sector is lack of competition (Nguyen,

2015). For an example, no matter how poor the services that are being rendered by Municipality to the community, in most cases people have no choice but to accept whatever services they receive from the Municipality as there is generally no alterative service provider to most of the services like water, electricity and sanitation services (Nguyen, 2015). The only way for the customers to force the Municipality to provide better services nowadays is through constant complaints and protest actions (Hlatshwayo, 2017). However this culture could be changing soon, especially in the developed countries (Hlatshwayo, 2017). Lately in the United Kingdom, the government allows the patients to go to a medical center of their preference and in return the facility with more patients would normally receive more budget (Peyrache & Zhu, 2017). This is one way the public sector could take to cultivate the culture of competition (Peyrache and Zhu, 2017).

Zailani, et al. (2015) discovered that Kaizen strategy has limitations in that it does not replace or fundamentally change the process, i.e. as soon as the value of improvements obtained through Kaizen starts declining, one should start looking at introducing innovation to gain further improvement of the system. Typically, innovation results on drastic improvements after large capital investments (Thessaloniki, 2006). **Table 3** below shows the differences between Kaizen and innovation.

Table 2.2: Differences Between Kaizen and Innovation.

Factor	Kaizen	Innovation		
Improvement size	Small improvements	Major improvements		
Improvement basis	Conventional knowledge	Technology of equipment		
Main resource	Personal involvement	Money investment		
People involved	Many people	A few champions		
Orientation	Improve the process	Improve the results		
Economy	Even in slow economy	Mainly in good economy		

Source: Adapted from Thessaloniki(2006), page 34

Munzhedzi (2016) discovered that there is no blueprint available to improve efficiency amongst organizations in the public sector. This is primarily because the set of challenges can vary from an organization to an organization (Munzhedzi, 2016). A number of institutions in the public sector worldwide have adopted a variety of initiatives in an attempt to improve efficiency (Fourie and Poggenpoel, 2017). These amongst others include, decentralization of powers and authority, creating completive environment for the organizations in the public sector, re-organizing work force structures for efficient use and introduction of production orientated management models (Fourie and Poggenpoel, 2017). Nengwekhulu (2015) also discovred that even though some institutions in public sector have embraced some good business initiatives there are still some challenges with respect to evaluating the success of those initiatives. This is because most organizations from the public sector still lack resources to conduct evaluations, lack of understanding with respect to performance measurement tools and difficulties of separating effects of efficiency as a result of internal efforts and as a result of external influences (Nengwekhulu, 2015). In some cases, different preferences by different political leaders have been identified as one of the cause for measurement tools not to be consistent (Nengwekhulu, 2015).

2.7 Recommendations of Implementing Kaizen Strategy in the Public Entities

After looking at both potential benefits and challenges as discussed in the previous two sections, the following typical recommendations were reviewed to form a baseline on what could be the recommendations given to EThekwini Municipality should the Municipality consider implementing Kaizen strategy in the future. The typical recommendations under this section were further used to compose four research questions.

After looking at a number of case studies around the world where Kaizen approach has been applied with success, Barraza and Smith (2016) discovered that application of Kaizen strategy in the public sector is indeed possible. However, Barraza and Smith (2016) further discovered that in order for this approach to be successful in the public sector the are some enablers that need to be put into place first in order to realize full benefits. These enablers include but not limited to commitment and strong desire for

improvement, organizational culture that encourages participation and involvement of staff, active leadership, appropriate training, teamwork and good communication (Hasson, et al., 2016). To succeed in applying Kaizen strategy in the public sector Hasson, et al. (2016) further recommended that public sector entities need to find a way to correlate their growth strategy with interests of their workers.

Hasson, et al. (2017) gave the following recommendations which were found to play a vital role when implementing Kaizen strategy within a public sector entity:

2.7.1 An environment needs to be created where a series of activities are being carried out striving to deliver what the citizens want and on time.

Public sector operations primarily entail execution of various activities with the main objective of adding value for the people being served (Munzhedzi, 2016). Munzhedzi (2016) further stated that government entities must strive to constantly deliver services as per needs of the citizens which may change overtime as communities evolve. Reddy (2016) defined Municipalities as the most basic units of government which are mandated to provide basic services and foster developments in the areas they operate under. Survey conducted by Lehohla (2017) revealed that majority of the citizens in South Africa are still not very satisfied with the quality of service delivery. One of the factors that was found to contribute to poor service delivery is poor consultation with the citizens (Lehohla, 2017).

2.7.2 All employees need to take ownership for achieving better outcomes for the citizens and strive for continuous improvement.

Various studies have shown that employee ownership increases employee commitment to their organizations (Singh, et al., 2017). Employee ownership and empowerment have been identified as the main contributors to customer–orientated growth (Rostami, et al., 2016). In some organizations business growth is measured by a number of customers in the organization's database and research conducted by Lampel, et al. (2012) revealed that an organization with employees with a good sense of ownership is likely to secure more customers, i.e. achieve growth. For EThekwini Municipality, the customers include all members of the society, visitors from various

places and businesses the Municipality is providing services to. Some of the services the Municipality offers include electricity, water, sanitation services, recreational services, etc. According to the study conducted by Rostami, et al. (2016), the economy of the Municipality is likely to get stronger and stronger with more and more customers in the Municipality's database.

Apart from customer-orientated benefit discussed above, Kisalu (2015) covered another essential aspect of positive media image which can be easily attained through employee ownership. Media image of an organization has an impact on customers, for an example, an organization with a negative media image is likely to lose its customers (Kisalu, 2015). Apart from retaining customers, an organization with bad media image is unlikely to attract good employees to strengthen an organization (Bwemelo, 2016). It is paramount for a huge organization like EThekwini Municipality to retain and constantly recruit more customers especially businesses/ investors in order to substation its economic programs and attain growth for the benefit of if its citizens.

These two essential aspects as discussed above, namely customer-orientated growth and positive media image which can be attained through employee ownership are very crucial elements for continuous improvement and this research will reveal if this area of concerned needs attention or not at EThekwini Municipality.

2.7.3 Performance needs to be transparent for all levels within an organization such that everyone can get an opportunity to get involved.

Bernshteyn and Berggren (2016) found that organizations are increasingly making their organizational goals and objectives transparent. This is because transparent goals were found to assist employees to easily identify how their own duties relate to organizational goals and that of other employees (Bernshteyn and Berggren, 2016). This has been found to be very effective in improving the overall performance and efficiency of organizations since collaboration among employees is promoted and redundant work is minimized from the system (Bernshteyn and Berggren, 2016)

Based on the study conducted by at Assefa (2016) looking at the challenges that may hinder Kaizen strategy, it is recommended that every public sector entity looking into

implementing Kaizen strategy first considers conducting a proper study prior to full implementation (Assefa, 2016). This study can assist in identifying potential challenges that may pose a threat to Kaizen strategy.

2.8 Chapter 2 Summary

The introductory part of this chapter primarily focused on the definitions and key elements of Kaizen strategy. Various authors such as Macpherson, et al. (2015) and Coetzee, et al. (2016) have described Kaizen strategy which originated in Japan as a "culture", "philosophy", "common sense" and "way of life" where people strive to continuously seek improvement, eliminate deficiencies and improve safety in an existing work place which is commonly referred to as "Gemba" in Japanese language. Kaizen strategy was further described by Corbell (2016) as "cheap" and cost effective strategy since the strategy's philosophy is about optimally re-organizing the existing resources such as equipment, facilities and workforce to attain growth and improvement.

Similar to most of other management strategies and systems, various authors have discussed a number of tools, principles and critical elements that are essential in ensuring Kaizen strategy yields the expected results in a sustainable and systematic manner. Coetzee, et al. (2016) have discussed some of these critical elements and tools which include constant communication, organizational transparency, commitment from the entire workforce, housekeeping using 5S system and waste elimination techniques. The rest of chapter one looked at previous studies with respect to the objectives of this study, i.e. perception of Kaizen by the public sector, potential benefits and challenges of Kaizen strategy. Brief general understanding based on previous research and case studies regarding the objectives of this study is outlined below.

General perception by the public sector

Previous studies by various authors have clearly indicated that the perception of Kaizen by public sector official has historically not been a positive one. For an example, Barraza and Smith (2016) found that some public sector officials believe that priority

and mandate of government entities should focus to matters of policy compliance and not on customer-driven strategies like Kaizen. Other studies by Ramis-Pujol (2017) and Barraza and Smith (2016) respectively have shown that some public sector officials believe there is no need for Kaizen if there are no monitory incentives involved and some officials were found to be cynical about the idea of Kaizen thinking it's a "plot" by management to cut down jobs. However, studies conducted by Fryer and Douglas Fryer and Douglas (2018) have revealed that most of these historical negative perceptions about Kaizen by public officials are closely associated with limited knowledge of Kaizen strategy in the public sector. This negative mindset has been found to be slowly changing recently with more and more information on Kaizen strategy becoming available and a number of potential benefits which can be obtained by the public entities if introduced Kaizen strategy Quayle (2017).

Potential benefits of Kaizen strategy

Kaizen strategy has been known to be historically popular in the manufacturing sector. However, literature has highlighted a number of potential benefits which can be obtained by the public entities if correctly implemented Kaizen strategy. Some of these benefits as covered in various studies such as Bwemelo (2016) and Walley and Radnor (2018) include: minimizing bureaucratic delays, positive impact on productivity, improved turnaround times, employee empowerment, improved communication, opportunities to develop new skills etc. A wide range of benefits were further presented under various case studies. It was however clear that potential benefits depend mainly on the current state of an organization, for an example if the current state of an organization is really poor, that means that particular organization has a potential to benefit more from applying Kaizen strategy. Lastly, Walley and Radnor (2018) extensively six indicators that can be used by public sector officials to ascertain if implementing Kaizen strategy can yield benefits for their organization. These indicators were subsequently used to examine if EThekwini Municipality can potentially benefit from Kaizen strategy.

Potential challenges

It was clear from literature that even though Kaizen strategy in principle can work in the public sector it is not an easy task since the public sector has different driving forces governing it. Although there have been numerous case studies indicating successful application of Kaizen in the public sector as presented in this chapter, studies like Asnan, et al. (2015) have shown that most of the entities in the public sector are still struggling to sustain the principles of Kaizen strategy due to various challenges. Various studies such as Asnan, et al. (2015) and Assefa (2016) have highlighted a number of challenges that are common in the public sector setting that may pose a threat to successful application of strategies like Kaizen. Some of these challenges include managers still viewing public sector as a series of functional processes, environment not customer focused, lack of commitment from management and some organizational measurement tools not clearly understood. The best way to introduce this strategy is therefore to identify these challenges first and deal with them.

General recommendations

Lastly, the literature has highlighted some typical recommendations which could be given to a public entity intending to introduce Kaizen strategy. As indicated by Barraza and Smith (2016) these recommendations or enablers these are dependent on the set of challenges a particular entity is currently faced with, i.e. some of these recommendations may not necessary be beneficial to some organizations. General recommendations discussed by Barraza and Smith (2016) and Hasson, et al. (2016) include aligning growth strategy of an organization with interests of the employees, creating an environment where employees strive for continuous improvement and good communication across all levels.

Chapter 1 has introduced what this study is all about and what it seeks to achieve, by clearly setting out research background, aim of the study and research objectives. Chapter two extensively reviewed the subject matter, i.e. Kaizen strategy to gather general perspectives from previous studies with respect to the objectives of this research so that findings can be deduced with reference or baseline. The next chapter

of this dissertation will comprehensively detail how the actual research work of this study was conducted, i.e. the chapter will discuss various research methods, philosophies, techniques and options that were considered and detail the rationale behind the selection of certain methods over others.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter serves as a blueprint of the study detailing how the study was conducted. It looks into various options/methods/approaches the study could have taken and the rationales behind selecting certain options over the others in an attempt to best respond to the objectives of this research. The chapter covers research approach, research population and sample, sampling techniques, sources and collection of data, data analysis, credibility of the research and ethical considerations which governed the proceedings of this study. However before going into the deeper details on how this research was conducted and the philosophies adopted, it is essential to briefly look at what is meant by the word "research".

According to Saunders, et al. (2009), the word "research" has been misused by many authors for a very long time. Some authors define research as simply an exercise of collection data with no clear goal and while some use "research" as term to make their products recognized (Kumar, 2011). Saunders, et al. (2009) further emphasized that even though a research does entail collection of data from asking people questions, reading books or reports, there is a lot more that is involved when conducting a prepared research. Collecting data not in a systematic fashion and with no clear objectives defined prior would not constitute a proper research (Saunders, et al.,2009).

Another critical element as defined by Walliman (2011) which constitute a proper research is the interpretation of the information collected. In short, Walliman (2011) defined research as an exercise where data is systematically collected from various sources and interpreted with clear objectives with respect to why the study was conducted. Collecting data systematically means that the data is collected logically and not just following unproven beliefs (Walliman, 2011). Similarly, this research was conducted following certain logical methods in collecting data which was later analyzed and interpreted to respond to specific research questions or objectives. The following sections will now give in-depth details on the methods, techniques and philosophies that were adopted when conducting this research.

3.2 Research Philosophy

Understanding the research philosophy is essential for any research. Carr (2015) described research philosophy as the first layer of an "onion" when one is conducting a research. Pragmatism is the research philosophy that was adopted for this study which was mainly motivated by the fact that this approach does not confine the researcher to one approach which enhances an opportunity to uncover more insight when conducting the study (Carr, 2015). Other philosophical positions which are briefly discussed below include positivism, realism and interpretivism.

The philosophy the researcher chooses to adopt contains a set of assumptions which in turn will influence the choices the researcher makes with respect to the research methods (Carr, 2015). Saunders, et al., (2009) detailed four common philosophical positions one would normally look into when conducting a research study. These include positivism, realism, interpretivism and pragmatism philosophical approaches. The following section briefly outlines what each of these approaches entail.

Positivism philosophical position mainly entails working with observable social realities (Saunders, et al., 2009). This philosophy which is usually associated with development of hypotheses to be tested and confirmed is commonly used by natural scientists (Harrison, 2016). Most researchers ague that this position of generalizing complex world social/ business events can pose a risk of losing essential insight on the subject in question-thus not ideal (Harrison, 2016). According to Knox (2014), realism philosophical position is also common for scientific based studies. This approach simply assumes that what natural senses depicts as the reality is actually the truth (Knox, 2014). The third approach which is described by Saunders, et al., (2009) called interpretivism stems from an idea that is it critical to understand different human behaviors. The argument is that conducting a research on objects such as cellphones is different from conducting a research among people (Saunders, et al., 2009). Lastly, pragmatism philosophical approach argues that the type of the research philosophy one needs to adopt is mainly dependent on each of the research questions the research seeks to answer (Carr, 2015). In other words, one researcher can assume or adopt three different philosophical positions for three different research questions

within a single study. Saunders, et al. (2009) also recommended the idea of exercising flexible or multiple approaches when selecting between various research methods such as quantitative and qualitative approaches.

3.3 Research Approach: Deductive and Inductive

There are two commonly used research approaches when conducting research studies, namely deductive and inductive research approaches (Khazaei and Zalaghi, 2016). Inductive approach was deemed more appropriate for this study based on the following rationale:

Inductive approach is commonly used for relatively smaller samples and usually follows qualitative approach (Saunders, et al., 2009). This study also involved a concept of Kaizen that is not very popular in the public sector it was not going to be practical and of any additional value to select a large sample, hence this study took inductive type of approach. Furthermore, Saunders, et al. (2009) described inductive approach as an approach which focuses more on how people feel about certain events and situations. The main aim for this study was to understand how employees from EThekwini Municipality being the public sector feel about Kaizen strategy which can be used as an alternative strategy to improve productivity. This is the second reason why inductive approach was deemed appropriate for this study, i.e. the study involves how people feel about this particular concept of Kaizen activities.

Khazaei and Zalaghi (2016) mentioned that it is critical that the researcher understands these approaches as they can determine which research techniques are more appropriate than others insofar as getting the best answers on the research questions, for example choosing between qualitative or quantitative approach. Furthermore, these two approaches can assist the researcher to better understand what type of evidence is essential for the study, how that evidence will be gathered and interpreted (Saunders, et al., 2009).

3.4 Research Design

In the sections above it has been discussed how research philosophies and research approaches can depict the choices the searcher needs to make when conducting the study in order to ensure that appropriate techniques and methods are employed to adequately respond to the research questions. This section details the actual plan on how exactly the research questions were responded to in this study.

Wright, et al. (2016) defined research design as a conceptual structure within which research is conducted; it serves as a blueprint for the collection, measurement and analysis of data and outlines ethical issues that need to be taken into account. Research design is research's overall plan on seeking answers to research questions guiding the research (Wright, et al., 2016). Saunders, et al., (2009) defined research questions as the basis for the research design and hence the importance of having clearly defined research questions. This chapter discusses different methods, techniques and approaches that were selected for this research together with the rationale behind those selections. All the decisions and choices that were made in this section were primarily guided by the research questions and the objectives of this study.

3.4.1 Research strategy

Saunders, et al. (2009) extensively discussed a number of research strategies one would normally employ to conduct a research study. Saunders, et al. (2009) further emphasized that the choice between different strategies must be guided by research questions one seeks to respond to, time allocated for the study, literature available on the subject and the resources available. Rahi (2017) listed the following different types of research strategies, i.e. experiment, survey, case study, action research, grounded theory, ethnography and archival research.

Grounded theory was found to be an appropriate choice for fulfilling the objectives of this study based on the following rationale. Creswell (2015) defined grounded theory as the best strategy in exploring new business and management concepts, issues and ideas. This is the first reason why grounded theory was deemed a good selection for

this study, i.e. the study is built around exploring a relatively new concept of Kaizen strategy in the public sector business environment. According to Saunders, et al. (2009) grounded theory is also mainly associated with inductive approach which was selected for this research.

3.4.2 Qualitative vs Quantitative research

There are generally two research approaches one would normally follow when conducting a research, namely, quantitative approach and qualitative approach. Qualitative approach was selected from this study based on the following augment.

Barnham (2015) described qualitative approach as a study concerned with non-statistical methods and relatively smaller samples. Barnham (2015) further maintained that qualitative approach is particularly useful for studying little-understood phenomenon. Kothari (2004) also described qualitative approach as study which deals with assessment of opinions, behavior and attitudes. In this study, qualitative approach was selected based on the fact that Kaizen strategy is not popular in the public sector, especially here in South Africa and thus qualifies as little-understood phenomenon as described by Barnham (2015) and also because the study was centered around analyzing different opinions from different participants about Kaizen strategy.

On the other hand, the quantitative approach generates quantifiable data and it is primarily associated with measurable phenomena between events, things or people with an aim of statistically establishing relationships between different variables (Creswell, 2015).

3.4.3 Research population and sample.

Martínez-Mesa, et al. (2016) defined research population as all items in the field of study and research sample as part of the population selected to participate in the study. All twenty-six departments from EThekwini Municipality constitutes an entire population for this study with three departments selected to participate in this study. Four respondents were then selected per department resulting in a sample size of

twelve respondents. Considerations that were taken into account when making these selections are discussed below

This research did not only focus on the views and opinions of participants as individuals but also looked at how the selected group within their departments collectively viewed Kaizen strategy. This is because the strategy requires teamwork in order for it to work properly (Assefa, 2016). The entire population for this research was therefore 26 departments providing various services under EThekwini Municipality. Three departments under EThekwini Municipality were selected to form part of the study as the research sample where four respondents were selected from each department to represent the views of those departments. Rationale behind selection of these departments and respondents is explained in the next section.

3.5.3.2 Sampling techniques

There are generally two techniques that are used for sampling, i.e. probability sampling and non-probability sampling (Alvi, 2016). Purposive sampling which falls under the category of non-probability sampling was followed when selecting the research sample for this research. Augment for this selection is outlined in the next paragraph.

Alvi (2016) described probability sampling as random sampling or chance sampling and non-probability sampling as deliberate sampling, purposive sampling and judgment sampling where sample respondents are selected by the researcher. A choice on the sampling technique that was employed for this study was mainly influenced by the nature of the credentials the participants needed to have in order to ensure credible findings. As explained by Thessaloniki (2006) in Chapter two, Kaizen strategy is a concept which fundamentally requires people with enough experience and capability to understand day-to-day business processes of the departments they are working for and therefore randomly selecting respondents was not ideal for this research and thus non-probability (purposive) sampling was followed when selecting the research sample. The criterion used for selecting research respondents is outlined below.

EThekwini Municipality offers over 26 different types of services from numerous departments (EThekwini Municipality, 2015). In order to make this study more representative and beneficial to most of the departments within EThekwini Municipality three departments under the following categories were purposefully selected to form a sample:

- Highly operational department: For example, department in charge of electricity installations.
- Highly administrative department: For example, Supply chain management section dealing with the processing of orders online.
- Department with combined administrative and operational functions: For example, department updating and monitoring Geographical Information System(GIS)

The three categories listed above more or less cover the day-to-day operations within EThekwini Municipality and this selection will allow any department falling under any of those three categories to relate to the findings of this research with reasonable confidence.

According to Zailani, et al. (2015), Kaizen strategy requires co-operation between top management, middle management, supervisors and ground level staff. Four respondents were then selected from each department under above categories giving a total sample size of twelve participants from three departments. This also allowed for a reasonably good comparison between the selected departments. Furthermore, the concept of Kaizen is that the people that undertake certain tasks are the most knowledgeable about those tasks and therefore involving them and showing confidence in their capabilities promotes sense of ownership to its highest level (Thessaloniki, 2006). Based on these Kaizen strategy fundamental requirements, only respondents with at least 2 years of working experience in the selected departments and have completed a tertiary qualification or at least 10 years working experience in the selected departments with no tertiary qualification were selected to participate in the study.

Table 3.1: Details of the Respondents Participated in the Study

	Department No.1		Department No.2		Department No.3	
	Experience	Qualification(s)	Experience	Qualification(s)	Experience	Qualification(s)
Respondent	27 years	BCom and	10 years	BTech Chemical	4 years	BTech in
no.1		Industrial Phycology		Eng.		chemistry
Respondent no.2	7 years	BTech in HR	3 years	BTech Chemical Eng.	29 years	Scientist
Respondent no.3	8 years	BTech in HR	37 years	none	4 years	NDip Analytical chemistry
Respondent no.4	2.5 years	N.Dip in office administration	25 years	none	10 years	NDip Analytical chemistry

From Table 3.1, it is clear that even the selected respondents with no tertiary qualification should have enough understanding of what might work or might not work for their respective departments because of the extensive experience they possess working for these departments. This selection also added some weight on the credibility of this research in general.

3.4.4 Sources and collection of data

3.4.4.1 Data collection

Paradis, et al. (2016) defined data as information collected during the study. In this study, information was collected through one-on-one in-depth interviews in order to get sincere views about this phenomenon of Kaizen strategy which is not so popular in the public sector as pointed out by Coetzee, et al. (2016) at the beginning of chapter two. Semi-structured interview approach was utilized for the purposes of this study. This approach was chosen since it allows for flexible probing of information from the respondents (Alvi, 2016).

Utilizing other techniques such as circulating a questionnaire was not going to yield any value for this research since most people in the public sector are not familiar with Kaizen strategy. All the respondents were taken through a ten-minute interactive presentation explaining the idea behind this strategy since Kaizen is a new concept in the public sector and most of the respondents didn't know about it. The presentation

was very interactive using practical and visual examples respondents could easily relate to and understand, see Figure 3.1 below which is one of the visual examples that were used during presentations. In order for the respondents to relax prior to the interview the presentation was kept informal and was offered in both vernacular language, i.e. IsiZulu and English language to make sure the concept was understood very well. Twelve interviews were conducted with a duration of 45 minutes per interview. Notes were taken during interviews and all interviews were audio recorded in order to make sure no details were missed out. Finally, all the interview sessions were held at the offices of respondents. The rationale behind this was to ensure that the respondents are relaxed and comfortable so that their responses are not influenced by unfamiliar-setting syndrome.

Before Kaizen Application

After Kaizen Application

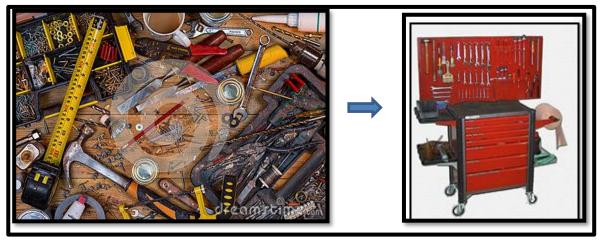


Figure 3.1: Diagram Demonstrating Kaizen Source: Adapted from Japan International Cooperation Agency(2016) page 21

3.4.4.2 Interview questions design

This study had three research objectives with the corresponding three research questions. Chapter two, i.e. literature review presented three distinguished topics looking into these three research questions from literature point of view. From the literature review, a number of interview questions were then composed. These questions ultimately fed back into the objectives of this research to conclude the

research. The interview consisted of 12 questions spilt into three groups according to research objectives, see details below:

Group A: To understand perceptions of EThekwini Municipality towards Kaizen strategy as a potential solution to increase productivity in the Municipality - 2 Questions

Group B: To establish if implementing Kaizen strategy as a strategy could be of benefit to EThekwini Municipality looking at the existing conditions - 6 Questions

Group C: To establish the challenges that could arise when implementing Kaizen strategy as business strategy at EThekwini Municipality - 4 Questions

3.4.5 Data analysis

Dickie (2015) recommended that data analysis should begin as soon as data collection commences. Similarly, in this study, data analysis commenced after the first interview was held. Thematic approach was selected to analyze data that was collected in this study. The rationale behind this selection is outlined below.

3.4.5.1 Approaches to qualitative analysis

It has been established by several authors that analyzing and presenting qualitative data is one of the most confusing aspects of qualitative research (Teherani, et al., 2015). There are two fundamental approaches when it comes to analyzing data, i.e. the deductive approach and inductive approach (Teherani, et al., 2015). According to Nayak (2017), deductive approach entails using a structure or predetermined framework where a researcher imposes their own theories on the data. This approach is useful in studies where the researcher is already aware of probable responses from the participants (Burnard, et al., 2015). This approach is known to be relatively quick and easy, however has been found to be inflexible and can potentially bias the analysis since the framework is decided in advance (Burnard, et al., 2015). On the other hand, inductive approach involves analyzing data with little or no predetermined theory and uses actual data to derive theories (Nayak, 2017). According to Nayak (2017), inductive approach is known to be comprehensive, time- consuming and well suitable

where little or nothing is known about the studied phenomenon. Recalling that application of Kaizen principles is not so popular in South Africa as stated in Chapter two, especially in the public sector. This research therefore followed inductive type of approach to analyze collected data. Saunders, et al. (2009) outlined the following types of inductive approaches:

- Data display and analysis
- Template analysis
- Analytic induction
- Thematic analysis
- Discourse analysis
- Narrative analysis

While there is a variety of inductive approaches as listed above, Saunders, et al. (2009) described thematic analysis approach as the most commonly used and relatively easy to use method to analyze qualitative data. Thematic analysis approach was used in this research to analyze collected qualitative data. Thematic analysis approach entails generating categories from similar themes (Burnard, et al., 2015).

3.4.5.2 Analyzing qualitative data

As explained under research approach, qualitative approach was chosen for this research and thus only qualitative data analysis will be discussed in this section. Qualitative data can range from a short list of responses to open-ended questions in an online questionnaire to a more complex data such as transcripts of in- depth interview (Dickie, 2015). In order for qualitative data to be understood it needs to be analyzed and qualitative data analysis procedures can be used develop theories from the collected data. The nature of qualitative data collected has implications for its analysis and during its analysis; the non-standardized and complex collected data is summarized, categorized and restructured as a narrative in order to develop a meaningful analysis (Saunders, et al., 2009). This section looked at techniques which could be used to analyze qualitative data collected in this research in order to deduce meaningful findings. Some of the techniques that were looked at included readily

available Computer Aided Qualitative Data Analysis Software (CAQDAS) such as NVivoTM, ATLAS.tiTM, N6TM and hyper RESEARCHTM.

3.4.5.3 Preparing data for analysis

As emphasized by Sargeant (2015), non-standardized data collected through interviews is usually audio-recorded and subsequently transcribed, i.e. reproduced as written document using the actual words. Similarly, in this research, all the audio recorded data from the interviews was subsequently transcribed and presented in tables of responses as will be seen in Chapter 4. In addition to transcribing audiorecording, the tones or non-verbal remarks used by the respondents were also noted during preparation of data. According to Sargeant (2015), transcribing an audiorecording is extremely time consuming, i.e. it is estimated that it takes between six to ten hours to transcribe every hour of audio-recording. In order to avoid build-up, audiorecordings were transcribed as soon as possible after each interview. Watkins (2017) highlighted alternative ways which can be used to reduce time needed to transcribe audio-recordings. These include paying a typist to do transition, using transcription machine, using computer voice recognition software and only transcribing those sections that are pertinent to the research (Watkins, 2017). This research used the latter technique because this technique did not require a third party, computer software and machines which may have been a challenge to source.

3.4.5.4 Computer softwares for data analysis

COQDAS packages such as those listed under section 3.6.1 can also be useful when analyzing qualitative data. However, as emphasized by Sapat, et al. (2017), these packages do not analyze data, i.e. they do not confirm nor deny quality or scientific value of the research. This means that the researcher still needs to analyze data and deduce findings. Computer packages are simply used to manage data, making data handling much easier, accurate and comprehensive (Sapat, et al., 2017). Computer packages were looked at the proposal stage of this research but never used as the collected data turned out not to be that complex to analyze with thematic analysis approach directly.

3.4.6 Credibility

Solberg, et al. (2016) defined credibility as an extent to which the employed methods and techniques will yield consistent findings in a particular study. As recommended by Solberg, et al. (2016) credibility was ensured by only selecting research methods that are well established in the field of research. Another technique that was used by the researcher was to hold frequent debriefing sessions with the supervisor during data collection to ensure there was no biasness. This technique was recommended by Swanson (2015). Swanson (2015) highlighted the following two threats to the credibility of the research.

Participant bias: This is when interviewees say what they think their bosses would want them to say (Swanson, 2015). This was not the biggest threat to this particular research as the research did not seek to challenge or question the existing strategies at EThekwini Municipality. However, this threat was still dealt with nonetheless by assuring all the respondents that the findings of the research will be kept anonymous and only utilized for academic purposes only.

Observer error: This normally happens when there are various ways of getting answers from different participants when conducting interviews (Swanson, 2015). This threat was controlled by introducing high degree of structure to the interview schedule and maintaining the questions asked the same across all the respondents participants.

3.4.7 Ethical considerations

Research ethics relates to questions about how the research is formulated with respect to the research topic, research design, and gaining access, collecting data, processing and storing data and data analysis data to compile findings in a moral and responsible way (Wolf, et al., 2015).

The first ethical principle to be considered is the principle of autonomy, which implies the right to self-determination and the right to full disclosure (Yip, et al., 2016). Selfdetermination means that respondents from the selected sample have a right to voluntarily decide if they want to participate in the study or terminate their participation (Yip, et al., 2016). In this study, the consent was first obtained from each respondent before proceeding with the research. All participants were further informed of the nature of the study and what would be the findings after finishing the study.

The researcher further ensured that standard confidentiality procedures were adhered to protect identities of the respondents and the departments they work for, i.e. names of the respondents and their departments were not disclosed in this dissertation. Furthermore, details on what the day-to-day operations of these selected departments entail were also withheld as this could have indirectly gave away information about these departments.

Manton, et al. (2015) outlined some difficulties that are faced by some of the researchers in obtaining ethical clearances from the gatekeepers. These include amongst others gatekeepers not realizing value in the study to be conducted or if the study may entail interrogation of sensitive issues within an organization (Wolf, et al., 2015). In order to overcome these challenges, the potential benefits of Kaizen strategy as detailed in various case studies were explained to the gatekeepers to incite mutual interest between the researcher and the gatekeepers. Gatekeepers were further ensured that the study did not seek to evaluate the existing business strategies or processes but to rather get a feel on the potential application of Kaizen strategy at EThekwini Municipality as a possible alternative. This approach allowed for ethical clearance to be obtained ethically and with ease.

3.4.7.1 Ethical issues during data collection

According to Akaranga (2016), data collection stage is associated with a range of ethical issues. Some of these issues apply to whichever technique that is being used to collect data. In this research, the importance of not causing harm or intruding on respondents' privacy was given priority. Once the participants were consented to participate in the study, they still maintained the following rights, that is, right to withdraw as respondents at any stage of the research and they could choose to decline to participate in some particular aspects of this research. All the respondents were not

asked questions that could cause harm or intrude on their privacy. Once access to collect data was granted, further analysis of that data was only limited to the objectives of this research as discussed with the respondents. During the course of data collection, the data was collected accurately and fully; exercising of subjective selectivity in what is being recorded was avoided. Manton, et al. (2015) stated that without objectively collected data, an ability to analyze and report work accurately will be impaired. Similarly, in this research, the entire data collection process was governed by the objectives of this research.

3.4.7.2 Ethical issues associated with data processing and storage.

As prescribed by Pickering (2017), the data collected during the cause of this study was:

- Processed fairly and lawfully following research ethical codes
- Obtained for specified, explicit and lawful purposes and not processed further in a manner beyond the scope of this research with respect to its objectives.
- Kept adequate, relevant and not excessive in relation to the objectives of this research.
- Kept for no longer than necessary, i.e. not more than 10 years
- Kept secure in a computer protected with a personal password.

3.4.7.3 Ethical issues related to analysis and reporting

The maintenance of objectivity is always vital during the analysis stage to make sure that misrepresentation of data collected does not occur (Pickering, 2017). In this research data analysis and reporting of the findings were kept limited to the objectives of this research, other issues that may have arose during the interviews which were deemed not to be adding value to the research aims were left out. Other ethical issues concerning confidentiality and anonymity were given priority in this research when reporting the findings. Furthermore, as recommend by Fouka (2015) all the respondents on request will be offered a summary report focusing on the finding of this study, this report will serve as a feedback for the benefit of the interested respondents.

3.4.8 Chapter 3 Summary

As stated at the beginning of this chapter, the main objective of chapter three was to give a "blueprint" on how this research study was conducted. The chapter reviewed various established methods, philosophies, techniques and other options so that certain selections could be made in the interest of best meeting the objectives of this study in a reasonable practical manner. Qualitative approach was deemed the more suitable and practical option for this study mainly because Kaizen is a relatively new concept in South African public sector as stated by Coetzee, et al. (2016) in Chapter two. Twelve respondents from three different departments were selected as a sample to participate in the study using non-probability sampling technique to ensure that only respondents with sufficient knowledge of how their departments operate were selected. This is one of the critical requirements of Kaizen strategy as explained by Thessaloniki (2006) in Chapter two. This selection also improved the reliability of the research findings as defined by Solberg, et al. (2016) Similarly, since the concept of Kaizen was relatively new to most of the respondents, data collection through one-onone in-depth interview was deemed the most suitable approach for this research. Lastly research data that was collected by employing various ethical principles such as autonomy was further analyzed using well a known thematic approach as recommended by Saunders, et al. (2009).

The next chapter will focus on the presentation and analysis of data that was collected during the interviews. Data analyses will be conducted using thematic method where patterns or themes observed from a set of data will be noted.

CHAPTER 4:DATA PRESENTATION AND ANALYSIS

4.1 Introduction

As stated in Chapter 1 of this dissertation, this study seeks to answer the following research questions:

- How is Kaizen strategy accepted by EThekwini Municipality as business strategy to improve business productivity?
- Are there any indications that implementing Kaizen strategy as business strategy at EThekwini Municipality could be of benefit?
- What could be the challenges of implementing Kaizen strategy as business strategy at EThekwini Municipality?

These questions were then used to inform the interview schedule which served as an instrument to collect data from the respondents of this study through in-depth interview approach. This chapter will now focus on the presentation of the actual data collected from the respondents and highlight certain patterns or themes that were identified during data analysis. As stated in the previous chapter, the method employed to analyze data is thematic analysis method. The interpretation of the results that will emerge from this chapter will then be covered in the next chapter called discussion.

The following set of tables present transcribed raw data that was collected directly from the respondents. Details of the respondents and their respective departments are not disclosed to maintain confidentiality as stated under ethical considerations section in Chapter 3. Each respondent was asked twelve questions during interviews and the data analysis on the collected data was conducted for each question.

4.2 Presentation and Analysis

Group A Research questions

A.1 Some managers from the public sector tend to believe that there is no reason to pursue continuous improvement if there is no profit. How do you personally feel about that?

Table 4.1: Respondents' Responses for Question A.1

	Department No.1	Department No.2	Department No.3
	Responses		
Respondent no.1	"We do believe is continuous improvement"	"That's a bad attitude, systems need to be improved"	"No I disagree. We need to be continuously improving"
Respondent no.2	"I disagree with this, continuous improvement is important irrespective"	"It's true but I don't think that's the right attitude"	"I disagree, it's a wrong attitude. If you can improve something, just go for it"
Respondent no.3	"I don't agree with that. We need to constantly improve, provide better services. Even though there is no financial gain"	"I disagree, Improvement is vitally important regardless. We can minimize operational costs"	"No I disagree. Technologies change, improvement is therefore essential"
Respondent no.4	"No, we need to strive to improve and get better at all times"	"I disagree. It's not about profit, it's about good service delivery"	"No I disagree. We believe in improvement. We recently bought new equipment to improve outputs"

There were two essential themes that ware apparent from a set of responses for Question A.1 given in Table 4.1 above. The first theme that was observed during data analyses is the condemnation of the general belief that there is no need for public sector officials to pursue continuous improvement if an organization does not generate any profits. Eleven out of twelve respondents, i.e. 91% were found to be explicitly disapproving of this general belief and this was supported by a number similar statements echoed by various respondents such as "No, I disagree", "That's bad attitude".

The second theme that was observed from this set of data is the sense of belief that continuous improvement is important even though an organization is not driven by profits. All twelve respondents were explicitly in favour of an idea of pursuing continuous improvement in the public sector. "We recently bought new equipment to improve outputs" is part of the response by Respondent No. 4 from Department No.4 which indicates that her department had already embraced this idea of maintaining continuous improvement in the public sector environment.

A.2 Do you think your department can benefit from utilizing Kaizen strategy?

Table 4.2: Respondents' Responses for Question A.2

	Department No.1	Department No.2	Department No.3
	Responses		
Respondent no.1	"Absolutely, this strategy can improve our production"	"Yes, we can obtain some savings and avoid wastage"	"Yes, I believe so"
Respondent no.2	"Yes we can benefit from this strategy"	"Yes, definitely"	"Yes, absolutely "
Respondent no.3	"Definitely yes, it makes things easy to manage"	"Yes, a lot. We can benefit from this strategy"	"Yes, I think we can benefit from continuous improvement"
Respondent no.4	"A lot, work experience learners tend to get abused and not utilized properly"	"Yes. We can make a lot of improvement"	"Yes, I think so. There's always a room for improvement"

Analyzing data as presented in Table 4.2 above, it was apparent that all respondents that participated in this study believed that the principles of Kaizen strategy can yield positive benefits for their respective departments. However, further analyses indicated that three respondents casted some doubt in their responses even though they still maintained that Kaizen strategy can be of benefit to their departments. This doubt was seen from responses like "yes, I think so. there's always a room for improvement" from Respondent No. 4 in Department No.3 and "Yes, I believe so" from Respondent No.1 in the same department. This can be attributed to the fact that none of the respondents had first-hand experience on Kaizen strategy.

On the contrary, the rest of the respondents demonstrated strong belief on Kaizen strategy despite the fact that similarly none of them had previous experience with Kaizen strategy. It is essential to re-iterate that the aim of this study was to get views from the respondents on Kaizen strategy as a concept not necessarily based on their previous experience with Kaizen strategy.

Group B Research questions

B.1 Do you feel that in general processes within your organization take longer than necessary and start frustrating employees/customers?

Table 4.3: Respondents' Responses for Question B.1

	Department no.1	Department no.2	Department no.3
		Responses	
Respondent	"Yes, we are	"Yes, when it comes	"Yes, purchasing
no.1	restricted by too	to the processing of	processes take long
	many policies and	orders. It took more	in the Municipality"
	procedures. For an	than six months just	
	example it takes	to procure reagents	
	about 6 months to	used for testing	
	appoint an	water quality"	
	employee and		
	irrespective of the		
	position all posts		
	need to be signed		
	by the City Manager		
	who is not always		
	available"		
Respondent	"Yes, too many red	"Yes, in general I	"Yes, supply chain
no.2	tapes and	feel that there is no	management(SCM)
	bureaucracies in the	sense of urgency	policies pose a
	system, especially	when it comes to a	major challenge for
	when it comes to	lot of things within	us"
	recruitment of staff	the Municipality. Not	
		only when it comes	
		to procurement	

		which is the main issue at the moment"	
Respondent no.3	"Yes, absolutely. I'm still waiting for some jackets to be signed and applicants keep calling me about the progress. It is frustrating"	"Yes, I encounter a number of delays when it comes to chemical orders and the maintenance of equipment"	"Definitely, sometimes it takes longer for us to finish testing all the samples from our customers because we do not have enough manpower. This really frustrates our customers and ourselves too"
Respondent no.4	"Most definitely, in my previous experience in a private sector we had deadlines to meet. Here in the Municipality the culture of not meeting deadlines and postponements seems normal"	"To me, delays in personal protective equipment (PPE) is one area of concern. Other than that I feel things are going well"	"Yes, SCM processes is the biggest issue for us"

Analysis of data as presented in Table 4.3 above strongly revealed that all respondents interviewed do face various challenges when it comes to unnecessary delays within their respective departments.

Respondents working for Department No.1 whose function is more on administration seem to be facing a common problem of procedural delays with respect to recruitment of staff which can take up to six months. As pointed out by one of the respondents in Department No.1, these delays do frustrate both employees and the customers served by this department. Even though these delays seem to arise as result of the procedures

that need to be followed, respondents felt that these delays are unnecessary and could be avoided. However, these respondents had different views when it comes to what they define as "unnecessary delay", for an example Respondent No.1 in their response mentioned that they feel it is not necessary for all the posts to be signed by the highest-ranking and arguably the busiest official in the Municipality ,i.e. City Manager and Respondent No.4 felt that a system with a long list of bureaucratic procedures is not the only element to criticize but the culture of lacking urgency which prevails within the Municipality, i.e. "most definitely, in my previous experience in a private sector we had deadlines to meet. Here in the Municipality the culture of not meeting deadlines and postponements seems normal" stated Respondent No.4. However, it is worth noting that the views of the respondents with respect to what they deemed as unnecessary delays was beyond the scope of this study with respect to its objectives and thus not given extensive attention.

On the other hand, both Departments 2 and 3 whose functions are pure operations and combined administration-operations respectively shared the same challenges relating to the delays arising from procurement procedures. Respondents believed that current Supply Chain Management(SCM) policies caused unnecessary delays with negative impacts on daily operations and thus hampering service delivery. Frustration around the issue of SCM policies was seen in the facial expressions of these respondents when responding to this question. Even though not stated explicitly, these employees surely would like to see some change for improvement around this area of concern.

In general, respondents did feel that there are unnecessary and frustrating delays which can be worked on to improve service delivery. According to Japan International Cooperation Agency (2016) this was one of the indicators that these departments can benefit from kaizen principles.

B. 2 From your experience in your organization's daily operations, do you think that work practices vary widely across individuals and groups?

Table 4.4: Respondents' Responses for Question B.2

	Department no.1	Department no.2	Department no.3
		Responses	,
Respondent no.1	"I think practices are similar but functions may differ depending on whether the person is dealing with a disciplinary hearing or recruitment"	"Yes its different, different area managers had different ways of doing things. There is no consistency"	"Work instructions and methods are the same however depending on the level of experience people tend to do work differently"
Respondent no.2	"There is no uniformity from staff members that are meant to be doing the same tasks across all three sections within our department. It depends on the manager in charge of that section"	"Yes, work practices do vary. I think it depends on individual work ethics"	"Yes it varies, some people are more experienced than others"
Respondent no.3	"Yes, work practices do vary depending on which section one is working under even though the functions are the same"	"Yes, work differences are there but minimal, it depends on individual behavior"	"Yes, work practices differ between individuals. It just depends on individual daily planning"
Respondent no.4	"Yes, it varies between departments even though the policies are the same. Sometimes some policies are overlooked by certain departments"	"Yes, different process controllers from different sections tend to do work differently, I think it depends on the supervisor"	"Work practice is not the same, experienced people tend to come up with their own methods of carrying out their work"

Lack of standardized operation within various departments at EThekwini Municipality was observed one of the major themes during analysis of data presented in Table 4.4 in the previous page. Eleven out of twelve respondents indicated that work practices do vary between different employees within their departments due to various reasons.

Three additional themes were further observed during data analysis relating to the underlying reasons for non-standardized work practices in the work place. The first sub-theme under this category relates varying level of experience of employees. Three respondents have cited varying level of work experience between employees as one of the contributing factors to varying work practices between employees with similar job descriptions. "Work practice is not the same, experienced people tend to come up with their own methods of carrying out their work" is one of the examples under this sub-theme as stated by Respondent No.4 from Department No.3

The second sub-theme that was observed from data analysis relates to influence by management as another factor contributing to varying work practices within the work place. Four respondents shared similar sentiment when it comes to this sub-theme. Respondent No.1 from Department No.2 is a good example demonstrating this sub-theme, i.e. "Yes its different, different area managers had different ways of doing things. There is no consistency"

The last sub-theme observed from data analysis highlights individual ethical integrity as another contributing factor to non-standardized work practices in the work place. Three respondents cited this sub-theme.

B.3 What do you understand to be the main goal for your department?

Table 4.5: Respondents' Responses for Question B.3

	Department no.1	Department no.2	Department no.3
	Responses		
Respondent no.1	"Decrease cases of disciplinary hearings and increase employee wellness"	"Our main goal is to discharge treated effluent that is compliant with the required permit standards"	"The main goal is to meet service level agreement requirements"
Respondent no.2	"We do have goals as the department even though I can't remember all of them. These include providing services timeously and efficiently"	"It is to achieve maximum compliance with respect to final effluent standards. Sometimes I get destructed with other things on the side"	"The main goal is to provide service to the public and protect the environment"
Respondent no.3	"Do I even know?I think it is to provide guidance to our customers on policies to be adhered to"	"It is to improve effluent quality standard, promote acceptable working environment for the employees. Yes I can see the link between my day-to-day efforts and these goals"	"The main goal is to meet customer satisfaction"
Respondent no.4	"one voice one goal! don't see how my day-to-day efforts link to the goals of my department"	"Getting green drop status on our works is the main price. We get worried if final effluent quality is not good"	"The main goal is to get more test methods SANAS accredited and get high ratings when compared to other service providers in the country"

Looking at data as presented in Table 4.5 above, it can be noticed that all four respondents from Department No.1 had different views when it comes to what they understood to be their departmental goal. Respondent No.3 started replying by saying

"do I even know?" which made it clear that this department either does not have well defined goals or does not communicate its goals sufficiently amongst its employees. Surely this can't be a good sign in any organization and there is a risk of having employees working towards different goals.

A similar theme was also observed from respondents in Department No.3 where two respondents cited meeting of the customer's needs or requirements as main goal for their department. In contrast, the other two respondents from similar department cited meeting compliance as the main goal

Lastly, all four respondents from Department No.2 gave a common departmental goal relating to the quality of their treated final effluent which demonstrated a good indication of having a team of employees working towards a common goal that is communicated well across the department.

In overall, data analyses revealed that only one out of three selected departments had all four respondents with a common understating of what they understood to be their departmental goal. B.4 How would you describe your organization's historical performance?

Table 4.6: Respondents' Responses for Question B.4

	Department no.1	Department no.2	Department no.3
	Responses		
Respondent no.1	"Ummh,I think the performance has improved over the years"	"The performance has not been that bad. I'd say it's been average"	"I think we haven't delivered the way we wanted to. Supply chain management has been the main bottle-neck to our performance. Things are however starting to get better"
Respondent no.2	"I think the performance has been good although there are some areas that need to be improved. We have received some awards as well	"I think its improving. More focus is now put on the process requirements"	"There have been some improvements recently. For an example we have procured a number of equipment with advanced technology to improve turnaround time"
Respondent no.3	"In my view there has been a lot of improvement is the past recent years. We migrated from paper applications to electronic/online application systems. We have online assistant packages. I believe we can still do better"	"The performance has been fairly good. Management used to be distant but that has changed now. However with increasing population, the performance is in a danger of getting compromised"	"I'd say it's been good. We have received some positive feedback from our customers"
Respondent no.4	"Not improving. Historically one human resources officer was assigned not more than 500 customers to serve but that has changed now, the workload has gone well beyond 500 customers. This is slowing down our performance"	"The performance has not been bad. However very recently it think the performance is starting to drop"	"It has improved I'd say. Recently we managed to get more methods accredited"

Analyzing data as presented in Table 4.6 in the previous page, it was apparent that Department No.1 respondents had some inconsistences and contradictions with respect to what they deemed as indicators of performance. One respondent mentioned awards as a performance indicator, while the others looked at introduction of electronic systems and a number of customers assigned to one human resources officer. This was unsurprising considering the fact that in the previous question these respondents had different views of what their main departmental goal is. Similarly, this is an indication of poor communication or not having well defined goals as a department. Furthermore, two respondents from this department gave an impression of some level of uncertainly and lack of interest when comes to the performance of their department. For an example Respondent No.1 casually replied by saying "Ummmh...I think the performance has improved over the years" without citing any example as evidence to support this view.

Respondents from Department No.2 indicated that performance of their department has been somewhere between good and average, however there is some belief from two respondents that performance seems to have reached its peak and under threat of dropping. This suggested that something needs to be done to change this foreseen downfall. It was also noticed during data analysis that Department No.2 is the only department of the selected three departments that gave contradicting responses. Similarly, this can be attributed to the fact that Department No.2 is the only department that demonstrated a common understanding of that they deemed as the main goal for their department.

Finally looking at responses given by respondents from Department No.3, unsurprisingly these respondents gave different indicators of their departmental performance. One respondent mentioned advanced technologies that have been introduced and others looking at positive feedback from the customers and an increase in a number of accredited methods. Again, as seen in the previous question A.3, this was because these respondents had different views in terms of what they define as the main goal for their department.

Overall ten out of twelve respondents interviewed across all three departments did indicate satisfactory historical performance despite respondents within the same department quoting different examples as indicators of improved performance, especially respondents from Departments No.1 and No.2. This is no surprise as these respondents similarly had different understanding of what they deemed as the main goal for their department. To resolve this difference of opinions one needs to look at having well defined goals and communicate these properly amongst all employees.

B.5 Roughly how often do you meet with your superior to discuss team or individual performance with respect to the targets of an organization?

Table 4.7: Respondents' Responses for Question B.5

	Department No.1	Department No.2	Department No.3		
		Responses			
Respondent No.1	"I meet my superior bimonthly to discuss performance and monthly with my team"	"we meet once every six months to discuss performance"	" I meet with management once a month or sometimes more to discuss performance"		
Respondent No.2	"We meet monthly to discuss performance and areas of improvement"	"We meet monthly to discuss compliance and when I feel necessary"	"I meet my superior at least three times a year to discuss key performance indexes"		
Respondent No.3	"We meet frequently, weekly and sometimes daily. There is always a constant communication, especially with our open door policy"	"Roughly twice a month. Usually when there is a problem with the performance"	"We meet every morning to discuss daily work plans and how to achieve daily targets"		
Respondent No.4	"I meet weekly with my superior to discuss performance and other statistics"	"We meet every day in our routine morning meetings to discuss plant performance"	"We meet from time to time. The is no set frequency"		

Overall analysis of data as presented in Table 4.7 above did indicate that all twelve respondents from three departments do meet with their respective supervisors to discuss performance. However, further analysis revealed that some respondents meet according to predetermined intervals while some meet on "as-and-when" required or ad hoc basis. This was found to be common in all three departments, for an example Respondent No.4 from Department No.3 stated, "we meet from time to time. the is no set frequency" and Respondent No.3 from Department No.2 stated, "roughly twice a month. usually when there is a problem with the performance". These responses can be an indication of an ad hoc operation, which can be frustrating to some employees and thus be a threat to the performance. However, data analysis revealed that eight out of twelve respondents do have a predetermined meeting schedule devoted for discussing performance related matters.

Another theme that was apparent during data analysis is that some respondents meet with their respective supervisor more often than others, even within the same departments. It was noticeable that particularly less senior respondents, i.e. Respondents No.3 and 4 tend to meet more frequently as opposed to more senior respondents. This could be as a result of senior employees having to spend more time attending strategic meetings and presentations as opposed to daily or weekly performance meetings.

B.6 In general, do you think employees within your organization are passionate or able to conduct work more efficiently over time?

Table 4.8: Respondents' Responses for Question B.6

	Department No.1	Department No.2	Department No.3
		Responses	
Respondent No.1	"I would say most of our staff members are generally passionate. However it differs for individuals"	"No, there is no passion. People don't bother about that extra mile. Some staff members especially lower level staff members do even worry about plant discharge compliance which is the main thing for us as department. Some don't even know what is compliance"	"Passion is there, most of our guys are passionate"
Respondent No.2	"Passion is lacking. There no drive. No incentive and recognition within our department"	"Only few employees are passionate. Most of them are not"	"Passion seems to be lacking. Most people seem to be doing work just to earn the living"
Respondent No.3	"I think my section is vibrant and colleagues are generally passionate. Payroll sometimes work over the weekend just to get some work done"	"It differs, most people that are not so clued up with operations lack passion and interest"	"Because of routine work, people tend to get bored. Because of this we have started rotating every three months. Hopefully this will help"
Respondent No.4	"Most of our staff members work just to meet the targets"	"In my section the majority is passionate. However there are still those few people that report to work for the sake of reporting to work"	"Some are passionate and some are not. People tend to get bored because of routine work"

Analyzing Department No.1 responses as presented in Table 4.8 in the previous page, it is clear that respondents had different views when it comes to this question. This was no surprise as they all had unique experiences with different encounters and interactions with certain group colleagues, for an example a respondent who often interacts with higher level and professional staff members won't have the same experience with the one who normally interacts with lower level staff members. Respondents No.2 and 4 believed that employees just do bare minimum as required, i.e. "passion is lacking, there no drive. No incentive and recognition within our department" and "most of our staff members work just to meet the targets" as respectively stated by these two respondents. Respondent No.2 even went further mentioning the possible reasons for this problem, for example no incentives and recognition for employees doing well in the department. On the contrary, both Respondent No.1 and 3 believed that employees are generally passionate about work with the level of passion varying from individuals. It was however noticeable during interviews that these two respondents facially didn't show enough confidence when responding to the question. It was thus correct to conclude that within Department No.1, some employees lack passion and some are more passionate than others suggesting that there is still a room for improvement on this aspect to empower employees and get them motivated.

A similar pattern was also observed in Department No.2, where there was a difference of opinions amongst respondents when it comes to the passion of employees. However, in this case, three out of four respondents within this department believed that most of the employees are not passionate about their work. Two of the respondents further indicated that lack of passion is more apparent in lower level staff members who do not even understand operations fully. This indicated lack of training and empowerment of the employees by management

Lastly, respondents from Department No.3 also had difference of opinions which it comes to this aspect. They all suggested that generally there are people who lack passion when it comes to work with two respondents citing boredom as the major cause for this problem due to routine work. No matter what the causes are, it was very

clear that there is a room for improvement when it comes to the aspect of passion within the work place.

In general, there was a clear indication from all respondents that some employees at EThekwini Municipality are not passionate about their work. This could have been as a result of the environment which might be not conducive enough for people to express ideas, not supporting personal growth, lack of training and no inventive/recognition.

C.1 Some managers tend to focus on making sure operation is functional and the required activities/procedures are executed and some focus more on the production. Of the two scenarios above, which one do you think management in your organization prioritizes the most?

Table 4.9: Respondents' Responses for Question C.1

	Department No.1	Department No.2	Department No.3
	Responses		
Respondent No.1	"line managers tend to focus more on making sure operation is running and higher up managers tend to focus more on production and statistics"	"My manager focuses solely making sure procedures are enforced and operations is running and not worried about how much money was used to buy chemicals for the process and how much of treated water was processed"	"Management tries to balance the two. They look at production while enforcing procedures"
Respondent No.2	"They tend to focus more on making sure task are executed, meetings are attended, timesheets are signed and check for deviations"	"My manager tends to focus more on the production. If the compliance is good, then all is good"	"Our management tends to focus on the quality of the results(production)"
Respondent No.3	"My manager is production orientated. He looks at the results"	"It is a bit of both, with slightly more focus on production"	"Managers tend to focus more on the results(production)"
Respondent No.4	"Some managers within our department focus on making sure procedures are followed and some focus on the performance or results"	"Generally they focus on both aspects with more emphasis on production (compliance) I would say"	"There is trust between management and the employees. Management tend to focus more on the results and check on the methods every now and then"

There are three major themes that were observed from analysis of data as presented in Table 4.9 above. The first theme that was observed is that some managers and supervisor at EThekwini Municipality are production orientated. In other words, these managers tend to focus more on the end results as opposed to daily operational issues. A good example is the reply from Respondent No.2 in Department No.2, i.e. "my manager tends to focus more on the production. If the compliance is good, then all is good". This theme came out strongly from Department No.3 where three out of four respondents were in agreement. As stated by Respondent No.4 in this department, this culture could be attributed a good working relationship between management and the employees where there is no need for management to micro-manage daily operations.

The second theme that was observed during data analysis is that some managers at EThekwini Municipality prioritize ensuring that things are working and not so much on the output. This was however the least dominant theme that was observed as there were only two replies that fall under this theme, e.g. a reply from Respondent No.1 in Department No.2 which states, "my manager focuses solely making sure procedures are enforced and operations is running and not worried about how much money was used to buy chemicals for the process and how much of treated water was processed". This particular reply makes it very clear that this manager is not concerned about efficiency and improvement.

Lastly, the third theme that was apparent from data analysis is the one where management seem to be embracing both aspects, i.e. operations and production. Five respondents shared the same sentiment when it comes to this theme.

Overall, it was clear that EThekwini Municipality has different types of management models, i.e. different managers and supervisors have different preferences when it comes management styles. Some managers focus more on enforcing procedures, some focus more on the results and some try to balance these two aspects.

C.2 From your understating, what are your department's performance measurement tools?

Table 4.10: Respondents' Responses for Question C.2

	Department no.1	Department no.2	Department no.3
	Responses		
Respondent no.1	"Statistics on sick leave, over time and turnaround time for appointments"	"We look at final compliance of the discharged effluent"	"We look at service level agreements and annually send customers for a feedback from our customers"
Respondent no.2	"Monthly statistics which include: disciplinary hearings and jacket turnaround times"	"We look at final compliance of the discharged effluent and process uptime"	"We look at proficiency testing where an independent body gives us a ranking against other similar utilities in a country"
Respondent no.3	"Statistics on industrial relations and number of posts that have been filled"	"Compliance of the discharged effluent"	"SABS rankings, customer feedback from the surveys"
Respondent no.4	"We look at a number of grievances, number of appointments made, sick leave records"	"Effluent compliance. If that is good, then we know we are doing well"	"Number of methods accredited and SABS rankings"

After analysis of data as presented in Table 4.10 above, it was clear that most of the respondents from each department had a fair idea when it comes to measurement tools for their respective departments. All four respondents from Department No.1 mentioned statistics on recruitments/appointments as the main measurement tool and similarly all four respondents from Department No.2 cited compliance of the discharged effluent as their main performance measurement tool.

Department No.3 slightly fell short when compared to the other two departments; only three respondents cited a similar measurement tool which is South African Bureau of Standards (SABS) ranking against other utilities in a country while two respondents from the same department mentioned customer feedback from the annual surveys as one of the measurement tools.

After analysis, it is fair to say employees at EThekwini Municipality have a fairly good idea of what constitutes performance measurements tools or indicators within their respective departments. This is despite the fact that there were inconsistencies when it comes to common understating of departmental goals.

C.3 Between public sector policies and the customer, in your personal opinion what would you say is the main driver for daily operations in your organization?

Table 4.11: Respondents' Responses for Question C.3

	Department no.1	Department no.2	Department no.3
	Responses		
Respondent no.1	More driven by policies I would say	The focus is solely on the policies, i.e. making sure policies are followed	Policies take priority
Respondent no.2	Our actions are driven by the policies. We don't want to get into trouble"	We do whatever it takes our discharged effluent is compliant with the standards or regulations	Policies take priory in this environment
Respondent no.3	"Policies always take priority"	"Policies take priority"	"Policies govern our actions"
Respondent no.4	"Historically, policies have always been prioritized however through Bathopele initiative, we are now looking at engaging the customers so that we can address their needs much better"	"Policies are the main driver"	"Policies take priory. We strive to put out customers first but we have to do that by following the right protocols first"

Analysis of data as presented in Table 4.11 above indicated that all twelve respondents irrespective of their positions and level of experience understood policies to be the main driver of their daily operations. This came as no surprise in a Municipal environment which is governed by a number of policies, regulations and Bylaws.

However, two replies from Table 17 have shown some will and change of mindset to engage more and more with the customers. It is also apparent that this is a new initiate that the Municipality has just started implementing. A Response from Respondent No.4 in Department No.1 is a good example supporting this statement, i.e. "historically, policies have always been prioritized however through Bathopele initiative, we are now looking at engaging the customers so that we can address". It is also clear that this new initiate called Bathopele has not been rolled out across all the departments in the Municipality as most of the respondents were not familiar with this new Bathopele initiative.

C.4 Which customers is your department servicing?

Table 4.12: Respondents' Responses for Question C.4

	Department no.1	Department no.2	Department no.3
	Responses		
Respondent no.1	"Line management"	"Were are servicing the community"	"Pollution branch, Works Branch and Heath department"
Respondent no.2	"Line management and employees"	"We are servicing the public"	"Pollution branch, Works Branch and the public. We monitor recreational facilities like pools and attend to customer complaints"
Respondent no.3	"Line management, employees, trade unions and the public"	"Industries and the community"	"Pollution branch, works branch"
Respondent no.4	"Employees and line management"	"The community"	"Works branch, pollution branch, Heath department , Durban solid waste unit and other municipalities"

From Table 4.12 of responses above there seemed to be a good understanding with respect to knowing customers being served by the respective departments. Even though some respondents within the same departments mentioned more customers than others there was an existing pattern where all four respondents mentioned at least one customer which is common throughout. All respondents from Department No.1 mentioned line management while all respondents from Departments No.2 and 3 mentioned the public/community and pollution branch/works branch respectively. Overall this is a good sign, however this area can still be improved as some employees seem to be more acknowledgeable than others.

4.2 Chapter 4 Summary

The main objective of this chapter was present the actual data collected from the respondents and highlight certain patterns or themes that were identified during interactive thematic data analysis. Themes were analyzed per question with twelve questions altogether. It is important to emphasize that analysis only focused on the themes that were deemed relevant to the objectives of this study.

The interpretation of the findings that have emerged from this chapter will then be covered in the next chapter called discussion, where findings of the study will be compared to previous literature.

CHAPTER 5: DISCUSSION

5.1 Introduction

Based on the study findings that emanated from data analysis in Chapter 4, this chapter compares study findings against previous studies or literature framework to deduce the final conclusions. However, the conclusions of the study will be presented separately in the next chapter together with recommendations and suggestions for future research. For ease of readability, the findings of the study will be discussed under each of the objectives of the study as listed below:

- 5.1.1 To understand perceptions of EThekwini Municipality towards Kaizen strategy as a potential solution to increase productivity in the Municipality.
- 5.1.2 To establish if implementing Kaizen strategy as a strategy could be of benefit to EThekwini Municipality looking at the existing conditions
- 5.1.3 To establish the challenges that could arise when implementing Kaizen strategy as business strategy at EThekwini Municipality

5.2 Discussion Under Objective of the Study No. 5.1.1

Each of the respondents were asked two questions during the interviews under this objective of the study. Data analysis indicated that there were three major themes that were observed under this objective of the study.

Theme 1: Respondents condemning the belief that improvement is profit-driven

Data analysis indicated 91 percent of the respondents interviewed were against the belief that continuous improvement must only be pursued when there is profit gain involved.

Theme 2: Respondents in support of continuous improvement in the public sector

Data analysis indicated all the respondents interviewed were explicitly in favour of an idea of pursuing continuous improvement in the public sector.

Theme 3: Respondents expressing belief on Kaizen

Data analysis indicated that all the respondents had belief that the concept of Kaizen strategy can positively benefit their respective departments with 75 percent of the respondents expressing strong belief on the Kaizen strategy.

According to Fryer and Douglas (2018), most of officials in the public sector have historically had a negative view on the application of Kaizen strategy in the public entities mainly because they had incorrect understanding of what Kaizen was about. For an example Fryer and Douglas (2018) discovered some employees in the public sector viewed Kaizen as management's stunt to cut down manpower. However, Quayle (2017) has discovered that this negative perception on the application of Kaizen strategy in the public sector has changed over recent times owing to enormous pressure arising from public demands for better service delivery and more information on Kaizen strategy being made available. As result more and more of public sector official have shown growing interest in continuous improvement techniques (Quayle, 2017). This theoretical framework in support of all three themes that were observed under this objective of the study.

In addition, the changing of belief is also supported by the study that was conducted by Assefa (2016) which revealed that about 92.5 respondents from African Union Commission study were of the strong view that Kaizen strategy could bring improvement in the African Union Commission. This is particularly in coherent with theme 3.

5.3 Discussion Under Objective of the Study No. 5.1.2

Each of the respondents were asked six questions during the interviews under this objective of the study. Data analysis indicated that there were six major themes that were observed under this objective of the study. The identified themes were then compared against six indicators listed by Walley and Radnor (2018) in literature in order to deduce the potential benefits to EThekwini Municipality resulting from Kaizen strategy application.

Theme 1: Employees do encounter unnecessary delays

Data analysis strongly revealed that all respondents interviewed do face various challenges when it comes to unnecessary delays within their respective departments.

Theme 2: Standard operating procedure not followed

Lack of standardized operation within various departments at EThekwini Municipality was observed one of the major themes during data analysis. As per analysis, 91 percent of respondents indicated that work practices do vary between different employees within their departments due to various reasons.

Theme 3: Employees not aware of what their departmental goals are

The overall data analyses revealed that there was only one out of three selected departments where all four respondents had a clear and common understating in terms of what their departmental goals are.

Theme 4: Awareness of historical performance

In overall, ten out of twelve respondents interviewed across all three departments did indicate satisfactory historical performance despite respondents within the same department quoting different examples as indicators of improved performance, especially respondents from Departments No.1 and No.2.

Theme 5: Planned performance meeting

Overall analysis of data did indicate that all twelve respondents from three departments do meet with their respective supervisors to discuss performance. Furthermore, data analysis revealed that 66 percent of respondents do have a predetermined meeting schedules devoted for discussing performance related matters.

Theme 6: Some employees do no work efficiently

In general, there was a clear indication from all respondents that some employees at EThekwini Municipality are not passionate about their work.

Walley and Radnor (2018) gave the following list of indicators which can be used to tell if Kaizen strategy could be of benefit in a particular organization. These six indicators were also used to compose six research questions which formed a basis of the objective of the Study No. 5.1.2.

- Processes take longer than necessary and frustrate both customers and employees.
- Work practices vary widely across individuals and groups and it is not known how much they vary.
- People struggle to describe how their day-to-day efforts link to organizational goals.
- No one has a clear view of the organization's historical performance or what "good" looks like.
- Managers rarely discuss team or individual performance
- Employees are not encouraged or able to conduct work more efficiently over time.

From the comparison of theme against six indicators as list above by Walley and Radnor (2018) which serve as theoretical framework for this objective of the study, the following deduction can be made:

Theme 1, 2,3 and 6 which constitute 66 percent of the observed themes support the theoretical view which states that there is potential for EThekwini Municipality to benefit from the application of Kaizen strategy. It is essential to emphasize that this deduction is limited to the current organizational culture of EThekwini Municipality.

5.4 Discussion Under Objective of the Study No. 5.1.3

Lastly, each of the respondents were asked four questions during the interviews under this objective of the study. Nguyen (2015) discovered three commonly encountered by public sector entities when embracing Kaizen strategy. These include lack of commitment from management, poor understanding of organizational performance tools and nature of operating culture in the public sector (Nguyen, 2015).

Data analysis indicated that EThekwini Municipality is likely to encounter two of the common challenges as discovered in literature. Themes associated with these challenges are discussed below:

Theme 1: Varying management style by management

It was clear from data analysis that EThekwini Municipality has different types of management models, i.e. different managers and supervisors have different preferences when it comes management styles. Some managers focus more on enforcing procedures, some focus more on the results and some try to balance these two aspects. As indicated by Nguyen (2015), these vrying managenet models within the same organization are likely pose a threat to the implementation of Kaizen strategy.

Theme 2: Priority given to policies as opposed to customers.

Data analysis indicated that all twelve respondents irrespective of their positions and level of experience understood policies to be the main driver of their daily operations or opposed to customer-focused operation. Similarly, this is in coherent with theoretical framework as discovered by Cross and Mavunga (2017) which states that the workers in the public entities respond more to management requirements rather than the customers.

These two challenges have been identified as the main potential threats to EThekwini Municipality should the Municipality consider embracing Kaizen principles in the future. This finding allows EThekwini Municipality to proactively work on these potential threats.

5.5 Chapter 5 Summary

The main objective of this chapter was compare study findings against previous studies or literature framework to deduce the final conclusions. The following are some of the main deductions that were made through these comparisons:

- Perception of Kaizen by the respondents was found to be incoherent with literature framework.
- It was found that EThekwini Municipality has a chance of benefiting from Kaizen strategy
- There are two challenges that EThekwini might encounter should the Municipality decide to embrace Kaizen in the future.

The next chapter which is the final chapter of this study will cover conclusions based on these comparisons, recommendations and suggestions for future research. This will then conclude the study.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This is the final chapter of the study which will cover summary of the study, conclusions, recommendations and suggestions for further studies based on the limitations identified in this study. In addition, this chapter will also include the summary of the study up to this point in order to put the content of this final chapter into perspective.

6.2 Summary of the Study

The EThekwini Municipality took a decision to implement Economic Development and Job-Creation Strategy 2013-2018 in year 2013 with a hope of reviving the economy of the Municipality and decrease an unemployment rate. However, six years later EThekwini Municipality's GDP growth rate has decreased from 2.6 % in 2013 to 0.4% in 2016 and similarly the informal settlements have been reported to have increased from 24.9% to 27.4 % between 2014-2016 with no sanitation services provided to approximately 75 % of those informal settlements. It is therefore clear that the Economic Development and Job-Creation Strategy has not delivered on the expectations of EThekwini Municipality as it was originally anticipated.

To this end, the study seeks to determine if continuous improvement strategy like Kaizen can potentially be a solution to EThekwini Municipality's ongoing problems. The following research questions were used to make this determination:

- How is Kaizen strategy accepted by EThekwini Municipality as a potential solution to increasing productivity in the Municipality?
- Are there any indications that implementing Kaizen strategy as business strategy at EThekwini Municipality could be of benefit?
- What could be the challenges of implementing Kaizen strategy at EThekwini Municipality?

The study was conducted following qualitative approach where twelve respondents were selected from EThekwini Municipality to participate in the study. The data that was collected through in-depth interviews was analyzed using thematic approach to deduce the following study findings: -

- All the respondents had belief that the concept of Kaizen strategy can positively benefit their respective departments with 75 percent of the respondents expressing strong belief on the Kaizen strategy.
- Sixty-six (66) percent of observed themes from data analysis support the theoretical view which states that there is potential for EThekwini Municipality to benefit from the application of Kaizen strategy.
- Inconsistent management styles and the current organizational culture have been identified as two challenges that may pose a threat EThekwini Municipality successfully adopting Kaizen principles in the future.

6.3 Conclusions

The following are set of conclusions that were drawn up from this study in line with its objectives:

- 6.3.1 The study revealed that employees working for EThekwini Municipality do believe that Kaizen strategy can increase productivity in the Municipality despite the fact that the Municipality is the public sector entity and is not driven by profits.
- 6.3.2 The study also revealed that there is theoretical evidence supporting that EThekwini Municipality can benefit from implementing Kaizen strategy
- 6.3.3 Lastly, the study has revealed that there are two challenges that may potentially pose a threat to EThekwini Municipality's successful application of Kaizen strategy. These treats include varying management models within EThekwini Municipality and current organizational culture which not customer-orientated.

6.4 Recommendations

Should EThekwini Municipality wish to embrace Kaizen strategy in the future, it is recommended that: -

- 6.4.1 The challenges that have been identified by the study as potential threats be resolved first.
- 6.4.2 Findings must be adopted with an understanding that the findings of the study are unique to the current leadership of the Municipality.
- 6.4.3 Despite positive responses by EThekwini Municipality employees regarding Kaizen strategy, successful implementation of the strategy still requires will from all stakeholders and continuous application.
- 6.4.4 The organizational performance needs to be transparent across all levels within an organization so that everyone can get an opportunity to get involved.
- 6.4.5 The Municipality must create conducive working environment where employees can express creative ideas for continuous improvement.

6.5 Study Limitations and Suggestions for Future Studies

The main limitation for this study is that the findings are primarily based the views and perceptions of Kaizen strategy as a concept. This is because Kaizen strategy is not widely used in the public sector, especially here in South Africa (Coetzee, et al., 2016). Based on this limitation, it is recommended that further research (pilot study) be conducted at EThekwini Municipality to practically examine the success of Kaizen strategy at the Municipality. The findings of the current research can be used as guidelines in drafting an informed research proposal having gathered some understanding on the potential challenges, benefits and how employees feel about this strategy.

6.6 Chapter 6 Summary

This was the final chapter of the study which concludes the dissertation. This chapter commenced with an introduction which outlined the main content for this final chapter. The introduction was then followed by summary of the study which recapped on what the study seeks to find and how the study was undertaken. Summary of the study briefly covered the background of the study, problem statement, aim of the study, research questions and research methodology. Following the recap, the chapter comprehensively covered the conclusions of the study in line with its objectives. Lastly, the chapter was concluded by the recommendations and study limitations and suggestions for future studies; in that order.

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APPENDICES

Appendix A: Interview Questions

Research Topic: Investigation of acceptance of Kaizen strategy as business strategy at EThekwini Municipality to improve business productivity

Date :

Department 1 :

Respondent 1 :

Current position and years of experience :

Roles in an organization :

Brief outline of what the department does

Group A

- 1. Some managers from the public sector tend to believe that there is no reason to pursue continuous improvement if there is no profit. How do you personally feel about that?
- 2. Do you think your department can benefit from utilizing kaizen strategy?

Group B

- 1. Do you feel that in general processes within your organization take longer than necessary and start frustrating employees/customers?
- 2. From your experience in your organization's daily operations, do you think that work practices vary widely across individuals and groups?
- 3. What do you understand to be the main goal for your department?
- 4. How would you describe your organization's historical performance?

- 5. Roughly how often do you meet with your superior to discuss team or individual performance with respect to the targets of an organization?
- 6. In general, do you think employees within your organization are passionate or able to conduct work more efficiently over time?

Group C

- 1. Some managers tend to focus on making sure operation is functional and the required activities/procedures are executed and some focus more on the production. Of the two scenarios above, which one do you think management in your organization prioritizes the most?
- 2. From your understating, what are your organization's performance measurement tools?
- 3. Between public sector policies and the customer, in your personal opinion what would you say is the main driver for daily operations in your organization?
- 4. Which customers your department is servicing?

Appendix B: Informed Consent Form

Dear Participant,

My name is Nkosinathi Buthelezi (208521800). I am a Masters student enrolled at the University of KwaZulu-Natal, Westville Campus. The title of my research is: Investigation of Kaizen strategy as business strategy at EThekwini Municipality to improve business productivity. The aim of the study is to establish if EThekwini Municipality can potentially benefit from adopting Kaizen strategy and thus taking the Municipality closer towards resolving some of its current challenges such as high employment, declining growth rate, etc. and also to highlight some of the potential challenges that may arise should EThekwini Municipality decide to embrace Kaizen strategy in the future. I am interested in interviewing you so as to share your experiences and observations on the subject matter.

The following is to be noted:

- The information that you provide will solely be utilized for academic purposes.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating during the course of this the research. You will not be penalized for taking such an action.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The interview will take about 45 minutes long
- The record as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisors. After a period of 5 years, in line with the rules of the university, it will be disposed by shredding and burning.
- If you agree to participate please sign the declaration attached to this statement (a separate sheet will be provided for signatures)

For more information or quires, I can be contacted at: Graduate School of Business and Leadership, University of KwaZulu-Natal, Westville Campus, Durban.

Email: 208521800@stu.ukzn.ac.za;

Cell: 0792311834

My supervisor is Dr Bhasela Yalezo who is located at Graduate School of Business and Leadership, Westville Campus, Durban of the University of KwaZulu-Natal. Contact details: email: Yalezob@ukzn.ac.za Phone number: 061 8239850 The Humanities and Social Sciences Research Ethics Committee contact details are as follows: Ms Phumelele Ximba, University of KwaZulu-Natal, Research Office, Email: ximbap@ukzn.ac.za,Phone number +27312603587.

Thank you for your contribution to this research.

DECLARATION			
I participant) hereby confirm that I understand the content nature of the research project, and I consent to participat	ts of this		
I understand that I am at liberty to withdraw from the prodesire. I understand the intention of the research. I hereb	y agree to	partic	SO
SIGNATURE OF PARTICIPANT	DATE		

Appendix C: Ethical Clearance

Appendix D: Turnitin Report