

**CHALLENGES OF IMPLEMENTING THE STRATEGY OF MOBILE-BASED
TRANSACTION SYSTEMS BY KENYA POWER & LIGHTING
COMPANY LIMITED**

By

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For the Award of the Degree of Master of Business Administration, the School of
Business University of Nairobi**

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DECLARATION

This research project report is my original work and has never been presented for a degree in any other university.

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DEDICATION

I dedicate this research report to my dear family, my employer, and my colleagues at Adtel Phone Company Ltd for being supportive during the time of my studies.

ACKNOWLEDGEMENT

I would like to acknowledge the support, advice and tireless efforts of my supervisor in the supervision during my research work and in writing of this research project report.

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Finally, I would like to acknowledge the assistance given by the staff at the School of Business, University of Nairobi.

ABSTRACT

The aim of this study was to establish the challenges facing the implementation of the mobile-based transaction strategy by KPLC. The following research questions guided the study: What are the challenges facing KPLC in the implementation the strategy of Mobile-Based transaction systems? And what are the measures taken by KPLC to overcome the challenges of implementing the strategy of mobile-based transaction systems?

This study adopted a case study design. A case study approach was necessary considering the nature of the target informants. The required data was obtained through self-report methods, namely, in-depth interviewing and document analysis. The data for the study was collected from the top management of KPLC. Two methods of data collection were applied. They included: in-depth interviewing and document analysis. Qualitative data was analyzed through content analysis. The key findings of the study revealed that the challenges to implementation of the MBTS strategy by KPLC include: delay in roll out of plan; down times by the mobile operators; support from third parties in provision of acceptable level of services; delays in executing transactions; network issues; customer reload of wattage units; poor customer buy-in; last minute rush to make payments; high cost of transactions; dented KPLC brand; change management; decentralized decision-making; poor adoption of the service; and poor communication approaches to customers. Some of the outstanding measures taken to overcome such challenges were found to include the following: hiring of expertise; staff redeployment; staff training; increased budgetary allocations; changes in leadership; multi-sectoral stakeholders' involvement and participation; customer sensitization and education drives; involvement of third parties to drive the innovations; regular infrastructure upgrades; and re-branding.

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LIST OF ABBREVIATIONS AND ACRONYMS

ICT	:	Information Communication Technologies
KPLC	:	Kenya Power and Lighting Company Limited
MBTS	:	Mobile-Based Transaction System
MDAS	:	Mobile Data Access System
SMS	:	Short Messaging Service

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

In Kenya, the Central Bank recently instituted the strategy of modernization of national payments systems, aimed at encouraging people to shift to non-cash payment instruments such as credit, debit or pre-paid cards, and mobile-based payments. The result has been the ability by various service providers to provide various points of sales solutions, transaction switching, remote banking through Internet, and WAP, mobile commerce and pre-payments. The landing of the fibre optic channel, and the growth of the Internet on the mobile phone, has further opened up new opportunities in distribution channels within the payments space. This study seeks to assess the challenges of implementing the strategy of mobile transactions systems by Kenya Power and Lighting Company Limited (KPLC). This chapter provides background information to the problem, the objective, as well as the significance to various stakeholders.

1.1.1. Strategy Implementation Challenges

Lack of understanding of a strategy is one of the obstacles of strategy implementation (Aaltonen and Ikavalko, 2001). Before any strategy can be implemented, it must be clearly understood. Clear understanding of a strategy gives purpose to the activities of each employee and allows them to link whatever task is at hand to the overall organizational direction. Byars (1996) pointed out that many organizational members typically recognize strategic issues as important and also understand their context in generic terms. However, problems in understanding arise when it comes to applying the strategic issues in the day-day decision-making.

Cultural impact underestimation is yet another challenge to strategy implementation. The implementation of a strategy often encounters rough going because of deep-rooted cultural biases. It causes resistance to implementation of new strategies especially in organizations with defender cultures. This is because they see change as threatening and tend to favour “continuity” and “security” (Wang, 2000). It is the strategy maker’s

responsibility to choose a strategy that is compatible with the “sacred” or unchangeable parts of the prevailing corporate culture (Thomson and Strickland, 1989).

1.1.2. Mobile-Based Transaction Systems

Advances in wireless networking technology and portable computing devices have led to the emergence of a new computing paradigm known as mobile computing and a number of applications. As a result, software applications have to be redesigned to take advantage of this environment while accommodating the new challenges posed by mobility. As mobile users wander about, they are bound to encounter a variety of different information sources (databases) that are often autonomous and heterogeneous in nature. Such a collection of autonomous and heterogeneous database is often known as a multidatabase. The existing multidatabase systems do not readily support mobile computing. A new class of multidatabase that provides access to a large collection of data via a wireless networking connection is proposed - a Mobile Data Access System (MDAS). Within the scope of MDAS, a new transaction-processing model is designed that allows timely and reliable access to heterogeneous and autonomous data sources while coping with the mobility issue. The proposed model extends the existing multidatabase system without any adverse effect to the preexisting local and global users. This is accomplished through the implementation of multi tiered mobile transaction proxies that manage the execution of mobile transactions on behalf of the mobile user.

Users can interact with the database by one or many database operations. The database operations can be gathered together to form a unit of execution program that is called a transaction (Gray and Reuter, 1993). In other words, a transaction is a logical execution unit of database operations. A transaction transforms the database from one consistent state to another consistent state. A transaction program starts from an initial consistent state of the database by invoking a Begin_transaction method call. After that, one or a set of database operations of the transaction program are executed. When these database operations are completed, i.e., a new consistent database state is established as designed, the transaction program saves this new consistent state into the database by calling the

Commit_transaction method. The Commit_transaction call ensures that all the database operations of the transaction program are successfully executed and the results of the transaction are safely saved in the database. If there is any error during the execution of the transaction program, the initial consistent state of the database is re-established by the Abort_transaction call. The Abort_transaction call indicates that the execution of the transaction program has failed and this execution does not have any effect on the initial consistent state of the database. The transaction is said to be committed if it has successfully executed the Commit_transaction call, otherwise it is aborted. A transaction is called a read-only transaction if all of its database operations do not alter any database state. Figure 1.1 presents a programming model of a transaction.

Figure 1.1: Transactional Programming Model

```
Begin_transaction (initial_consistent_state)
    One or more database operations

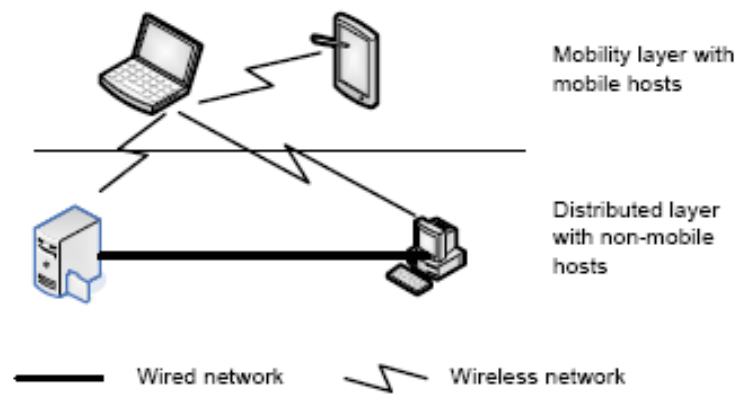
if (reach new_consistent_state) then
    Commit_transaction (new_consistent_state)
else
    Abort_transaction (initial_consistent_state)
```

Source: Nam Le (2006) “A Transaction Processing System for Supporting Mobile Collaborative Works”

Mobility is the main characteristic that distinguishes the mobile environments from the traditional distributed environments. In traditional distributed environments, computers are stationary hosts. In mobile environments, mobile computers are continuously moving from one geographical location to another. Many modern distributed applications support mobile clients and it is common for the mobile clients to access backend databases and/or shared data files (Madria and Bhargava, 2001; Chen, Phan, and Yen, 2002; Kumar, Dunham, and Seydim, 2002). For example, traders may issue business transactions via mobile devices, salesman may access the inventory data and client information, and travelers may access sites for hotel reservation or make travel plan changes.

In mobile environments, transaction processing systems consist of both mobile and non-mobile hosts (Serrano-Alvarado, Roncancio, and Adiba, 2004), and can be divided into two different layers (see Figure 1.2). The distributed transaction processing layer corresponds to the execution of mobile transactions that are carried out on non-mobile hosts. The mobile transaction processing layer corresponds to the execution of mobile transactions that are carried out on a mobile host or distributed among mobile hosts. Due to the above distinguishing and challenging characteristics of mobile environments, transaction processing in mobile environments is more difficult than in distributed environments, especially in terms of concurrency control, data availability, and recovery mechanisms (Murthy, 2001). These characteristics of mobile transactions are the motivators behind this study.

Figure 1.2: Transaction Processing in Mobile Environments



Source: Serrano-Alvarado, Roncancio, and Adiba (2004) “A Survey of Mobile Transactions”, *Distributed and Parallel Databases*, 16(2), 2004, pp 193-230

Current distributed and multi-database systems are designed to allow timely and reliable access to large amounts of data distributed at different locations. Changes in current technology now allow users to access this data via a wide variety of devices through a diverse communication medium. A mobile data access system is an environment in which a wireless-mobile computing environment is superimposed upon a multi-database environment in order to realize anywhere, anytime access capability. As a potentially large number of users may simultaneously access the available data, there are several

issues involved in the ability to concurrently manage transactions. Current multi-database concurrency control schemes do not efficiently manage these accesses because they do not address the limited bandwidth and frequent disconnections associated with wireless networks.

1.1.3. Kenya Power & Lighting Company Limited

Kenya Power and Lighting Company (KPLC) is a limited liability company which transmits, distributes and retails electricity to customers throughout Kenya. KPLC is a public company listed in the Nairobi Stock Exchange (NSE). The company is a national electric utility company, managing electric metering, licensing, billing, emergency electricity service, and customer relations. In 2005, KPLC initiated a programme to roll out bill querying services through mobile phones. In the same year, the company launched the e-Bill e-mail Service that enables customers to check their electricity account balance through e-mail. To kick-off this project, the company first launched a service to enable customers to access their accounts at their own convenience and at any time using short messaging service (SMS) technology. This service was meant primarily to serve electricity customers who receive bills through third parties and often get disconnected when they do not get them on time. Despite the introduction of electronic bill querying services, the company still continues to dispatch detailed electricity bills to customers through their postal addresses. The mobile technology product rollout came at a time when the firm was implementing a Sh11bn upgrade programme that was expected to improve the firm's capacity to offer efficient and reliable services.

1.2. Statement of the Problem

Successful strategy implementation entails involving teams at all levels in strategic planning to build a shared vision, and increase each individual's motivation. Clarity and consistent communication, from mapping desired outcomes to designing performance measures, seem to be essential to success. Successful leaders have often engaged their teams by simply telling the story of their shared vision, and publicly celebrating large and small wins, such as the achievement of milestones. To ensure that the vision is shared, teams need to know that they can test the theory, voice opinions, challenge premises, and

suggest alternatives without fear of reprimand. Implementing a strategy may require leaders who lead through inspiration and coaching rather than command and control.

In light of the above requirements, it is evident that because of the unique characteristics of the mobile environments (that are: the mobility of the mobile hosts, the limitations of wireless networks, and the resource constraints of the mobile computers), mobile transactions are very different from traditional transactions. This consequently implies that implementation of such a strategy would be crowded with a myriad of challenges to the implementing agency or organization. As for KPLC, implementing a strategy of mobile-based transaction systems would be viewed as a key milestone in handling delays in relaying of paper-based electricity bills and unwarranted power cuts that the consumers have experienced over the year

Empirical studies on implementing a technology-based customer service strategy in Kenya are not systematically documented. A study by Towett (2002) surveyed the perceived risks on the use of mobile telephone services among consumers in Nairobi. Technological illiteracy among users was identified as one of the key areas of concern by mobile phone users. Muturi (2004) further sought to determine factors that determine customer loyalty to a mobile phone service provider among users in Nairobi. The study showed that users' beliefs, reliability and level of customer service were key drivers to loyalty. Two years later, a study by Ontunya (2006) conducted a survey of consumer adoption of mobile phone banking in Kenya. The study identified that ICT infrastructural challenges were hinderances to growth of mobile phone banking in Kenya. None of the studies had focused on critical success factors to usage of transaction querying or m-payments amongst customers of major utility service providers such as water and electricity. In light of the gaps identified from the above empirical studies, this study sought to answer the following two research questions: What are the challenges facing KPLC in the implementation the strategy of Mobile-Based transaction systems? And what are the measures taken by KPLC to overcome the challenges of implementing the strategy of mobile-based transaction systems?

1.3. Objective of the Study

- i). To determine the challenges facing KPLC in the implementation the strategy of Mobile-Based transaction systems.
- ii). To establish the measures taken by KPLC to overcome the challenges of implementing the strategy of mobile-based transaction systems.

1.4. Significance of the Study

First, the results from this study will be of benefit to the management and stakeholders of the Kenyan public sector organizations such as KPLC that are running mobile-based transaction systems so that they are more user-friendly. The findings of this study will assist information systems' developers in designing information systems that are able to meet client needs of efficiency, adaptability, and convenience in use. Secondly, the study will be of benefit to utility service providers such as the Nairobi Water Company that run related transaction systems to inform consumers on the status of their water accounts. Thirdly, the study will highlight the challenges experienced in dissemination of data in the mobile computing environment hence the data and networking service providers will be able to identify areas for possible improvements. Finally, the findings of this study will also form the basis for further studies by other scholars and researchers who might be interested to carry this subject further on.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The purpose of this review is to set the study into a broader context through reviewing of the relevant literature. This chapter presents a review of the related literature on the subject under study presented by various researchers, scholars, analysts and authors. Models by writers are used to illustrate the various sub topics mentioned in the objectives of the study. The review has covered the issues of strategy implementation, factors influencing strategy implementation, strategy implementation process, and the challenges of strategy implementation.

2.2. Strategy implementation

The implementation of organization strategy involves the application of the management process to obtain the desired results. Particularly, strategy implementation includes designing the organization's structure, allocating resources, developing information and decision process, and managing human resources, including such areas as the reward system, approaches to leadership, and staffing (Barnat, 2007). Strategy implementation can also be regarded as a process of allocating resources to support the chosen strategies. This process includes the various management activities that are necessary to put strategy in motion, institute strategic controls that monitor progress, and ultimately achieve organizational goals. For example, according to Steiner (1997) the implementation process covers the entire managerial activities including such matters as motivation, compensation, management appraisal, and control processes. As Higgins has pointed out, almost all the management functions -planning, controlling, organizing, motivating, leading, directing, integrating, communicating, and innovation -are in some degree applied in the implementation process. Pearce and Robinson, (2003) say that to effectively direct and control the use of the firm's resources, mechanisms such as organizational structure, information systems, leadership styles, assignment of key managers, budgeting, rewards, and control systems are essential strategy implementation ingredients.

Strategy implementation is one of the components of strategic management and refers to a set of decisions and actions that result in the formulation and implementation of long term plans designed to achieve organizational objectives (Pearce and Robinson, 2003). Its purpose is to complete the transition from strategic planning to strategic management by incorporating adopted strategies throughout the relevant system (Bryson, 1995). Strategy implementation is also concerned with both planning on how the choice of strategy can be put into effect, and managing the changes required (Wang, 2000). According to Aosa (1992), once strategies have been developed, they need to be implemented; they are of no value unless they are effectively translated into action. However, poor implementation of an appropriate strategy may cause that strategy to fail (Kiruthi, 2001). An excellent implementation plan, will not only cause the success of an appropriate strategy, but can also rescue an inappropriate strategy (Hunger and Wheelen, 1994). Strategy implementation is therefore crucial to effective management (McCarthy et al, 1986).

2.3. Factors influencing strategy implementation

Factors that influence the successful implementation of strategic management from internal organization point of view relate quite closely with the generic organization development model suggested by management experts such as Mc Kinsey, de Bono, Ishikawa – to mention a few. The factors contributing to organization’s excellence under generic organization development model include: leadership, culture/ behavior; systems or processes; organizational structure; human resource architecture; and technology architecture (Ansoff, 1965; and Bryson, 1989).

2.3.1. Organizational Structure

Organization structure is the pattern in which the various parts of the organization are interrelated or interconnected. It prescribes relationships among various positions and activities. For implementing strategy, the organization structure should be designed according to the needs of the strategy. The relationship between strategy and structure can be thought of in terms of utilizing structure for strategy implementation because structure is a means to an end, that is, to provide facilities for implementing strategy. Therefore, both should be integrated. In the absence of such integration, outcome may be confusion, misdirection and splintered effort within the organization. There can be

various ways of designing an organization structure. However, the major issues involved in designing the structure to fit the strategy involve the answers of following questions: What should be the different units of the organization? What components should join together and what components should be kept apart? What is the appropriate placement and relationship of different units? (Bhasin, 2010)

An organization structure is the way in which the tasks and subtasks required to implement a strategy are arranged. The diagrammatical representation of structure could be an organization chart but a chart shows only the 'skeleton'. The 'flesh and blood' that brings to life an organization is the several mechanisms that support the structure. All these cannot be depicted on a chart. But a strategist has to grapple with the complexities of creating the structure, making it work, redesigning when required, and implementing changes that will keep the structure relevant to the needs of the strategies that have to be implemented. Successful strategy formulation does not guarantee successful strategy implementation. When the firm's strategy is not matched with the most appropriate structure and controls, performance declines. The structure specifies the firm's formal reporting relationships, procedures, controls and authority, and decision-making process. It influences how managers work and the decisions resulting from that work. It specifies the work to be done and how to do it given the firm's strategy or strategies. It provides the stability a firm needs to successfully implement its strategies and maintain its competitive advantages. Structural stability provides the capacity the firm requires to consistently and predictably manage its daily work routines (Igbal, 2008).

2.3.2. Organizational Culture and Behaviour

The first basic action that is required for putting a strategy into operation is its institutionalization. Since strategy does not become either acceptable or effective by virtue of being well designed and clearly announced, the successful implementation of strategy requires that the strategy framer acts as its promoter and defender. Often strategy choice becomes a personal choice of the strategist because his personality variables become an influential factor in strategy formulation. Thus, it becomes a personal strategy of the strategist. Therefore, there is an urgent need for the institutionalization of strategy

because without it, the strategy is subject to being undermined. Therefore, it is the role of the strategist to present the strategy to the members of the organization in a way that appeals to them and brings their support. This will put organizational people to feel that it is their own strategy rather than the strategy imposed on them. Such a feeling creates commitment so essential for making strategy successful (Bhasin, 2010).

Setting organizational climate relevant for strategy implementation is important for making strategy to work. Organizational climate refers to the characteristics of internal environment that conditions the co-operation, the development of the individuals, the extent of commitment and dedication of people in the organization, and the efficiency with which the purpose is translated into results. Organizations whose strategy is implemented with conducive climate are more effective than those whose are not. People are the instruments in implementing a particular strategy and organizational climate is basically a people-oriented attempt. A top manager can play an important role in shaping the organizational climate not only by providing standards for what others do but also what he does because organizational climate is a matter of practice rather than the precept (Bhasin, 2010).

2.3.3. Resources Architecture

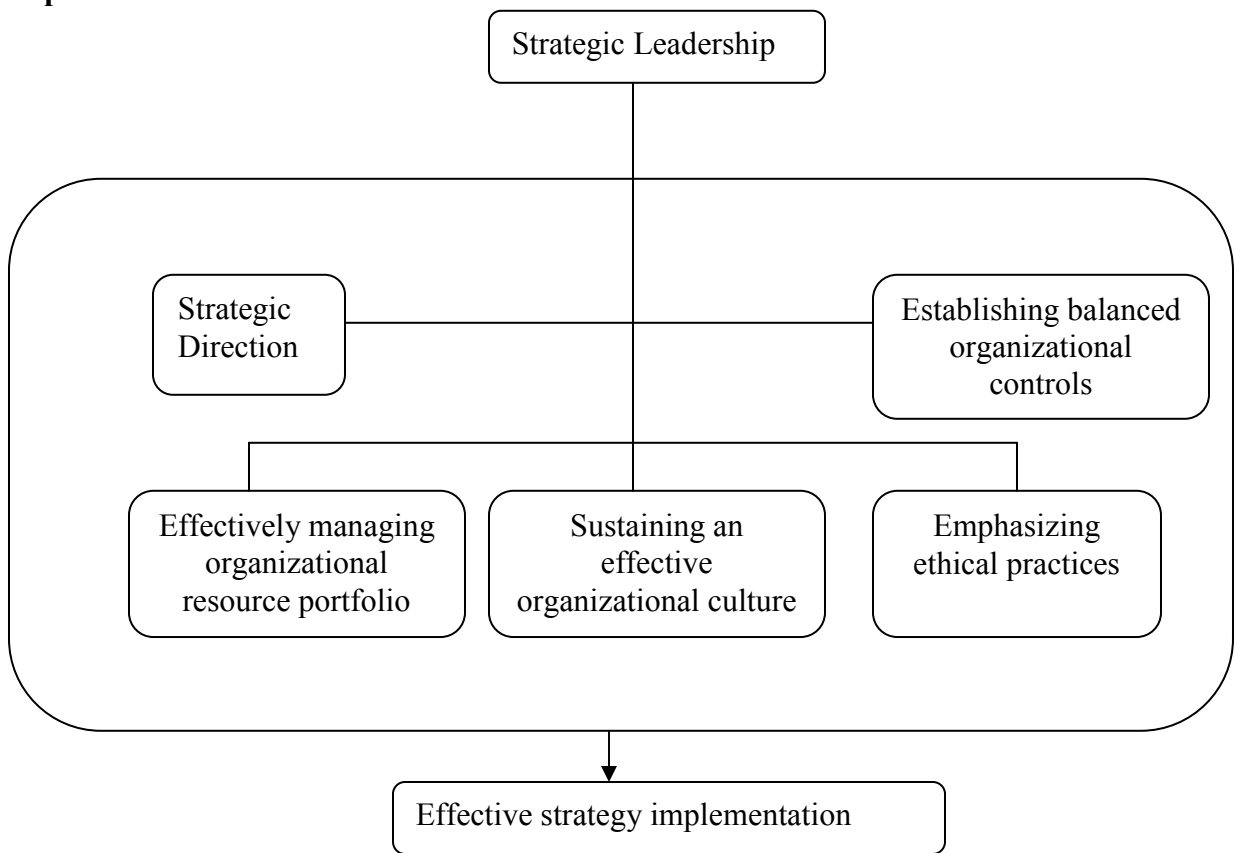
Organizations have at least four type of resources that can be used to achieve desired objectives namely; financial resources, physical resources, human resources, and technological resources (David, 2003). Once a strategic option has been settled upon (in the strategic selection stage), management attention turns to evaluating the resource implications of the strategy (Campbell et al, 2002). The operating level must have the resources needed to carry out each part of the strategic plan (Harvey, 1998). It should therefore be possible to implement strategies with the resources available and it is not possible to implement a strategy which requires more resources than can be made available

2.3.4. Strategic Leadership

A review of the literature reveals that strategy implementation is an important component of the strategic management process. Research indicates that the ability to implement a

strategy is viewed as considerably more important as strategy formulation, and that strategy implementation, rather than strategy formulation, is the key to superior organizational performance. However, the high failure rate of strategy implementation efforts is well documented, and many barriers to effective strategy implementation exist. A lack of leadership, and specifically strategic leadership, at the top of the organization has been identified as one of the major barriers to effective strategy implementation. In turn, strategic leadership is also viewed as a key driver to effective strategy implementation (Jooste and Fourie, 2009). Several identifiable actions characterize strategic leadership that positively contributes to effective strategy implementation (see Figure 2.1 below), namely: determining strategic direction; establishing balanced organizational controls; effectively managing the organization’s resource portfolio; sustaining an effective organizational culture; and emphasizing ethical practices.

Figure 2.1: The role of selected strategic leadership actions in strategy implementation



Source: Adapted from Hitt et al. (2007: 385) Strategic Management: Competitiveness and Globalization, 7th edition. Ohio: Thomson/South Western

Strategic leaders have a role to play in each of the above-mentioned strategic leadership actions. In turn, each of these strategic leadership actions positively contributes to effective strategy implementation (Hitt et al. 2007: 384). With research evolution in different ages, many scholars presented successively different viewpoints on leadership connotation. Stogdill (1948) thought that the leadership style means a kind of method and capability aimed at realizing organizational targets and further affect all organizational activities. Fiedler (1969) presented that the leadership style refers to a kind of relationship that someone uses his rights and methods to make many people work together for a common task. In modern leadership style theories, five leadership styles were presented, including (1) charismatic leadership, (2) transactional leadership, (3) transformational leadership, (4) visionary leadership, and (5) culture-based leadership (Yukl, 1994; Bass, 1990; Sashkin, 1996).

2.3.5. Technology Architecture

Technology is the most fundamental of the core capabilities of a firm. It is a systematic body of knowledge about how natural and artificial things function and interact. It is a body of knowledge embodied in human brains and muscles, machines, and also in software and standard operating procedures of the organization. As such, it is inevitable that technology will become one of the central factors in deciding the firm's strategy. Diversification strategy, for example, depends on extensible technology which the firm has accumulated (Teece, 1982). Many strategists warn that technological turning points are often the times when the fortunes of many firms change dramatically (Cooper and Schendel, 1976; Foster, 1986).

How strategy and technology interact with each other over time is the basic theme of this paper and is what we believe to be one of the fundamental themes in strategy research. We contend that, in the past, the relationship between strategy and technology has been treated in too static a way and in too narrow a sense. In most discussions, technology has been treated as a constraining factor that determines the current opportunity set for the firm. It is usually argued that the strategy that the firm wants to pursue is constrained by the technologically feasible set of actions, or the firm should invest in broadening that

feasible set if it wants to take a strategy which requires the broadened technological capability. There is no denying that this is often a very sensible argument. Is it, however, the only possible argument? In this common argument, the relationship between strategy and technology is essentially directional, and static. It is directional in the sense that a causal arrow goes only from technology to strategy, not vice versa. Said differently, technology determines strategy options. However, even when current, strategy seems to dictate the technology the firm needs, and thus the causal direction indicated is actually from technology to strategy. For the firm, a given technology determines a given strategy, and such a technological capability must first be acquired. This view is static in the sense that a contemporaneous fit must exist between strategy and technology. Current strategy has to match the firm's current technology (Hofer and Schendel, 1978; Maidique and Patch, 1988; Porter, 1985).

2.4. Strategy implementation process

Strategy implementation involves converting strategic alternatives into operational plans. An operating plan may span more than a year (Aaker, 1998). It should contain detailed and specific information with short-term objectives. There is no single approach to strategy implementation. The challenge of establishing guidelines or framework for strategy implementation has made Nutt (1986), Pearce and Robinson (2003), and Hrebieniak (2005) as well as Bourgeois and Brodwin (1984) to refer to strategy implementation as elusive as there are no mutually exclusive forms of implementation. This is emphasized by Nutt (1986) in trying to identify the procedural steps of strategy implementation by mentioning that the implementation is ubiquitous and that any organization will engage a variety of methods, models and tactics to implement its chosen strategy.

Implementation can only be possible through a number of dependencies, such as an appropriate organization culture of collaboration and co-operation, a suitable organizational structure and supportive internal processes and resources. There are, however, distinct components of strategy implementation. These are classified into structural, interpersonal and behavioural (Noble, 1999). Added to these components are

dimensions that are referred to as tools and techniques which comprise resources and specialized skills (Roney, 2004) as well as short-term objectives, functional tactics and policies (Ehlers & Lazenby, 2004 and Pearce and Robinson, 2003). The importance of strategic consensus between managers is important as this influences the success of the intended change. Consensus is also facilitated by strategy implementation drivers such as leadership, organizational culture, reward systems, resources allocation and necessary structural adjustments (Nutt, 1999).

The implementation process of a strategy typically impacts every part of the organization structure, from the biggest organizational unit to the smallest frontline work group. Thomson and Strickland (2003) pointed out that every manager has to think through the question “what has to be done in my area to implement our part of strategic plan and what should I do to get these things accomplished?” All managers become strategic implementers in their areas of authority and responsibility and all employees should be involved. An important factor in the success of strategy implementation is the availability of required competencies in the human resources (Krishnan and Singh, 2004). Strategy formulation is influenced by factors like whether there are the needed competencies in the organization; possibility of training the employees for developing them and the gaps that exist in terms of competencies of the human resources. A critical factor that is important in the formulation of a strategy is the understanding of required organizational competencies for the implementation of the business strategy. Elements of human resource management like acquiring, managing and developing the competencies are important for the success of strategy implementation (Krishnan and Singh, 2004). According to Aosa (1992), there is need to implement strategies once they have been developed, otherwise they are of no value unless they are effectively translated into action. However, poor implementation of an appropriate strategy may cause that strategy to fail (Kiruthi, 2001). An excellent implementation plan causes the success of an appropriate strategy as well as rescues an inappropriate strategy (Hunger and Wheelen, 1994).

2.5. Challenges of Strategy implementation

The implementation of strategy has its own challenges as, several literature sources have observed that strategy implementation is an elusive phenomenon (Bourgeois & Brodwin, 1984) as there are no mutually exclusive forms of implementation. Any organization will engage a variety of models or tactics to strategy implementation. Nutt (1986) also notes that procedural steps of implementation are difficult to specify because implementation is ubiquitous. Various sources in strategy implementation take into account organizational resources with specific reference to the organizational structure. Organizational structure defines lines of authority and communication. It also specifies the mechanisms by which organizational tasks and programmes are accomplished (Aaker, 1998).

Zagotta & Robinson (2002) note that most companies do have the know-how and insight to the creation of strategy. However, a holistic approach is necessary, which includes tools for turning strategy into an execution process. Additional consideration according to Zagotta & Robinson (2002) should include quantifying the vision, communicating the strategy through short and meaningful phrases, planning for results and opening the strategy to the organization.

Strategy implementation also depends on the attitude and actions of the leaders and managers. Waldersee & Sheather (1996) assert that personality is the primary determinant of strategy implementation. Waldersee & Sheather (1996: 105-106) support this by mentioning that “different strategies require different manager behaviours that managers and strategy should be matched on the basis of personality”. This, however, could pose some challenges for organizations in view of limited resources. Kaplan & Norton (2005) noting that a strategy in many organizations is almost completely disconnected from execution, suggest that a specific unit charged with the responsibility for the implementation of strategy should be convenient focal point for ideas that percolate up through the organization. They refer to this unit as “office of strategy management” (OSM). Among the responsibilities of the OSM are to support the alignment of the organization, review strategy, develop strategy and communicate strategy.

CHAPTER THREE

3.0. RESEARCH METHODOLOGY

3.1. Introduction

Research refers to systematic planning, inquiring, acquiring, analyzing and disseminating data, information and insight to guide decision making (Cooper and Schindler, 2007). Research methodology describes the procedure that was followed in conducting a study (Mugenda and Mugenda 2003). This chapter discusses the following: research design, data collection methods, and data analysis techniques.

3.2. Research Design

This study adopted a case study design. A case study approach was necessary considering the nature of the target informants. This research utilized a case study design and qualitative mode of inquiry. In qualitative research different types interpretative techniques are involved, which attempt to describe and facilitate an understanding of an event in the social world. Qualitative research encompasses several types of inquiry that explain the meaning of social phenomena without disrupting the natural environment. "Case study" is a term that may be used interchangeably with qualitative research; however, there are distinct features for case studies. In a case study the investigator has less control over events. This approach is usually recommended especially when questions of "how" or "why" come up. The purpose of the research is to provide strategic implementation profiles that use descriptive, historical and interpretive methods to document the organization's experiences. The focus of the research was on the processes and challenges occurring in the implementation of the mobile-based transaction system: its early development, its growth and changes, and the current status of the organization. In case studies the focus of the study is not necessarily to test a hypothesis, but to gather information in order to present a description of what was going on in a study environment (Bouma, et al., 1995). The required data was obtained through self-report methods, namely, in-depth interviewing and document analysis.

3.3. Data Collection

The data for the study was collected from the top management of KPLC. The researcher spent considerable time at the KPLC head office, identifying key informants (including key strategists) who were or are involved with the mobile-based transaction projects, reading the current and past correspondence dealing with the projects, and having extensive discussions with the top director and the management staff. Two methods of data collection were applied. They included: in-depth interviewing and document analysis. In qualitative research, the technique of in-depth interviewing is extensively used, as it facilitates an interaction with the interviewer and the interviewee with a defined objective of gathering valid and reliable data. In general, qualitative in-depth interviews are informal and less structured interviews. During the interviews, the researcher sought to gain the participant's meaning and perspective of relevant topics. While collecting data, the researcher provided opportunities for the participants to describe their experiences, and simultaneously, to discuss their opinions regarding the level of success of the activities. The process of interviewing allowed the participant to describe and reconstruct details. Open-ended questions enabled the interviewee to elaborate and to recall additional information. Further, the researcher was able to lead the participant to providing more in-depth insights through these loosely structured interviews.

In the second approach of document analysis, the researcher was able to extract pertinent information from the project-related proposals, evaluations, letters, official minutes or records, magazine accounts, and research reports. Historical perspectives assisted in the study of the appropriate period for the understanding of some events or processes. This time perspective was important in determining the linkages of events that created an important issue and the consequences of events. The researcher also used the two sources commonly cited in the data gathering literature: primary, which provide firsthand account of events; and secondary, which are reports concerning some event from third party sources.

3.4. Data Analysis

After the fieldwork, qualitative data was analyzed through content analysis. According to Hancock (2002:17), content analysis involves coding and classifying data through categorizing or indexing. The basic idea was to identify from the transcripts the extracts of data that were informative in some way and to sort out the important messages hidden in the mass of each interview.

CHAPTER FOUR

4.0. DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1. Introduction

The objectives of the study were twofold. First, was to determine the challenges facing KPLC in the implementation the strategy of Mobile-Based transaction systems (MBTS); and secondly, to establish the measures taken by KPLC to overcome the challenges of implementing the strategy of mobile-based transaction systems. This chapter presents the findings of the study, analysis of data and presentation of findings. The study applied a mix of primary and secondary data that was collected from various sources at KPLC. The data formed the basis for the analysis presented in this chapter. The chapter is organized as follows: Section 4.2 presents the general information of the respondents; and Section 4.3 presents the analysis of challenges of implementing the strategy of mobile-based transaction systems by KPLC.

4.2. General Information of the Data and Respondents

The data for the study comprised of two batches. The first batch comprised of secondary data collected from annual reports of KPLC, minutes for various strategy meetings held to deliberate on the implementation of MBTS, and extracts from the project review reports. The second batch comprised of primary data drawn from key informants' interviews held at KPLC offices. The key informants comprised of the following twenty personalities: two system analysts; the chief manager (Information and telecommunication); the principal system analyst; two customer relations officers; assistant engineer from the distribution department; the change manager; marketing officer in-chief; the principle procurement officer; the deputy manager in-charge of customer service; chief engineer in-charge of large power projects; the telephone supervisor in-charge; the chief manager in-charge of commercial services; the principal human resource officer; the head of new business projects; the chief manager in-charge of commercial services; the general manager Adtel (project partner to KPLC); the general

manager in-charge of operations; chief corporate communication officer (for MD KPLC); and the senior engineer in-charge of quality assurance.

The MBTS has two platforms; the querying platform and the payment platform. The *Ebill* (Email Query System) is a system used by customers to query their electricity account balances through email. The average monthly queries are 30,000. Table 4.1 below details the statistics. The *Ebill* Short Messaging Service (SMS Query System) is applied where customers want to query their electricity account balances through SMS. The average monthly queries are 500,000. Table 4.1 below details the statistics. The *MPESA EASYPAY* system is used by customers to pay their electricity bills and new connection fees through MPESA (a local m-payment money transfer service). The average number of monthly transactions is 150,000 and monthly collection average is Kshs 150,000,000. The *ZAP EASYPAY* is used by customers to pay their electricity bills and new connection fees through Zain ZAP (a local m-payment money transfer service). The average number of monthly transactions is 4,200 and monthly collection average is Kshs 4,500,000.

Table 4.1: Monthly E-Bill Query Statistics (January 07 – October 09)

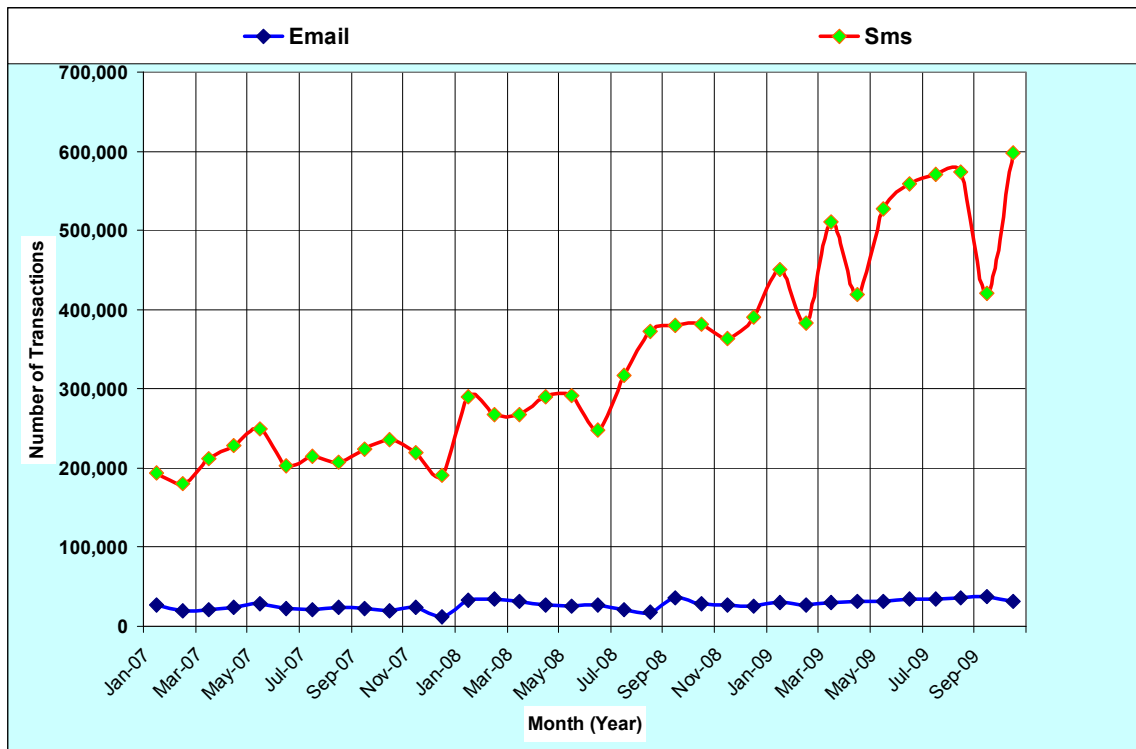
Month	Email	SMS	Month	Email	SMS
Jan-07	26,793	193,171	Sep-08	35,533	80,236
Feb-07	19,599	179,619	Oct-08	28,679	380,981
Mar-07	21,018	212,349	Nov-08	26,477	364,189
Apr-07	24,565	228,590	Dec-08	25,030	389,809
May-07	28,819	249,428	Jan-09	29,539	450,619
Jun-07	22,756	202,799	Feb-09	26,702	382,690
Jul-07	21,728	215,223	Mar-09	30,301	510,285
Aug-07	23,891	207,280	Apr-09	31,199	419,095
Sep-07	21,852	223,220	May-09	31,359	527,910
Oct-07	19,658	235,459	Jun-09	35,195	559,032
Nov-07	23,647	219,918	Jul-09	35,171	571,000

Dec-07	12,576	190,699	Aug-09	35,650	574,413
Jan-08	33,526	290,104	Sep-09	37,476	420,905
Feb-08	34,743	268,106	Oct-09	32,034	597,449
Mar-08	31,256	268,113			
Apr-08	26,842	289,256			
May-08	25,925	292,048			
Jun-08	26,763	248,384			
Jul-08	20,412	316,774			
Aug-08	17,322	372,460			

Source: KPLC Reports (2011)

The findings indicate that the growth of queries made by SMS grew by over 50% year on year since January 2007. The results from the e-mail queries indicate that they averaged around 30,000 queries as also reported in Table 4.1 above. This indicates that the adoption of mobile-based transaction was higher than that based on internet querying.

Figure 4.1: Monthly E-Bill Query Statistics (January 07 – October 09)



Source: KPLC Reports (2011)

4.3. Challenges of Implementing the MBTS Strategy at KPLC

The first objective of the study sought to determine the challenges facing KPLC in the implementation the strategy of Mobile-Based transaction systems (MBTS). This section presents some of the challenges identified from the gathered data.

4.3.1. Organizational Culture and Behaviour

According to the sampled key informants, implementation of the MBTS strategy has been faced by varied challenges relating to organizational culture and behaviour. They include: fear of job losses among staff; resistance to change and way of thinking; customers' lack of confidence on use of online transaction system; low uptake of the technologies among staff and customers; lack of a sound complaints handling system; and the challenges of users to the newly introduced information management systems.

4.3.2. Organizational Structure

According to the sampled key informants, implementation of the MBTS strategy has been faced by varied challenges relating to organizational structure. They include: the need for new roles to handle new innovations; need for expertise to handle new technology; need for specialized staff to handle the new innovations; need for more tendering for supplies; need for a customer relations office; and need for additional financial and physical resources to handle the business critical system.

4.3.3. Resource Architecture

According to the sampled key informants, implementation of the MBTS strategy has been faced by varied challenges relating to resource architecture. They include: need for new hardware and software resources; requirement for more capacity and hardware; constraints on network communication capacity; need to have specialized equipment; need for frequent system upgrades; the need to reallocate certain idle resources; and excessive demand in capacity at the customer care centers.

4.3.4. Strategic Leadership

According to the sampled key informants, implementation of the MBTS strategy has been faced by varied challenges relating to strategic leadership. They include: dealing

with unsatisfied customers; delays in processing customers' requests for new electricity supplies due to procurement-related bureaucracies; lack of a customer-friendly complaint management system; need for special focus on execution the project; change management among staff; lack of defined ownership of the projects due to integrated participation of various departments (or units) from within KPLC; lack of proper guidance and leadership at the call centre; the challenge of having to reallocate certain resources due to unexpected contingencies; and the concerns raised by project stakeholders on aspects of quality assurance.

4.3.5. Technology Architecture

According to the sampled key informants, implementation of the MBTS strategy has been faced by varied challenges relating to technology architecture. They include: need for frequent upgrades of the system capacity; need for more IT capacity; the links to fiber optics; need for 24-hour access system; need for interfaces at various connectivity points; the need to upgrade the call centers; frequent system down times; and utilization of certain outdated technologies which need phasing out.

4.4. Measures to Overcome Challenges of Implementing the MBTS Strategy

The second objective of the study sought to establish the measures taken by KPLC to overcome the challenges of implementing the strategy of mobile-based transaction systems. This section presents some of the measures applied to overcome the challenges identified from the gathered data.

4.4.1. Organizational Culture and Behaviour

According to the sampled key informants, in attempt to overcome various challenges relating to culture and behaviour that hinder implementation of the MBTS strategy, the company has come up with various measures. These include: re-assurance through team talks and education; educating the staff on new innovations; attempts to provide real time support to customers; customer education through media campaigns; monitoring customer usage through periodic reviews; embracing the innovations by introducing prepaid metering and bill query solutions; change management education on the need to have innovation in the company; enhancement of ways of interacting with customers (for

example the SSST to verify details before disconnecting customers); publicity campaigns through community-based organizations and public road shows; and redeployment of staff to new roles to reduce work monotony at one station.

4.4.2. Organizational Structure

According to the sampled key informants, in attempt to overcome various challenges relating to organizational structure that hinder implementation of the MBTS strategy, the company has come up with various measures. These include: creation of new roles; hiring of new teams to deal with new projects; redeployment of certain employees to other roles in the company as meter inspectors; and hiring in of more experts to assist in expanding the innovation initiatives.

4.4.3. Resource Architecture

According to the sampled key informants, in attempt to overcome various challenges relating to resource architecture that hinder implementation of the MBTS strategy, the company has come up with various measures. They include: partnering with third parties for system acquisition and maintenance; additional inclusion of m-payment platforms; creation of multi-divisional teams for smooth implementation; assignment of resource to key areas of the project on first priority basis; introduction of IVR; establishment of new centre agents and partnering with third parties like Adtel; redeployment of staff to handle other roles in the organization; introductions of job rotations; equipping of key project staff with multiple skills through intense staff training programmes; and prior notification of clients via SMS alerts on impending system downtimes.

4.4.4. Strategic Leadership

According to the sampled key informants, in attempt to overcome various challenges relating to strategic leadership that hinder implementation of the MBTS strategy, the company has come up with various measures. These include: meeting and resolving issues with unsatisfied clients; creation of complaints handling teams; hiring of additional cashiers to handle the pre-payment clientele; implementation of mobile-based complaint management system; introduction of system to track new electricity supply applications for customers; appointment of project managers to guide the whole process; training of

field personnel who also serve as liaison persons to KPLC contractors; Creation of the role of change manager to assist in re-branding process; establishment of pre-paid centres to handle the growing number of pre-paid clients; creation of a department to handle all new mobile based transaction systems and technologies defining the concept of prepaid meters; provision of a leadership element to guide the staff on how to handle calls on mobile-based transactions; job rotations; re-branding resulting in change of vision, mission, and logo; creation of new heads of various units to handle the emerging new roles; and training of staff with the view of enhancing efficiency and effectiveness.

4.3.5. Technology Architecture

According to the sampled key informants, in attempt to overcome various challenges relating to technology architecture that hinder implementation of the MBTS strategy, the company has come up with various measures. These include: increased system capacity to handle high SMS traffic of up to 10,000 SMS per minute; upgrading of data networks to fiber optics; upgrading of the system on regular basis; increased redundancy on fiber optics links to ensure increased uptime; creation of redundancy of network services and communication providers; introduction of automated vending services; inclusion of cellular service providers Safaricom and Airtel as key project stakeholders; establishment of a new *Cisco* call centre system and training of current agents on its use; strategic partnerships with third parties to improve in innovations; and increased budgetary allocations to ease financing gaps.

4.5. Other Emerging Challenges of Implementing the MBTS Strategy, Their Effects, and Measures Taken to Overcome Them

The findings presented in Table 4.2 below present a summary of various other challenges that are faced in the implementation of the MBTS, their underlying effects, as well as the measures put in place to overcome them. The results show the challenges to include: delay in roll out of plan; down times by the mobile operators; support from third parties in provision of acceptable level of services; delays in executing transactions; network issues; customer reload of wattage units; poor customer buy-in; last minute rush to make payments; high cost of transactions; dented KPLC brand; change management;

decentralized decision-making; poor adoption of the service; and poor communication approaches to customers. The findings collaborate what was reported earlier in sections 4.3 and 4.4 above.

Table 4.2: Other Challenges, Effects and Measures to Mitigate

Challenge	Effect	Measure to Mitigate
Delay in roll out of plan	Original roll out target not met	Increase in the number of staff involved
Down times by the mobile operators	Dissatisfied clients	Educate the public on the need that third parties are involved and not always front of KPLC
Support from third parties in provision of acceptable level of services.	Poor performance from third party vendors	Enhance the systems to handle the delays
Delays in transactions	Causing delay in payments hence disconnections	Worked with the mobile operators to stabilize the systems
Network issues	Affected the services	None
Customer recharge was not easy	Caused disconnections Caused complaints	customer education on how to use the system
Poor customer buy-in	Slow adoption on using the mobile based transactions	Enlighten users to use mobile payments any time anywhere
Kenya culture of late payment	Many queues at the call agents at the end of the month	Increase redundancy Avoid down times
Cost of transactions	Client dissatisfaction	Talked to the mobile operators to reduce the cost
Brand challenges	Not happy with brand (customers)	They rebranded the logos and the whole company image
Customer perception	Customer don't want to work with machines	Customer information and education
Change management on new technology	Recruit people	Training
Many players on the system	Many points of failure	Adding redundancy
Poor adoption of the service	A lot of meeting to convince the management on the advantage of the system	Meeting were done and a proof of concept
Poor communication to customers	Lack of use of the new technology	Had meetings with the communications department to make the ads simpler

Source: Survey Data (2011)

CHAPTER FIVE

5.0. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary, conclusions and recommendations derived from the findings of the study. The chapter also presents the limitations that were encountered in the process of gathering findings.

5.2. Summary of Findings

The aim of this study was to establish the challenges facing the implementation of the mobile-based transaction strategy by KPLC. The following research questions guided the study: What are the challenges facing KPLC in the implementation the strategy of Mobile-Based transaction systems? And what are the measures taken by KPLC to overcome the challenges of implementing the strategy of mobile-based transaction systems?

The key findings of the study revealed that the challenges to implementation of the MBTS strategy by KPLC include: delay in roll out of plan; down times by the mobile operators; support from third parties in provision of acceptable level of services; delays in executing transactions; network issues; customer reload of wattage units; poor customer buy-in; last minute rush to make payments; high cost of transactions; dented KPLC brand; change management; decentralized decision-making; poor adoption of the service; and poor communication approaches to customers. Some of the outstanding measures taken to overcome such challenges were found to include the following: hiring of expertise; staff redeployment; staff training; increased budgetary allocations; changes in leadership; multi-sectoral stakeholders' involvement and participation; customer sensitization and education drives; involvement of third parties to drive the innovations; regular infrastructure upgrades; and re-branding.

5.3. Conclusions

The study has shown that implementation of a technology-driven management strategy can at times be challenging. However, proper planning and risk management are critical to ensure that the underlying projects run to completion. The study shows that the major challenges revolve about supply of project resources (Technical, financial, and human resources) at internal level and about user and client satisfaction at the external level of the project behind the strategy implementation process. The study indicates that stakeholder participation is highly critical to ensure that resource deficiencies can be identified and fixed at the earliest opportunity. The findings of the study have shown concurrence to past studies by Noble (1999) and Aaker (1998) who asserted that strategy implementation can only be possible through a number of dependencies, such as an appropriate organization culture of collaboration and co-operation, a suitable organizational structure and supportive internal processes and resources.

5.4. Limitations of the Study

This study was exploratory in nature. It dealt with the challenges to implementation of the mobile-based transaction strategy at KPLC. The study focused on key project's informants for primary source of the data, but it did not include the implementers at the lower cadres of the project. The MBTS strategy is likely inter-twined to other strategies in the current KPLC's strategic plan. As a consequence, the study missed out on the critical experience of such strategies. The other area of focus was the measures applied to overcome the underlying challenges. The researcher was able to capture some of the critical experiences, through in-depth investigation of the experiences of the sampled informants. The scope of the study was confined to the Nairobi region of Kenya. Given this scope, the findings of the study may not be generalized to other regions, or the country as a whole.

5.5. Recommendations

5.5.1. Recommendations for Policy

From the findings of the study, various recommendations emerge which can be greatly helpful to the policy makers and future academicians. They include: benchmarking with other organizations of repute in the market; constant research and development; streamlining of procurement process; massive customer education campaigns; greater involvement of all company departments; continuous education for customers and staff; synchronization of the departments to ensure smooth running of projects; conduct periodic surveys to gauge satisfaction from both the internal and external customers; and embrace utilization of modern project management principles and procedures.

5.5.2. Recommendations for Future Research

This study sought to establish the challenges facing implementation of the MBTS by KPLC; as well as seek to reveal some of the measures applied to overcome such challenges. In the view of the limited scope of the study, future research may be conducted to assess the general view of challenges to strategic planning at KPLC. The study can be further extended to incorporate other organizations dealing in utility payments such as the Nairobi Water Company. The study was largely qualitative with the data collected from select project informants. Future research may seek to be quantitative and include all cadres of project staff such as the field officers, inspectors and implementing partners.

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APPENDICES

Appendix I: Interviews Cover Letter

November 10, 2011

Dear Informant,

I am a MBA student at the University of Nairobi. In partial fulfillment of the course requirements, I am conducting a Survey on the **challenges facing implementation of the strategy of mobile-based transaction systems by KPLC**. I would appreciate if you could spare a few minutes of your time to respond to the following list of questions to the best of your knowledge. The information in this interview will be strictly confidential. The information will not be used for any other purpose other than for this research. Your assistance in facilitating the same will be highly appreciated.

Thank you in advance.

RONALD MERU

Appendix II: Interview Guide for Senior Management Staff (KPLC)

The interview is meant to collect information on the challenges facing implementation of the strategy of mobile-based transaction systems by KPLC. Kindly answer the questions to the best of your knowledge. The interview will take maximum of ten minutes.

1. Name (Optional) _____
2. Gender _____
3. Position in Organization _____
4. Years of service at KPLC _____
5. Professional background _____
6. How have each of the following challenges affected the implementation of the strategy of Mobile-Based transactions at KPLC?
 - a) Organizational Culture and behavior YES [] NO []
If yes , what effect;

Measures taken;

 - b) Organizational Structure YES [] NO []
If yes , what effect;

Measures taken;

c) Resource Architecture YES [] NO []

If yes , what effect;

Measures taken;

d) Strategic leadership YES [] NO []

If yes , what effect;

Measures taken;

e) Technology Architecture YES [] NO []

If yes , what effect;

Measures taken;

f) Other challenges

Challenge; _____

Effect; _____

Measures taken;

g) Other challenges

Challenge; _____

Effect; _____

Measures taken;

h) Other challenges

Challenge; _____

Effect; _____

Measures taken;

i) Other challenges

Challenge; _____

Effect; _____

Measures taken;

j) Other challenges

Challenge; _____

Effect; _____

Measures taken;

7. What recommendations would you make to KPLC regarding implementation of the strategy of mobile-based transaction systems

THANK YOU FOR YOUR RESPONSES