

**CHALLENGES OF IMPLEMENTATING ENTERPRISE RESOURCE
PLANNING STRATEGY AT THE KENYA ELECTRICITY GENERATING
COMPANY**

By:

Christopher E. Kutswa

**A Research Project submitted in partial fulfillment of the requirement for the
award of the degree of Master of Business Administration, School of Business,
University of Nairobi**

OCTOBER, 2011

DECLARATION

I, the undersigned declare that this research project is my original work and has not been presented in any other university for the award of degree.

Signature: _____

Date: _____

Christopher E. Kutswa

Reg. Number D61/70876/2008

This research project has been presented for examination with my approval as the University Supervisor

Signature: _____

Date: _____

Dr. Martin Ogutu,

Senior Lecturer,

Department of Business Administration

School of Business

University of Nairobi.

DEDICATION

This research project is heartily dedicated to The Lord God Almighty my Ebenezer, thus far has the Lord helped me.

To my wife Sarah, son Melchizedeck and daughter Esther; what can I do to reciprocate your patience, encouragement and undying support? You have been a great source of inspiration.

ACKNOWLEDGEMENTS

It is virtually impossible to complete a research project of this magnitude without support, it collates and develops upon the brilliant resources available. I am immeasurably grateful to the Lord God for giving me grace in my MBA endeavors.

I appreciate and acknowledge the extraordinary support and guidance of project supervisor Dr. Martin Ogutu, his profound knowledge, skills, expertise and availability played a crucial role in shaping this work.

Special recognition goes to my coursework lecturers, classmates, and friends; I treasure every moment spent with you. I pay distinctive tribute to all interviewees who participated in this study for volunteering valuable time and information. My sincere and heartfelt thanks are reserved for my family for their enduring moral, spiritual and material backing.

TABLE OF CONTENTS

Declaration.....	ii
Dedication.....	iii
Acknowledgements.....	iv
Abbreviations and Acronyms.....	viii
Abstract.....	ix
CHAPTER ONE: INTRODUCTION	
1.1 Background of Study	1
1.1.1 Strategy Implementation.....	1
1.1.2 Enterprise Resource Planning (ERP).....	3
1.1.3 Kenya Electricity Generating Company Ltd.....	5
1.2. The Research Problem.....	6
1.3 Research Objectives.....	8
1.4 Value of the Study.....	8
CHAPTER TWO: LITERATURE REVIEW	
2.1 Introduction.....	9
2.2 Concept of Strategy Implementation.....	9
2.3 Challenges in Strategy Implementation.....	10
2.4 Dealing with Strategy Implementation Challenges.....	13
CHAPTER THREE: RESEARCH METHODOLOGY	
3.1 Introduction.....	15
3.2 Research Design.....	15
3.3 Data Collection	15
3.4 Data Analysis.....	16

CHAPTER FOUR: RESULTS, INTERPRETATIONS AND DISCUSSIONS

4.1 Introduction.....	17
4.2 The Interviewees' Profile.....	17
4.3 Challenges Encountered, Remedial measures taken and Interpretations.....	17
4.3.1 Organizational structure incompatible with ERP	18
4.3.2 Non-supportive organizational culture	18
4.3.3 Inadequate allocation of resources.....	19
4.3.4 Resistance to change.....	20
4.3.5 Ineffective communication.....	20
4.3.6 Lack of top management commitment and support.....	21
4.3.7 High implementation costs.....	21
4.3.8 Lack of incentives and reward system.....	22
4.3.9 Inadequate user training and education.....	22

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction.....	24
5.2 Summary.....	24
5.3 Conclusions.....	26
5.4 Limitations of Study.....	27
5.5 Recommendations.....	28
5.6 Suggestions for Further Research.....	28
5.7 Implication on Policy, Theory and Practice.....	29

REFERENCES	30
APPENDICES	37
Appendix: Interview Guide.....	37

ABBREVIATIONS AND ACRONYMS

- ECK:** Electoral Commission of Kenya
- ERP:** Enterprise Resource Planning
- IPP:** Independent Power Producer
- KenGen:** Kenya Electricity Generating Company Limited
- KPLC:** Kenya Power and Lighting Company Limited
- SAP :** Systeme Anwendungen und Produkte in der Datenverarbeitung
- SBU :** Strategic Business Unit
- SWOT:** Strengths Weaknesses Opportunities Threats
- US\$:** United States Dollar

ABSTRACT

Between February and December 2010, Kenya Electricity Generating Company Limited implemented Enterprise Resource Planning (ERP) strategy in quest for: best industry practices, cost cutting, high efficiency and instant access to data. The objective of this study was to determine challenges of implementing the ERP strategy at the Kenya Electricity Generating Company Limited. The research was conducted through a case study design. In-depth interviews were conducted using an interview guide with senior officials drawn from each division in which KenGen is functionally structured. A conceptual and qualitative content analysis method was used for data analysis, findings were presented in narrative form. The study revealed that ERP implementation at KenGen was completed on schedule which helped prevent an escalation of ERP implementation costs. ERP usage rates were sluggish from onset but forceful intervention of divisional directors and managers managed to somewhat reverse the pattern. Nine out of ten interviewees indicated that ERP usage is yet to hit peak and that about eighty percent of employees lack mastery of ERP. Study findings indicated that ERP implementation challenges were: organizational structure incompatible with ERP, non-supportive organizational culture, inadequate allocation of resources, resistance to change, ineffective communication, high implementation costs, lack of incentives and reward systems and inadequate user training and education. These challenges were broadly categorized as institutional, behavioral, internal and external. Perhaps the challenge with greatest impact on ERP implementation was inadequate allocation of resources especially technological resources. While compressing implementation schedule may have worked well to control costs, it adversely impacted on the duration needed by the consultant to train staff. Therefore, there was ineffective and inadequate transfer of troubleshooting & problem solving skills from the consultant to super-users and by extension employees. This technological lapse left users ill equipped to make the most use of ERP. Consequently most staff are weakly equipped to handle technical challenges, the resulting low ERP usage has stood on the way of KenGen realizing the benefits from ERP implementation.

This study recommends cost effective initiatives to realize effective training and capacity building such as active involvement of super-users in KenGen Areas to conduct hands-on refresher trainings aimed at broadening and deepening user abilities; training to provide materials to facilitate practice and learning. Embedding incentives and reward systems within ERP implementation by way of recognizing and rewarding outstanding performance was identified as key to spur ERP usage and motivate staff into active use of ERP.

CHAPTER ONE: INTRODUCTION

1.1 Background of Study

All organizations operate within and are influenced by changes in their immediate environment, and to remain competitive they have to formulate and implement strategies. According to Byars et al (1996) different firms perceive strategy implementation variously. According to David (2005), implementing strategies involve: altering sales territories, adding new departments, setting-up or closing facilities, hiring and training new employees, changing organization's pricing strategy, developing financial budgets and developing new employee benefits, establishing cost control procedures, changing advertising strategies, building facilities, building better management information systems and transferring managers among divisions. Whichever way, these strategies must be implemented to guarantee the achievement of desired results.

Barney and Hesterly (2008) declares that strategy implementation occurs when a firm adopts organizational policies and practices consistent with its strategy. According to Thompson Jr. et al (2007), a firm that adopts a formal organizational structure, formal and informal management control systems and its employee compensation policy that are consistent with and reinforce its strategies is more likely to successfully implement those strategies, whether business-level strategies of cost leadership and product differentiation or corporate-level strategies of vertical integration, strategic alliance, merger and acquisition. In their pursuit to implement strategies, organizations experience challenges that tend to impede successful realization of business goals. To carry strategy to fruition, it is indispensable that organizations identify and effectively deal with challenges as they arise.

1.1.1 Strategy Implementation

Strategy implementation is defined as the manner in which an organization should develop, utilize, and amalgamate organizational structure, control systems, and culture to follow strategies that lead to competitive advantage and a better performance. According to Thompson Jr. et al (2007), a company's strategy consists of the competitive moves and

business approaches that managers are employing to grow the business, attract and please customers, compete successfully, conduct operations, and achieve targeted levels of organizational performance. Lucas (1981) defined implementation as the whole process of introducing a system into an organization, from conception of an idea, to analysis, design, installation and operation. Bean et al (1977) pictured implementation as accommodating to the environment. O'Brien (1993) describes implementation as doing what you planned to do. Waters (2006) defines strategy implementation as an internal, operations-driven activity involving organizing, budgeting, motivating, culture-building supervising and leading to "make the strategy work as intended" or putting the organization's chosen strategy into action. Strategy implementation is governed by the fit between the organizational structure and strategy and allocation of resources, the organizational culture, leadership, rewards, volatility and dynamism of environment as well as the nature of the strategy. Strategies are implemented by matching people with tasks, funds, organizational structure, rewards, technology, support systems, culture and traditions, policies and rules. Strategy implementation process involving guiding the organization from where it is to where it ought to be is the most challenging exercise to most managers being impeded by obstacles in the internal and external environment.

The process of strategy implementation starts with formulation of organization vision and mission statements; conducting an analysis to determine organization internal strengths, weaknesses, and environmental opportunities and threats (SWOT analysis) facing the firm. According to Pearce and Robinson (2007), there has to be a good fit between the firm's internal resources and its external situation for the firm to maximize its strengths and opportunities and minimize its weakness and threats. Pearce and Robinson (1997) affirm that for organizations to achieve their goals and objectives, they have to constantly scan their environment and adjust to it. This environment is turbulent constantly changing, and it makes it necessary for organizations to formulate and implement strategies to meet environmental challenges in order to survive.

Without understanding and commitment, strategy implementation efforts face major problems (David, 1997). According to Grundy (1995) managing the implementation

process and the organizational issues that go with it is so frequently the graveyard of strategy. Mintzberg and Quinn (1991) concurs that 90% of well formulated strategies fail at implementation stage. Grant (2005) decrees that without effective implementation, the best laid strategies are of little use. Implementing strategy though soundly crafted, is tougher, more time consuming and challenging (Thompson and Strickland, 1989). Stoner (2001) points out that managers face challenges to strategy implementation principally in form of strategic inertia, lack of shareholder commitment, failure to understand progress, strategic drift, strategic dilution and isolation, initiative fatigue, impatience and failure to celebrate success.

Hrebiniak (2005) observes that difficulties in strategy implementation often include cost overruns; inadequate allocation of resources; vague definition of strategy, power struggle within organizational structure; lack of understanding of organizational structure, poor communication; poor co-ordination methods; unclear responsibility and accountability in the implementation process and an inability to manage change including aligning organization culture with strategy and failure to involve employees in the strategy implementation process.

1.1.2 Enterprise Resource Planning (ERP)

Lucey (2005) defines an ERP package as fully integrated information system that spans entire organization and is built around shared databases of business functions in the organization. It brings together databases, applications and interfaces them into a single family of modules where each module separately performs specific data-processing function and provides data analysis tools. Parr and Shanks (2000) concedes an ERP is useful to improve production processes to better understand value-adding activities and improve service provision. Miranda (1999) views ERP as based on “process” view approach instead of the traditional “functional” view approach.

David (2005) alleges that the process of strategic management is facilitated immensely in firms that have effective information systems that blend technical knowledge of computer experts with the vision of senior management. According to Sammon and Adam (2000) ERP is an integrated enterprise-wide real-time business application software package that

share common database and uses modules to support and unify key business information, processes and functions across all departmental boundaries into one software system. Typical ERP modules comprises: Human Resource, Finance, Plant Maintenance, Production Planning, Sales & Distribution, Materials Management, the individual software modules extract data from the common database, can be purchased, installed, and run separately designed to integrate business processes and functions to automate day-to-day operations. It presents a holistic view of a business environment by permitting the sharing of common data and practices in continuous real-time borderless environment (Davenport, 1998). From business and strategic perspective, implementing Enterprise Resource Planning is viewed as a way to improve organization's effectiveness, efficiency, quality, productivity and profitability. ERP allows immediate access to: inventory, product data, customer credit history, and prior order information thus improving order entry. This availability of information raises productivity and increases customer satisfaction saves costs and improves decision making by management through intelligent decision support capabilities giving the firm a competitive edge.

Waters (2006) argues that ERP systems have been available since the 1990s and are in use in thousands of large and medium companies worldwide some producing dramatic results and the market is growing vigorously. Somers and Nelson(2001) attributes the growing global demand for ERP applications to:- competitive pressures to become a low cost producer, expectations of revenue growth, ability to compete globally, and desire to re-engineer the business to respond to market challenges. Benefits of a properly selected and implemented ERP system, he adds, are enormous; leading to efficient business process, reduction in inventory cost, low raw material costs, reduction in lead time for customers, a cut down on production time and costs. O'Leary (2000) categorized four reasons why firms are motivated to implement ERP as technology, business practices, strategy, and competitive. According to Waters (2006), systems applications and products in data processing (SAP) is currently the biggest European software company and one of the world's dominant enterprise resource planning vendors.

1.1.3 The Kenya Electricity Generating Company (KenGen) Ltd

Kenya Power Company which had been in existence in Kenya since 1954 was re-launched on 2nd October 1998 as Kenya Electricity Generating Company (KenGen); which has distinctly stood out as the leading bulk electric power producer in Kenya, producing about 75% of national power consumption. The remaining 25% is contributed by Independent Power Producers (IPPs). KenGen structure, processes and relationships are according to Mintzberg (1979) configurational stereotypes akin to machine bureaucracy. KenGen has an installed capacity of 1125.63MW; its power generation mix comprises hydro, geothermal, thermal and wind power stations installed in 20 locations countrywide. KenGen intends to maintain market leadership in the liberalized electric energy sub-sector in Kenya and Eastern Africa Region (Strategic Plan 2005~2010) unpublished.

Since 1996 the Kenya electricity sub-Sector has undergone two main shake-ups and re-organizations that impacted on KenGen: in the first re-organization, according to the Government of Kenya (1997), the amendment of the Electric Power Act gave KenGen the mandate to generate quality, affordable, adequate bulk electrical energy and retail Kenya Power and Lighting Company. The Act also liberalized local power industry licensing IPPs to contend for same market share as KenGen. In the second re-organization, KenGen was partially privatized in 2006 and listed at Nairobi Stock Exchange, KenGen felt obligated to meet expectations of increased stakeholder base. Government of Kenya (2004), asserts in Sessional Paper No. 4 on Energy that changes in Regulatory Environment caused the establishment of Geothermal Development Company (GDC), Kenya Electricity Transmission Company (KETRACO) and the Rural Electrification Authority (REA). KenGen aspires to relate and build strategy synergy with these entities. Lastly, regionalization of power grid through interconnection of Southern and Eastern Africa regional power pools is underway to ensure shared resource. KenGen was confronted with threats from external environment of shrinking market share, entry of new rivals, fast-evolving customer/shareholder expectations and requirements, and a rapidly changing turbulent environment.

Among measures KenGen urgently needed to take were to cut operating costs such as by creation of paperless work environment, perform cost-efficient management of value chain activities and embrace best practices. This role of KenGen in emerging turbulent and constantly changing environment underpinned the need for self examination with a view to formulate strategies apt to meet environmental challenges, address threats, focus on meeting the growing need for power in Kenya and create a strategic lock-in. (KenGen (2007/2008) & KenGen (2008/2009)).

1.2 Research Problem

KenGen's functional mainframe-based legacy systems which have been a blend of SAP and non-SAP systems have been a major obstacle to KenGen's quest to leverage Information Technology for organizational transformation. The competitive pressure unleashed by the process of globalization is driving implementation of ERP projects in increasingly large numbers; the primary purpose of implementing ERP is to run the business in a rapidly changing and highly competitive environment. Pearse II et al (2007) argues that firms that implement the strategy of operational excellence restructure their delivery processes to focus on efficiency and reliability, and use state-of-the-art information systems that emphasize integration and low-cost transactions. According to Armstrong (2005) organizations are trying to become more competitive and efficient by transforming into digital firms where nearly all core business process and relationships with customers, suppliers and employees are digitally enabled. Between Feb and Dec 2010, KenGen implemented ERP to turn weaknesses in its internal environment into strengths and in-turn use these strengths to counter threats in its external environment. But ERP implementation is a complex and difficult process that can potentially reap enormous benefits for successful companies or be disastrous for those organizations that fail to manage the implementation process. Slack (2008) reiterates that far from being the magic ingredient which allows operations to fully integrate all their information, ERP is regarded by some as one of the most expensive ways of getting zero or even negative return on investment. O'Brien (2004) is categorical that "An ERP implementation is like the corporate equivalent of a brain transplant. If you don't do ERP properly, you can kill

your company, guaranteed.” Therefore KenGen needed to be wary of the inherent pitfalls of implementing the ERP strategy. Many organizations underestimate the effort, cost and strain which an ERP implementation inflicts upon the organization. The complexity of an ERP project is easily misjudged and the consequences are potentially grave. ERP implementation is strenuous, complex, delicate process often accompanied by behavioral and systemic challenges in form of resistance to change, non-supportive culture, structure misalignment, lack of user training, communication hurdles, low top management commitment, poor management of consultants, poor allocation of resources and inadequate incentives. All these challenges impact the process. The above challenges need to be identified and dealt with for the strategy to work as intended.

Studies on strategy implementation have been conducted by several scholars. Notable researchers in this area are: - Awino (2001) dealt with effectiveness and problems of strategy implementation of financing higher education in Kenya by Higher Education Loans Board, Ronga (2008) considered challenges to strategy implementation at Madison Insurance (K), Kiprotich (2008) studied strategy implementation and its challenges at African Braille centre, Omolo (2008) delved into challenges in strategy implementation at the (ECK) Electoral Commission of Kenya. In her study, Thati (2008) identified human resource management challenges facing Kenya Pipeline Company in the implementation of ERP. Due to contextual, sectoral and managerial differences among organizations studied; lessons drawn from the above studies on strategy implementation challenges cannot be used to gainfully explain strategy implementation challenges faced in the KenGen ERP case. An empirical study needs to be conducted on KenGen to point out challenges of ERP strategy implementation. This study seeks to address this knowledge gap by answering the following research question; what are the challenges of implementing enterprise resource planning strategy at the Kenya Electricity Generating Company?

1.3 Research Objectives

The research seeks to determine:

- i. The challenges of implementing enterprise resource planning strategy at the Kenya Electricity Generating Company.
- ii. Measures taken by the Kenya Electricity Generating Company to deal with the challenges.

1.4 Value of the Study

The study will add to the existing knowledge in strategy implementation and its challenges besides forming a basis for further research by scholars who will be interested to advance research on challenges faced in the implementation of corporate strategic plans on Enterprise Resource Planning.

The study will identify and fill gaps existing in Enterprise Resource Planning strategy implementation and its challenges especially in the Kenyan electricity sub-sector.

KenGen management will draw a lot from this study to straightforwardly identify and eliminate barriers to strategy implementation ensuring business objectives are well-focused and avoiding wasting effort and resources on unclear or unforeseen areas in future ERP strategic plans.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter deals on the theoretical literature review of the work of other researchers who have dealt with the subject of strategy implementation. The specific areas covered here are the concept of strategy implementation, challenges in strategy implementation and finally ways of dealing with these challenges.

2.2 Concept of Strategy Implementation

Thompson Jr. and Strickland (1993) defined Strategy implementation as fundamentally an administrative activity which enlists – organizing, budgeting, motivating culture-building, supervising and leading as activities that “make it happen” to achieve intended strategic and financial outcomes. Strategy implementation varies substantially among different types and sizes of organizations however, primarily it manages resources needed during the implementation process; it focuses on efficiency, and is chiefly an operational process requiring special motivation and leadership skills and co-ordination among many individuals. David (2005) underscores management issues central to strategy implementation as establishing annual objectives, devising policies, allocating resources, altering an existing organizational structure, restructuring and re-engineering, revising reward and incentive plans, minimizing resistance to change, matching managers with strategy, developing a strategy-supportive culture, adapting production/operations processes, developing an effective human resource function and if necessary downsizing.

Thompson Jr. et al (1992) argues that most discussions of strategic planning deal on how to formulate strategy but pay scant attention on strategy implementation; yet problems with failed strategies are traceable to poor implementation. Thompson further argues that having clear strategies is essential, having brilliant strategies is terrific, but only if those strategies are brilliantly implemented will they lead to lasting competitive advantage. Sandelands (1994) contends that people underestimate the commitment, time, emotion and energy needed to overcome inertia in their organizations to implement their strategies. This lapse creates an implementation gap between stated strategic goals and

the realized goals which result in poor strategy implementation hence strategy failure (Abiero, 2010). Alexander (1991) attributes this lapse to limited availability of conceptual models on strategy implementation, strategy implementers are unsure of where the process begins, ends and what it entails. Strategy implementation is perceived as less glamorous than strategy formulation and implementation is commonly overlooked under the guise that anyone can do it.

David (2005) believes implementing strategy affects an organization from top to bottom; it affects all functional and divisional areas of a business. When implementing ERP systems, most organizations encounter different kinds of challenges like the difficulty to convert sales orders in the legacy systems to an ERP compatible format, management's inability to re-engineer business processes, failure to change organizational structure, failure to inculcate strategy supportive culture. People-related problems include end users receiving insufficient training, employees not understanding the newly installed system or being apprehensive about it, which subsequently leads to low usage/performance; end user resistance and fighting the change in the business process.

2.3 Challenges in Strategy Implementation

Hussey (1998) outlines Structure as a concept that involves division of tasks for efficiency and clarity of purpose and co-ordination between the interdependent parts of organization to ensure organizational effectiveness. Organizational structure may be functional, divisional by geographic area, divisional by product, divisional by customer, divisional by process, Strategic Business Unit (SBU) and matrix. According to Olsen (2005), an organization establishes and streamlines its management structure and lines of authority with employees, establishes objectives and policies, allocates resources to ensure effective execution of strategy. It channels collaboration, specifies modes of co-ordination, allocates power and responsibility and prescribes levels of formality and complexity. Chandler (1962) hypothesized that structure is determined by strategy and that correct choice of organizational structure can bolster successful strategy implementation. Hussey (1998) asserts that if structure and strategy are not coordinated, the results will be inefficiencies, misdirection and fragmented efforts.

Culture is the powerful and complex set of values, traditions, behavioral patterns that bond people in an organization. Culture of an organization can profoundly facilitate or impede strategy implementation. For strategy to be successfully implemented, it requires the right culture. Strategists should strive to preserve, emphasize, and build aspects of an existing culture that supports proposed new strategy. For instance encouraging computer culture in an organization would lead to increased employee acceptance to daily transact businesses on computer via ERP, intranet and extranet.

Strategy implementation demands equitable outlay of resources and sharing, a constraint in resources can pose a handicap to strategy implementation process. According to David (2005), nothing could be more detrimental to strategy implementation and to organizational success than for resources to be allocated in ways not consistent with priorities indicated by approved objectives. Lugini (2004) points resources as the third greatest factor for ERP implementation failure. Many companies attempt to “save the dollar” by doing everything on overtime basis, in the end people reach burn out after putting in extensive hours over a long time. Resources include human resources, financial resources, physical resources and technological resources. Effective resource allocation is inhibited by the following challenges: overprotection of resources, lack of sufficient knowledge, vague strategy targets, organizational politics, and a reluctance to take risks, too great emphasis on short-run financial criteria.

Resistance to change is quite often caused by failure to build a case for change, lack of involvement by those responsible for working with changed process, inadequate communication, lack of visible top management support and commitment, or arrogance. Aged or unskilled employees are often unwilling to adopt a new way of working with ERP; some employees may feel that their supervisor or worse still; management on higher organizational echelon will now keep a better trail on what they are doing. Employees may perceive ERP implementation as a precursor to organizational downsizing to adversely affect their jobs. These somewhat manifest various facets of resistance.

Communication is a key link that can make or break a strategy. According to Ligui (2004), one of the causes of ERP implementation failure is poor project communications, beginning with a failure to alert stakeholders the reasons for up-coming project and continuing to update the organization of the progress and importance of the ERP implementation. Poor communications prevents different parts of the organization from assessing how they will be impacted by changes in processes, policies, and procedures.

According to Muraguri (2010) the most challenging issue in strategy implementation is lack of commitment and focus from the top management to give their energy and express loyalty to the implementation process. Chapman (2004) singles out need for efficient and effective leaders in strategy implementation to guide the rest of the employees through the strategy plan with ease while providing solutions and explanations to unclear issues. Involvement of middle and lower management in the implementation process helps ensure employee buy-in and own-up of the process.

Sammon and Adam (2003), lists the costs of implementing an ERP as the cost of licensing, training, implementation, maintenance, customization, consultancy, hardware requirements and continual training. ERP are priced based on the functionality of the system and the number of authorized users. ERP systems require the implementing company to invest in migrating data, modifying existing systems, overhauling network infrastructures and hiring consultants whose fees may be five to ten times the cost of software. Based on this, it's no surprise for big complex ERP implementations to cost between US\$50,000 and US\$75,000 per user. The challenge of high ERP implementation costs poses a barrier of adoption in firms with feeble financial base and unskilled staff.

Johnson et al (2005) stresses importance of incentives such as promotion, salary review, praise, fringe benefits, increased job autonomy, awards and recognitions to motivate staff to put in hard work for successful strategy implementation. Pearson and Robinson (1997) emphasizes the importance of motivating and rewarding individual or organizational good performances a key ingredient in efficient strategy implementation. However if this need is loosely viewed, it leads to a formidable challenge, kills morale among staff, breeds resistance, and drags the whole implementation process to cost overruns or failure.

2.4 Dealing with Strategy Implementation Challenges

According to David (2005) when a firm changes its strategy, the existing organizational structure may become ineffective; warnings of ineffective structure are too many people, too much attention directed to solve interdepartmental conflicts, too large span of control and too many unachieved objectives. Strategies formulated must be workable not requiring massive structural change. Structural changes necessary to implement new strategies are determined and executed.

Strategists should preserve, emphasize, and build upon aspects of existing culture that fits and supports new strategy that are market-driven and dictated by competitive forces. Some approaches to alter organizational culture are recruitment, training, transfer, promotion, restructure of organization's design role modeling and positive reinforcement.

Resource allocation ensures the organization has right people with required competencies and skills to support strategy implementation. In the run to implementation employee skills ought to be honed by training, competency gaps need to be filled through competitive hiring of new employees with right competencies (Olsen, 2005). The organization must set aside adequate budget funds allowing for contingencies to meet all anticipated project expenses and provide necessary facilities like office space, computer hardware and network.

Resistance to change can be minimized by identifying change agents drawn from all organizational functional areas the agents must be dedicated, disciplined, motivated, have good communication skills and know the system well, have embraced change and command some respect among other employees to champion the cause of ERP to end-users and offer help and address resistance issues. Top management must communicate clearly and extensively re-assuring employees that change coming with ERP is good and well intended. Wanjagua (2008) urges organizations to involve all stakeholders in changes affecting them to ensure smooth operations, and to involve them in the developing, planning and change processes. In return, this creates change ownership and user buy-in.

Communications plays a vital part of managing change in a corporate environment. According to Wang (2000), communication should be two-way to improve understanding, clearly define strategy and responsibilities therein. According to Cole (2004) organizational formal communication could include any of the aspects below: content communication (such as factual information, discussion points, formal notices), media of communication (such as face-to-face, written reports/memos, emails, fax, telephone, audio visual, teleconferencing), skills of communication (for instance report writing, chairing meetings, interviewing, telephone selling), form of communication (for instance memos, reports, bulletins), Organization of communication (for example formal channels of communicating, committee structure, authority levels, communication procedures, disciplinary issues).

There is mounting evidence that strategy implementation is linked to the top executive's philosophy and personality (Kotey and Meredith, 1997). Strong leadership that apportions resources, defines business processes and formulates strong policies that support the strategy. Top management must not assume lower managers have same perceptions of strategic plans and urgency of implementation; they must clearly communicate and rally everyone in the organization in the desired strategic direction.

Sammon and Adam (2003), points out that many organizations use the strategy of training ERP "super-user" who then trains the rest of the workforce in the company; this is cheaper and ensures continuity as opposed to hiring experts to train employees. Another cost-cutting measure is careful composition of Project Team; which ensures the project is implemented within stipulated schedule and costs thus averting cost overruns. The implementing organization should ensure minimal customization of ERP modules is done and the numbers of authorized ERP users is limited; they both tend to inflate costs.

It is crucial that reward system be clearly and tightly tied to the strategies being implemented. In which case implementation success or failure should prompt corresponding consequences in individual monetary or non-monetary compensation and rewards, this will directly influence the action and behavior of individuals covered under the program.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter detailed on the methodology adopted by the researcher in this study in quest to attain prescribed research objectives. The chapter comprised research design, the population of interest, data collection instruments and the data analysis techniques to be used to establish the challenges of implementing ERP strategy by KenGen.

3.2 The Research Design

This study was a case study of Kenya Electricity Generating Company. Kothari (2004) is emphatic that a case study is a powerful form of qualitative analysis that involves a careful and complete observation of social unit which may be a person, a thing, an institution, a cultural group or even an entire community. A case study places more emphasis on full analysis of a limited number of events or conditions and their interrelations. The researcher found the position taken by Kothari appropriate for use in this study because there was need for an in-depth analysis of the challenges of implementing the ERP strategy at KenGen and measures taken to deal with challenges.

3.3 Data Collection

The study collected primary data. The data collection instrument was interview guide please see Appendix 1. The interview guide was categorized into three sections; Section I collected data on general information, Section II explored challenges faced in the implementation of ERP, lastly Section III delved into steps taken by KenGen to deal with the challenges encountered. The respondents were 10 management staff comprising 10 Chief Officers heading the various company functions namely: Operations, Human Resource, Quality Assurance, Finance, Supply Chain, Technical Services, Information Technology, Projects & Strategy, Regulatory Affairs and finally Transport & Administration; all were expected to have closely participated in the implementation of ERP. Interview guide was administered by researcher on the respondents using face-to-face personal interviews.

3.4 Data Analysis

Data collected was analyzed using content analysis. Hosti (1969) defines content analysis as any technique for making inferences by objectively and systematically identifying specified characteristics of messages. Whereas, Weber (1990) contends that content analysis is a systematic, replicable technique for compressing many words of a text into fewer content categories based on explicit rules of coding.

Content analysis objectivity of coding categories to ensure reliability, systematic application of these coding systems across a representative sample of materials to control observer bias, and consistency in theoretical aims so that the findings can be related to the relevant variable. Data from respondents was analyzed to determine presence of patterns, themes, relationships of words and concepts, they were coded, and results were presented narratively from which inferences were made to help expose challenges of implementing ERP strategy at KenGen and approaches used to deal with the challenges.

CHAPTER FOUR: RESULTS, INTERPRETATIONS AND DISCUSSIONS

4.1 Introduction

This chapter presents analysis and interpretations of study findings using content analysis. Narrative approach has been used to present responses from interviewees. The chapter is divided into three parts in line with the objectives of the study. The first part deals on general information of interviewees, the second part focuses on challenges experienced, counter measures taken and interpretations thereof.

4.2 The Interviewees' Profile

This study targeted ten respondents selected from the divisions in which KenGen is functionally divided. The researcher conducted face-to-face interviews with the ten respondents who have held senior management positions in KenGen for at least five years and who were involved in the process of implementing ERP strategy and presumably had firsthand knowledge of the challenges met and remedial steps taken.

4.3 Challenges Encountered, Remedial Measures taken and Interpretations

This section delves into the interviewee responses on various subject areas that were considered to have affected the implementation of ERP strategy at KenGen. Views expressed by interviewees are highlighted, interpreted and discussed; specific subject areas of interest touched include: organizational structure incompatible with ERP, Non-supportive organizational culture, inadequate allocation of resources, resistance to change, ineffective communications, lack of top management commitment and support, high implementation costs, lack of incentives and reward system and inadequate user training and education.

4.3.1 Organizational Structure incompatible with ERP

Organizational structure defines roles, responsibilities, boundaries, processes and procedures and relationships of various positions. Eight out of ten interviewees stated that the hierarchical structure of KenGen was initially not streamlined hence as ERP was run under this structure it resulted into inefficiencies, fragmented efforts or jobs ending up at unintended recipients. Lack of fit between structure and ERP modules was reported to have slowed ERP implementation, tasks handled under this structure took infuriatingly long to execute. Two out of ten interviewees concurred that upto and beyond Go-Live, ERP was not well tailored to all the section's day-to-day work procedures, consequently efforts to interrogate and navigate the system to straighten up things unassisted often proved a frustrating and enduring nightmare owing to the fact that SAP ERP is largely rigid, complex and its graphic user interface non-user friendly. Two out of ten interviewees reported that supervisors expressed frustrations when a junior officer sought supervisor approval for a request only for ERP program to escalate the request to a senior officer above the supervisor ostensibly the funds involved were beyond the supervisor's approval limit. Such inconsistencies in the line of authority were frustrating and elicited negative feelings and stood on the way of smooth implementation of ERP strategy.

Nine out of ten interviewees reported that the company did organization audit during ERP implementation in which it revised lines of authority, roles, responsibilities and altered its structure making it compatible with ERP modules. However in the post go-live period, some company divisions reportedly still experienced disparities between work procedures and ERP; these bottlenecks were earmarked for addressing by customizing ERP module to suit individual division requirements.

4.3.2 Non-supportive Organizational Culture

Organizational culture is the company's way of doing things. It constitutes norms, values, and beliefs, traditions held over time in the course of doing business. A supportive culture is imperative for a successful ERP implementation. All interviewees were in accord that such a supportive culture was largely absent during ERP implementation; traditions were

manifested strongly by the tendency of employees to show preference of using the old systems despite ERP having been availed. Low cadre employees were apprehensive that the automation introduced by ERP would adversely affect their careers and expose their work to closer supervisory scrutiny and spying.

Two out of ten interviewees reported that management allayed employee fears by categorically affirming that the system was well intended. Employee preference of old systems was tackled by disabling the old systems and directing everyone henceforth to turn to ERP. User behavioral patterns like laziness and lethargy yielded droopiness at ERP post-inauguration period until divisional directors and managers assertively intervened, supervising and invigorating ERP usage. One in ten interviewees observed that steps followed in transacting work requests at one level in ERP and the next level were quite unrelated, this tended to stretch ERP learning curve for an average user and slow down ERP adaptation.

4.3.3 Inadequate allocation of resources

Effective implementation of strategy demands that an organization allocates adequate resources as laid out and consistent with priorities in approved objectives. According to all interviewees, inadequate allocation of resources was a constraint in smooth ERP strategy implementation. The main resources in short supply was technological followed closely by human resource. Technological resources in form of consultancy expertise, skills, proficiency in troubleshooting and problem solving, user manuals, ERP tutor; were not effectively passed on to would-be ERP users. Though SAP user manuals were posted on company intranet, they were of little use to employees without hands-on guided training; trainings didn't provide user manuals to help develop user skills and expertise through practice. This position augments current situation where serious user challenges tend to remain pending until tackled with the support of super-users and in exceptional cases, the consultant. Human resources were not adequately availed owing to the fact that ERP training programs often interfered with employee daily work pattern resulting into low training attendance.

Management rolled out training program and emphatically stressed need for all employees to attend; the company also kept the avenue for consultancy services open to facilitate a smooth start. Inadequate technological resources was perhaps the greatest sin in ERP implementation, knowledge is power and knowledge deficiency presents a crippling condition that manifests high dependency rate, fumbling in the face of challenges and general ineffectiveness by those insolvent of knowledge.

4.3.4 Resistance to change

Most interviewees were of the opinion that employee resistance to change was muffled. Resistance experienced was attributed to failure by management to accommodate stakeholder views both at formulation stage and in the change process, ineffective communication, employee apprehension/fears, lack of opportunity for employees to internalize ERP and failure to build case for ERP, these were cited to have bred employee discontent and resistance to change.

Of the ten interviewees four reported that the company appointed communications officer to educate and communicate the efficacy of the system to enhance employee buy-in; KenGen dispelled employee fears by re-affirming that ERP strategy was a well intended cause. In some cases management used explicit and implicit coercion to deal with resistance.

4.3.5 Ineffective Communications

All interviewees underpinned the importance of communications in ERP implementation process. They indicated the critical role of two-way synergistic communication taking both vertical and horizontal orientations. Interviewees concurred that KenGen conducted a brief awareness program at ERP inception to sensitize employees on ERP but employee views or reactions were not engrafted in the process at formulation stage, nine in ten interviewees revealed that as a result, low cadre staff were reluctant to own the ERP strategy. Although there were subsequent communications on the process, the communications were rare and lacked an in-depth appeal to stakeholders.

Four out of ten respondents reported that KenGen responded to the challenge of ineffective communication by appointing a communications officer to dispatch stakeholders periodically on ERP progress. Eight out of ten interviewees indicated that there was sluggish pick-up of ERP after go-live; however this was dealt with by senior management's involvement in the monitoring and evaluation of ERP usage, education and communication.

4.3.6 Lack of Top Management Commitment and Support

Half of interviewees held that the chief executive championed ERP by defining the process and formulating strong policies, but company division directors, line managers and employees under them were not incorporated from inception until after Go-Live. Four out of ten of interviewees attested to the fact that stakeholder relations were not well managed, staff were not given ample time to appreciate the efficacy of ERP consequently there was no top down employee buy-in and change ownership.

In response, KenGen organized the training of directors and managers who later stepped in as change agents to spur and popularize ERP usage among employees in their respective areas. Managers attempted to inspire and motivate teams under them by insisting that one's performance would be recognized as per one's postings in the ERP. The status of posted data was downloaded from SAP ERP and scrutinized section by section in bid to arouse feeble sections into active ERP usage ; the strategy somewhat managed to pay off.

4.3.7 High Implementation Costs

One in ten interviewees attributed high inflation and high foreign exchange charges in the Kenya shilling to US dollar exchange; the exchange was necessitated by need to pay for the cost of ERP including licensing, training, implementation, maintenance, customization, consultancy, hardware requirements and continual training. Continued dependence on consultant expertise was singled out as an avenue still attracting further costs. Two out of ten interviewees failed to reconcile high initial costs of ERP incurred by KenGen to the benefits that have so far accrued from its usage.

All interviewees maintained that though typically ERP costs are high, KenGen ERP implementation costs were well managed and were prevented from escalating. They pointed out cost control measures KenGen adopted like managing implementation schedule to prevent an overshoot, limiting the number of modules installed to what is optimal for KenGen, limiting authorized users to optimal size and use of common shared passwords by multiple users, were applauded as measures that KenGen took to cut operating costs. Paper transactions were replicated and ingrained into ERP making virtually all key transactions within KenGen paperless.

4.3.8 Lack of Incentives and Reward System

All interviewees were unanimous that there were inadequate incentives and reward systems accompanying ERP strategy implementation. They held that lack of proper reward, compensation and recognition systems was a challenge that adversely affected ERP implementation. Except super-users who received per diem and underwent extensive trainings as would-be trainers; bulk of the staff were not as lucky, they were not given incentives or rewards except for provision of lunch during ERP training sessions, this stirred up lack of ownership of the process, low morale, poor commitment among staff, low buy-in as exhibited by poor attendance of training sessions and sloppy ERP usage rates in post go-live period. Eight out of ten interviewees cited lack of performance based promotions, salary increases or bonuses among key de-motivating factors responsible for low staff morale.

Divisional directors and line managers intervened and turned the tide of low ERP usage by impressing on employees to transact all work through ERP; they also focused on specific cases of weak usage and facilitated support.

4.3.9 Inadequate User Training and Education

All interviewees maintained that there were inadequate transfers of skills, expertise and knowledge from consultant to users, as a result a majority of employees lacked mastery of ERP. Nine out of ten interviewees held that training programs were rushed and tended to clash with employee work pattern leading to low attendance of training sessions as

employees were divided between fulfilling work obligations and attending training. Training period allocated was short depriving trainees of the benefits of an in-depth hands-on training depicting a typical work environment and challenges thereof. Further, user materials like manuals, training packages/ERP tutor were not provided which deprived trainees of an opportunity to deepen their skills and knowledge. Further, trainings were not subjected to assessment tests as instruments for evaluating the degree of training effectiveness in knowledge impartation, it was therefore difficult to gauge whether intended training targets were achieved or not.

All interviewees unanimously reported that current ERP usage can be deepened, broadened and enriched by conducting hands-on re-fresher trainings tailored to user requirements and addressing specific challenges experienced in the course of using ERP. This approach was identified as a firm avenue to user proficiency and independence.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the findings of the study, conclusions, limitations faced, recommendations from the study are made at the end of the chapter and suggested areas for further research.

5.2 Summary

This case study was carried out to determine challenges of implementing enterprise resource planning strategy by the Kenya Electricity Generating Company Limited. A population of ten senior officers selected from each company division and who also took part in ERP implementation were chosen for the purpose of the study. An interview guide was used to collect views and opinions from the population on challenges faced and measures taken to deal with the challenges mentioned. The responses were analyzed and narrated.

Eight out of ten interviewees stated that initially there was lack of fit between KenGen's hierarchical structure and ERP modules; leading to inefficiencies and inconsistencies in the line of authority. Nine out of ten interviewees reported that KenGen did organization audit during ERP implementation in which it revised its structure to be compatible with ERP modules.

All interviewees concurred that traditions posed a strong non-supportive culture, expressed by the tendency of employees to continue using the old system despite the availing of ERP. Non-supportive culture was tackled by disabling the old systems thus compelling everyone to shift to ERP work platform.

According to all interviewees, inadequate allocation of both technological and human resources was a major constraint in smooth ERP implementation. Technological resources from consultants in form of consultancy expertise, proficiency in troubleshooting and problem solving skills, user manuals, ERP tutor; were either ineffectively passed on or not passed on at all to would-be ERP users.

Eight out of ten interviewees attributed employee resistance to poor stakeholder relations management, ineffective communication, employee apprehension/fears, lack of opportunity for employees to internalize ERP and failure to build strong case for ERP; these were cited to have bred employee discontent and resistance. Four of the ten interviewees reported that later the company enhanced communication to update stakeholders and win their support; in some instances assertiveness or coercion was used to deal with resistance.

All interviewees emphasized the importance of two-way synergistic communications in both vertical and horizontal orientations within KenGen. From the onset, communications were rare and failed to give in-depth appeals to stakeholders. Four out of ten respondents reported that KenGen responded to the challenge of ineffective communication by appointing a communications officer to educate and communicate to stakeholders periodically on ERP progress.

All interviewees concurred that KenGen managed ERP costs well and prevented cost escalation. Two in ten interviewees viewed continued dependence on consultancy services as an avenue that still attracts costs. Two out of ten of interviewees failed to reconcile high initial costs of ERP incurred by KenGen to the benefits that have so far accrued from ERP usage.

Interviewees were unanimous that there were inadequate incentives and reward systems. They held that lack of proper reward, compensation and recognition systems was a challenge that adversely affected ERP implementation. Eight out of ten interviewees cited lack of incentives and reward systems like performance based promotions, recognitions or bonuses; among key de-motivating factors responsible for low staff morale. Half of interviewees held the opinion that pushy intervention of divisional directors and managers facilitated crucial support which improved ERP usage in their respective portfolios.

All interviewees maintained that there was inadequate transfer of skills, expertise and knowledge from consultant to users, as a result a majority of employees lacked mastery

of ERP. Nine out of ten interviewees held that training programs were rushed and their timing tended to interfere with employee work schedule leading to low attendance of training sessions. The period allocated to training was short which deprived trainees of the benefits of an in-depth hands-on training; the training also failed to provide user manuals for reference, practice and learning backup. All interviewees unanimously reported that current ERP usage can be deepened, broadened and enriched cost effectively by hands-on re-fresher trainings conducted in KenGen areas by super-users.

5.3 Conclusions

The outcome of the study disclosed that ERP strategy was successfully installed within projected costs and timeframes, however the anticipated benefits from ERP have been slow to come-by; they comprise: improved business processes, enhanced monitoring and decision making, improved efficiency and cost reduction. Interviewees proposed ways to improve on certain shortcomings encountered in ERP implementation.

Two out of ten interviewees reported that although good schedule management and compressing the process to ensure scheduled exit of consultant may have worked well in controlling costs, it deprived employees of ample opportunity to draw from the expertise, skills, knowledge from consultant. The use of super-users to run ERP in KenGen Areas was cited as one viable way to cut operating costs and circumvent the obstacle of low skills and knowledge.

Interviewee response revealed that all employees went through ERP training but it was ineffective among majority of employees because allocated time was short, employees were weighed by low morale. ERP users in some KenGen divisions where structure had not been well tailored to ERP reportedly faced frustrating struggles while using ERP. The complexity of ERP and the unrelated steps required to carry out work transactions at various organizational tiers were singled out as primary cause of the long learning curve.

Incompatibility between organization structure and ERP modules was solved when KenGen conducted an audit of its lines of authority defining roles, responsibilities and tailoring its structure to ERP. Failure by KenGen to ensconce training feedback in form

of evaluations and assessments in the training program made it difficult to determine the effectiveness of trainings conducted, the lessons learned and any remedial steps necessary. Employees were expected to assume active ERP usage despite their unattended weaknesses, consequently majority of employees begun using ERP while unsure and needed guidance hence there has been a general low ERP usage.

Non-supportive organizational culture especially traditions were overcome by big-bang changeover to ERP from the old systems and management firm advocacy for increased ERP usage. Inadequate allocation of resources particularly technological and human was not well tackled, this setback coupled with resistance, low staff morale, compromised training effectiveness and low user skill levels introduced the problem of user dependency on help as a result KenGen has been slow at embracing the benefits from ERP. Resistance to change was dealt with through education, enhanced communication and management assertive intervention and in some cases by coercion. Lack of incentives and rewards dampened user morale, however this was solved by management's facilitative support, the challenge of ineffective training and low user skills levels remained outstanding hopefully to be tackled through subsequent refresher courses.

5.4 Limitations

The findings of this study should be interpreted within the limitations of the study. At the outset, there are limitations of measurement, which are common to social researches. Interviewees' perceptions may change over time and vary with personal inclinations based on individual experience with ERP. Also interviewees may express prejudiced views or offer insincere reply.

Secondly, the study was constrained with time on the part of the interviewees and the researcher. The interviews were not as exhaustive as was envisaged considering that interviews were conducted amid interviewees' pressing work schedules; this robbed the interviews of valuable time to give well thought out responses. The study was thus deprived of ample opportunity for snooping on the questions of interview.

5.5 Recommendations

This study recommends the following; the need to ensure complete and exhaustive technological transfer from consultant to ERP users in form of expertise, knowledge, troubleshooting skills as part of human capacity building process to ensure smooth and beneficial running. ERP sensitization and awareness campaigns need to be conducted to all stakeholders on ongoing basis highlighting milestones covered and benefits made. All stakeholders need to be incorporated in the ERP strategy at inception, either directly or indirectly to create a sense of change ownership. The role of incentives and reward systems like monetary awards, recognitions, and promotions to reward outstanding performance to bolster high staff morale cannot be overemphasized.

The need to institute pragmatic cost-effective hands-on-training facilitated by super-users companywide aimed at deepening and broadening ERP user abilities is crucial and needs to be effected at earliest opportunity. Training ought to be structured to assess and evaluate trainees as a means of estimating training effectiveness and ensuring an earlier realization of envisioned benefits of ERP by KenGen.

Management needs to deal with inhibitive cultural practices by inculcating strategy supportive measures such as change advocacy, people need to be taken through an awareness campaigns to appreciate the efficacy of ERP and allay any fears, which if not well attended leads to end user resistance, compromised training and performance; in the end KenGen as a beneficiary of ERP is penalized by these behavioral patterns.

5.6 Suggestions for Further Research

The mandate of the study was to determine the challenges of implementing enterprise resource planning strategy by the Kenya Electricity Generating Company Limited. From the results, it was established that there was inadequate transfer of expertise, knowledge and troubleshooting skills from consultant to ERP users, lack of incentives and failure to involve employee views in the change process led to low employee morale and lack of

change ownership, this coupled with competing interests of work and training on the employee resulted in poor attendance of training sessions and training ineffectiveness. The not-so-well equipped employees begun using ERP modules still grappling with algorithmic challenges and as a result ERP usage has been low across KenGen, this has adversely impacted on KenGen by standing on the way of realizing anticipated benefits. There is therefore need to carry out an empirical study on KenGen to determine the relationship between training effectiveness and the benefits accruing from ERP implementation.

5.7 Implication on Policy, Theory and Practice

This study is expected to make impacts on existing organizational policy, theory and practice. Organizations implementing ERP projects will draw from the nine challenging areas encountered in the implementation of ERP strategy at KenGen and accordingly adjust their policy frameworks to mitigate against the risks that accompany ERP implementation; thereby ensuring a smoother ERP implementation process and timely cost effective attainment of anticipated benefits. According to Abiero (2010), the study can be used to put in place policies that ensure synergy in project implementation. The study will as well enrich the existing literature on implementation of ERP as a strategy and its challenges and advance scholarly research on this subject. This study will enable firms to increasingly view ERP as a potential business strategy to enhance their efficiency and competitiveness.

In practice, the results of this study will aid KenGen and other firms especially in electricity subsector by pointing out pitfalls and weakness often encountered in the implementation of ERP strategy, pitfalls could be avoided and areas of weakness invigorated to ensure continuous growth of ERP. KenGen management should also identify emerging challenges not cited in this study and set up mechanisms of dealing with those challenges.

REFERENCES

- Abiero, A. A. (2010). *Challenges of Stakeholder Management in Implementation of Sondu Miriu Hydro-Electric Power Project in Kenya*. Unpublished MBA Thesis; University of Nairobi.
- Al Ghamdi, S. M. (1998). Obstacles to successful implementation of strategic decisions: The British experience, *European Business Review*, 98 (6), 322-7.
- Alexander, L.D. (1985). Successfully implementing strategic decisions. *Long-Range Planning*. 18(3), 91-97.
- Alexander, L.D. (1991). Strategy implementation: nature of problem. *International Review of Strategic Management*. 2(1), 73-91.
- Armstrong, M. (2008). *Human Resource Management Practice*. 10th Ed. Kogan Page.
- Awino, Z. (2001). *Effectiveness and Problems of Strategy Implementation of Financing Higher Education in Kenya by Higher Education Loans Board*. Unpublished MBA Dissertation; University of Nairobi.
- Barney, J. B. & Hesterly, W. S. (2008). *Strategic management and competitive Advantage*. 2nd Edition. Upper Saddle River, NJ: Pearson Prentice Hall.
- Bean, J., Noon, C., Ryan, S. & Saiton, G. (1977). Selecting tenants in a shopping mall. *Inte-aces*. 18 (Mar~April 1988), 1-9. Cambridge Mass, Belknap Press.
- Beer, M. & Eisenstat, R. (2000). The silent killers of strategy implementation and learning. *Sloan Management Review*. 41(4), 29-40.
- Bryman, A. & Bell, E. (2007). *Business Research Methods*. 2nd Edition. Oxford University Press.
- Buckhout, S., Frey, E. & Nemec, J. J. (1999). Making ERP succeed: Turning fear into promise. *IEEE Engineering Management Review*, 19, 116~123
- Burnes, B. (2000). *Managing Change: A Strategic Approach to Organizational Dynamics*. 3rd Edition. Essex: Prentice Hall.

- Byars, L. L., Rue, L. W. & Zahra, S. A. (1996). *Strategy in Changing Env.* Chicago.
- Chandler, D. A. (1962). *Strategy and Structure: Chapter in History of the America Industrial Enterprise.* Cambridge, UK: MIT Press.
- Chapman, A. M. (2004). *Strategy Implementation and Realization.* New York. Macmillan Press.
- Cooper, D. R. & Schindler, P. S. (2003). *Business Research Methods.* 8th Edition. Tata McGraw Hill Publishing Company Ltd.
- Corboy, M. & O'Corrbui, D. (1999). The seven deadly sins of strategy. *Management Accounting.* Nov. 77(10), 29 – 30.
- Crowley, A. (1999). Training treadmill – A rigorous plan of end-user education is critical to whipping ERP systems into shape. *PC Week Online, Jan.4, 1999.*
- Daveport, T. (1998). Putting the enterprise into enterprise system. *HBR, 76(4), 121-131*
- David, F. R (2005). *Strategic Management.* 10th Edition. Pearson Prentice Hall.
- David, F. R. (1997). *Strategic Management.* 6th Edition. Pearson Prentice Hall.
- Egonmwan, J. A. (2001). *Public Policy Analysis: Concepts and Applications.* Benin City: S. M. O. Aka and Brothers Press.
- Esteves, J. & Pastor, J. (2001). Analysis of critical success factors relevance along SAP implementation phases. *Proceedings of the 7th America's Conference on Information Systems (AMCIS), Boston, Massachusetts, USA.*
- Eugen, O. (2004). *The IT Strategy Management Process- Supporting IT Services Through Effective Knowledge Management.* Van Haren Publishing.
- Galbraith, C. G. & Merrill, B. H. (1991). The effect of compensation programme and structure on SBU competitive strategy: A study of technology intensive firms: *Strategic Management Journal.* 327-351.
- Government of Kenya (1997). *The Electric Power Act No. 11 of 1997.* Ministry of Energy. Government Printer: Nairobi.

- Government of Kenya (2004). *Sessional Paper No. 4 on Energy*. Ministry of Energy.
Government Printer: Nairobi.
- Grant, R. M. (2002). *Contemporary Strategy Analysis: Concepts, Techniques, Applications*. Oxford: Blackwell.
- Grewel, R. & Tansuhaj, P. (2001). Building organizational capabilities for managing economic crisis: The role of market orientation and strategic flexibility. *Journal of Marketing*. 65(2), 47-80.
- Grundy, T. (1995). *Breakthrough Strategies for Growth*. Prentice Hall.
- Gupta, A. (2000). "Enterprise resource planning to emerging organizational value systems". *Industrial Management & Data System*. 114 – 118.
- Hrebiniak, L. G. (2005). *Making Strategy Work: Leading Effective Execution and Change*. Upper Saddle River, NJ: Wharton School Publishing.
- Hrebiniak, L. G. & Joyce, W. F. (1984). *Implementing Strategy*. Macmillan New York.
- Hosti, O. R. (1969). *Content Analysis for Social Sciences and Humanities*. (Reading, Mass.: Adison-Wesley). 14
- Hussey, D. (1998). *Strategic Management: Past Experiences and Future Directions*. Nottingham Trent University. John Wiley and Sons Ltd.
- Janson, M. A. & Subramanian, A. (1996). "Packaged software: Selection and implementation policies". *INFOR*, 34(2), 133-151.
- Jarr, Y. (2002). "ERP implementation and critical success factors, the role and impact of business process management". *Proceedings of the 2000 IEE International Conference. on Management of Innovation & Technology*, Singapore, 165-170
- Jauch, L. R. & Glueck, W. F. (1988). *Business Policy and Strategic Management*. 5th Edition. McGraw Hill, New York.
- Johnson, G. & Scholes, K. (2003). *Exploring Corporate Strategy*. 6th Edition. India Prentice Hall.

- Johnson, G., Scholes, K. & Whittington, R. (2005). *Exploring Corporate Strategy: Texts and Cases*. 7th Edition. Prentice Hall.
- Judson, A. S. (1996). *Making Strategy Happen*. Blackwell Publishers Inc.
- KenGen (2007/2008). *Annual Report and Accounts*. KenGen. Nairobi.
- KenGen (2008/2009). *Annual Report and Accounts*. KenGen. Nairobi.
- KenGen Strategic Plans (2005 ~ 2010). Unpublished.
- Kiprotich J. (2008). *Strategy Implementation and its Challenges: A Case of African Braille Centre*. Unpublished MBA Thesis; University of Nairobi.
- Kotey, B. & Meredith, G.G. (1997). Relationships among owner- manager personal values, business strategies and enterprise performance. *Journal of Small Business Management*, 35(2), 37-61.
- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*. 2nd Edition New Age International (P). Publishers.
- Kumar, K & Hillegersberg, J. (2000). ERP experiences and evolution. *Communications of the ACM*, 43(4), 23-26
- Ligus, R. G. (2004). *"The 12 Cardinal Sins of ERP Implementation"*. Rockford Consulting Group, Ltd.
- Lucey, T. (2005). *Management Information Systems*. 9th Edition. Bookpower.
- Lucas, H. C. (1981). *Implementation: The Key to Successful Information Systems*. Columbia University Press. New York. Guildford, Surrey.
- March, J. G. & Simon, H. A. (1958). *Organizations*. John Wiley & Sons.
- Marginson, D. E. W. (2002). Management control systems and their effect on strategy formulation at middle management levels: Evidence from a UK organization. *Strategic Management Journal*, 23, 1019-1031.
- Mintzberg, H & Quinn, J.B (1991). *The Strategy Process, Concepts, Contents and Cases*. 2nd Edition. Prentice-Hall.

- Mintzberg, H. (1979). *The Structuring of Organizations*. Prentice Hall.
- Mintzberg, H., Lampel, J., Quinn, J. B. & Ghoshal, S. (2002). *The Strategy Process Concepts Contexts and Cases*. 4th Edition. Pearson Education.
- Miranda, R. (1999). The rise of ERP technology in the public sector. *Government Finance Review*, August.
- Muraguri, C. W. (2010). *The Challenges of Strategy Implementation in Chartered Private Universities in Kenya*. Unpublished MBA Thesis; University of Nairobi.
- Mwangi, S. M. (2010). *Challenges of Strategy Implementation at Simba Technology Ltd*. Unpublished MBA Thesis; University of Nairobi.
- Noble, C. H. (1999). The eclectic roots of strategy implementation research. *The Journal of Business Research*. 45(2), 119-134.
- Nutt, P. C. (1995). Implementation style and use of implementation approaches. *International Journal of Management Science*. 23(5), 469-484.
- O'Brien, J. A. (1993). *Introduction to Information Systems: Essentials for Internetworked Enterprise*. Irwin / McGraw-Hill, 2000.
- O'Brien, J. A. (2004). *Management Information Systems: Managing Information Technology in the Business Enterprise*. 6th Edition. Tata McGraw-Hill, 2000.
- O'Leary, D. (2000). *Enterprise Resource Planning Systems: Systems, Life Cycle, Electronic-Commerce and Risk*. Cambridge University Press.
- O'Reilly, C. (1989). Corporate, culture and commitment: Motivation and social control in an organization. *Harvard Business Review*.
- Olson, M. & Davis, G. (1985). *Management Information Systems*. McGraw-Hall. NY
- Omolo, O. G. (2008). *Challenges in Strategy Implementation at (ECK) Electoral Commission of Kenya*. Unpublished MBA Thesis; University of Nairobi.
- Ouchi, W.G. (1980). Markets, bureaucracies and clans. *Administrative Science Quarterly*. 25, 129-141.

- Panorama, Consulting. 2010 ERP Report.
- Parr, A. N. & Shanks, G. (2000). "Taxonomy of ERP implementation approaches." *Proceedings from the 33rd Hawaii International Conference on System Sciences*.
- Parsa, H. G. (1999). Interaction of strategy implementation and power perceptions in franchise systems: An empirical investigation. *Journal of Business Research*. 45, 173-185.
- Pearce, J. A. & Robinson, R. (2003). *Strategic Management: Strategy Formulation and Implementation*. 3rd Edition, Richard D. Irwin.
- Reed, R. & Buckley, R.M. (1998). Strategy in action: Technology for implementing strategy. *Long-Range Planning*. 21(3), 67-74.
- Ronga, C. (2008). *Challenges to Strategy Implementation at Madison Insurance Company (K) Ltd*. Unpublished MBA Thesis; University of Nairobi.
- Sammon, D. & Adam, F. (2003). *The Enterprise Resource Planning Decade: Lessons Learned and Issues for the Future*. Hershey, PA: Idea Group Publishing.
- Sandelands, E. (1994). All talk and no action? Perish the thought.. *Management decision*. 32(5), 10-11.
- Sandoe, K., Corbitt, G. & Boykin, R. (2001). *Enterprise Integration*. New York. Wiley.
- Schmidt, J. (1994). The case of the sales-driven company. *Journal of business Strategy*. 15(5), 17-20.
- Slack, N., Chambers, S. & Johnston, R. (2007). "Operations Management". Prentice Hall Financial Times. 7th Edition.
- Somers, T.M., & Nelson K. G. (2001). Organizations and ERP systems: conceptualizing fit. *Proceedings of the Twelfth Annual Conference of the Production and Management Society*, POM-2001, March 30-April 2, 2001, Orlando FL.
- Stoner, J. A., Freeman, R. E. & Gilbert, D. R. (2001). *Management*. 6th Edition, Eaglewood Cliffs, NJ: Prentice Hall.

- Thathi, E.W. (2008). “*Human Resource Management Challenges Facing Kenya Pipeline in the Implementation of ERP*”. Unpublished MBA Thesis. University of Nrbii.
- Thompson (Jr.), A. A. & Strickland (III), A. J. (1989). *Strategy Formulation and Implementation*. 4th Edition, McGraw-Hill.
- Thompson (Jr.), A. A. & Strickland (III), A. J. (1993). *Strategic Management. Concepts and Cases*. 7th Edition, Irwin.
- Thompson (Jr.), A. A., Strickland (III), A. J. & Gamble J. E. (2007). *Crafting & Executing Strategy: The quest for Competitive Advantage. Concepts and Cases*. 15th Edition. McGraw-Hill. Irwin.
- Thompson (Jr.), A. A., Fulmer, W. E. & Strickland (III), A. J. (1992). *Readings in Strategic Management*. 4th Edition, Irwin.
- Turban, E., Mclean, E. & Wetherbe, J. (2002). *Information Technology for Management: Transforming Business in the Digital Economy*. 3rd Ed. John Wiley & Sons, Inc.
- Waters D. (2006) *Operations Strategy*. Thompsons. 1st Edition.
- Weber, R. P. (1990). *Basic Content Analysis*. 2nd Edition. Newbury Park, CA.
- Wilder, C. & Davis, B. (1998). “False starts strong finishes”. *Information Week*, (711), Nov. 30, 1998, 41~53.

APPENDICES

APPENDIX I: INTERVIEW GUIDE

Part A: Introductory Letter

Christopher E. Kutswa,
Kipevu Power Station,
P. O. Box 80801,
Mombasa.

September, 2011

Dear Sir / Madam,

RE: REQUEST FOR RESEARCH DATA

I am a post graduate student of School of Business, University of Nairobi majoring in Strategic Management. My special area of interest is in the use of strategic management to augment corporate performance. In this respect, I am conducting a Management Research Project on the theme “**Challenges of Implementing Enterprise Resource Planning Strategy by the Kenya Electricity Generating Company Limited.**”

In order to undertake the research, you have been selected to form part of this study. This is therefore to request for your assistance in answering questions in the attached Interview Guide in as honestly and accurately as you can. The information you provide will be treated with strictest confidence and is needed purely for academic purposes.

Your assistance and kind co-operation will be heartily appreciated.

Yours faithfully,

Christopher E. Kutswa
(Student)

Dr. Martin Ogutu
(Project Supervisor)
Dept. of Business Administration

Part B: Interview Guide

Number:

Date:

This Interview Guide has been designed to collect data from interviewees on the theme “Challenges of Implementing Enterprise Resource Planning Strategy by the Kenya Electricity Generating Company Limited” and the remedial steps taken to address the challenges. Data collected is exclusively for academic purposes only.

Section I: General Information

1. Please indicate which company division you work in.
2. Please indicate which ERP module you participated in its implementation.
3. Please enlist your routine day-to-day functions and activities involving ERP.
4. How long have you used SAP ERP?

Section II: ERP Implementation Challenges

1. How did lack of fit between KenGen organizational structure and the ERP strategy affect ERP implementation?
2. Considering the following aspects of organizational culture: computer culture, values, traditions, norms and behavioral patterns; which cultural aspect posed greatest impediment to the implementation of ERP strategy?
3. If the resources allocated to the ERP implementation were categorized as human, financial, physical and technological, please indicate the resource that was least allocated to ERP implementation.
4. If resistance to change were caused by: failure to build a case for ERP, failure to involve employee views in the change process, inadequate communication and employee apprehension/fears. Please point out the aspect that most affected ERP implementation?

5. Please indicate ways communication was a hindrance to ERP implementation.
6. How did lack of top management commitment affect ERP implementation?
7. How did the high ERP implementation costs impact on the implementation process?
8. How did lack of incentives impact on the implementation of ERP strategy?
9. In your opinion, do KenGen staff poses the required levels of skills, expertise and knowledge to handle technical challenges arising from ERP usage?

Section III: Dealing with ERP Implementation Challenges

1. What alterations did KenGen make to create fit between its organizational structure and ERP strategy?
2. How did KenGen make its organization culture supportive to ERP implementation?
3. How did KenGen tackle the problem of low resource allocation?
4. What steps did KenGen take to offset employee resistance to change and ensure employee buy-in and ownership of change process.
5. What steps did KenGen take to deal with communication setbacks affecting smooth ERP implementation?
6. If the role top management played in support of ERP implementation is viewed as philosophy, personality, leadership, allotment of resources, definition of process

and formulation of strong policies. Please identify the role that you consider key in KenGen ERP implementation.

7. What cost saving interventions did KenGen take to manage and control ERP implementation costs from escalating? Please single out the most effective cost saving initiatives.

8. Please enlist incentives and reward systems used to bolster employee morale during ERP implementation. How effective were they in motivating employees?

9. How did KenGen deal with need for ERP user training during and after ERP process?

10. What in your opinion needs to be done to improve ERP performance in post Go-Live period?

Thank you!