IMPLEMENTING ENTERPRISE RESOURCE PLANNING SYSTEM
AT KENYA REVENUE AUTHORITY

BY

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DECLARATION

This project is my original work and has not been submitted for a degree in any other university.

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This project has been submitted for examination with my approval as University supervisor.

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DEDICATION

The project is dedicated to my family for the support they have accorded me throughout this long academic journey.
ACKNOWLEDGEMENT

First and most important is to thank my God for the gift of life and good health he has accorded me since I began my Masters programme. Without His love, I would not be writing this acknowledgement. My sincere and heartfelt appreciation go to supervisor Dr. Maalu for the patience and professional guidance he has accorded me throughout my proposal development, thesis preparation, research and actual writing. May God grant him a long and prosperous life.

I also wish to thank the employees of Kenya Revenue Authority for the financial and moral support I was accorded during my research. This enabled me to finish my research stress free.

Thanks to you all and may God bless you.
ABSTRACT

This study sought to determine factors influencing implementation of the ERP system AT KRA. The study was conducted using a descriptive case study design. It was based on four heads of departments; Human Resource department, Finance department, Procurement and Supplies department and ICT department. Primary data was collected using an interview and a content analysis was used to analyze the data.

The study established that computer based information systems used prior to introduction of ERP system. Several reasons justified the implementation of ERP systems. In the implementation methodology, the respondents selected the Module by module, big-bang approach and customized approaches. There was a formal process of analysing the users of the system before the implementation commenced. The implementation and steering committee was responsible for making necessary adjustments on ERP system. The main considerations for choosing ERP system were found to be cost effectiveness, licenses involved and user-friendly technology.

The study ascertained that most of the projects whose implementation was not completed in time were found to be stretching to more than three months after the scheduled time and the actual budget exceeded the planned budget and the general outcome of the implementation project was below the original expectations. There were two main impediments to the implementation of ERP System; the users and the management. The
users had gone for various retreats to come up with various processes, given the feedback received from users about ERP System implementation, of which resistance to change and manual methods preference to ERP was evident.

The study found out that efficiency of the system had blocked the loop holes that existed in the manual process while some staff found themselves with lesser work. Sadly, implementation of the ERP was not on track especially due to contract conflict between the company and the consultants and was not carried out in the most effective way. However, the implementation could be improved with better understanding of all stakeholders.
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LIST OF ABBREVIATIONS

ERP  Enterprise Resource Planning
KRA  Kenya Revenue Authority
MRP  Material Requirement Planning
Y2K  Year 2000 (2000 Millennium) Phenomenon
CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter introduces the background of the study by introducing Enterprise Resource Planning (ERP), and strategy implementation, the statement of problem, importance of the study and research objectives.

1.2 Background to the Study

Enterprise Resource Planning systems have transformed the way organizations go about the process of providing information systems. They promise to provide on-the-shelf solutions to the information needs of organizations. Despite that promise, implementation processes are plagued with much publicized failures and abandoned projects. The study investigates the challenges faced by the Kenya Revenue Authority (KRA) in implementing an ERP system. The findings of this study should provide to the management of KRA a better understanding of the likely challenges it may face and put in place appropriate measures to help in mitigating the risk of implementation failures.

1.2.1 An Overview of Strategy Implementation

Strategic management is the process of formulating implementing and evaluating an organization’s strategies to achieve its future goals. Strategy formulation is the process of determining appropriate courses of action for achieving organizational objectives thereby accomplishing organizational purposes. Strategy implementation is the putting of the formulated strategies into place by focusing on methods and procedures designed to
execute them and the order in which strategies should be implemented in order to obtain the desired results. Strategy evaluation involves how strategy has been implemented as well as its outcome. This is to see whether the implementation process and steps are working correctly and whether the expected results have been achieved (Chandler, 1962). Implementation of the strategy is a critical phase of strategy management process which involves translating the strategic plans into actions (Pearce & Robinson, 1997).

Historically, various researchers in strategic management greatly emphasized on the strategic formulation process and generally considered strategic implementation as a by-product or invariable consequence of planning (Wind & Robertson, 1983). Although most organizations have good strategies, successful implementation remains a major challenge. The idea of strategy implementation might seem quite straightforward after a strategy is effectively formulated but to the contrary transforming strategies into action is a far more complex, difficult and challenging undertaking and hence making it not a straightforward as many would assume (Aaltonen & Ikaraiko, 2001). Organizations today face major challenges due to the changing environment that make strategy implementation more difficult and more complex than in the past. Harvey (1988) & Holman (1999), researched on the importance of strategy implementation indicated that 80% of organization directors believe that they have good strategies but only 14% believe that they implement them well. Studies have shown that between 70% and 90% of organizations that have formulated strategies failed to execute them (Parkinson, 2005). David (1997) pointed out that only 10% of formulated strategies are successfully implemented while 90% of well formulated strategies fail at the implementation stage.
According to Pearce & Robinson (2002), the reasons that have been given for the success or failure of strategy implementation revolve around the nature of the strategy itself, the policies and the support systems, alignment of the strategy to the short term objectives and sub strategies, the allocation of resources, the fit between the structure and the strategy, communication process, leadership and the culture of the organization.

The implementation of the appropriate strategies remains one of the difficult and challenging areas faced by the top management. A lot of emphasis, energy and resources are focused to the formulation of it strategic plan. Effective implementation results when organization resources and actions are tied to strategic priorities and the formulated objectives attained, and when the key success factors are identified and performance measures and reporting are aligned (Deloitte & Touche 2003).
1.2.2 An Overview of Enterprise Resource Planning

Enterprise Resource Planning (ERP) can be conceptualized as a broad set of activities that are supported by multi-module application software which helps the organization to manage the important parts of their operations. The operations so managed include product planning, procurement, maintenance, customer service among others (Lau, 2003). Finance and Human Resource facets of the organization can also be managed by the use of an ERP.

Ming-Chuan & Pei-Hsin (2006) try to decipher ERP by looking at the meaning of the letters of the acronym and defining the same in relation to the operations of the system. They are of the view that an ERP system revolves around the resources of the organization. The goal of the ERP system is to integrate all departments and functions across an organization onto a single computer system. The single computer system, according to Hossein (2004), is aimed at serving all the different departments within an organization depending on their particular needs.

Some of the challenges that are faced by an organization when it is implementing an ERP are as associated with the mode of adoption by the organization. For example, Mehdi (2006) contrasts the benefits of full fledged and partial adoption of ERP by an organization. The scholar is of the view that when an organization adopts ERP system at once, meaning that it goes for the full fledged ERP system, it may incur wasted resources. This is given the fact that ERP is a costly undertaking for any organization (Ellen & Bret, 2006). As such, the organization may adopt an ERP system that will
remain idle or underutilized. Mehdi (2006) is of the view that it is advisable for an organization to adopt a partial ERP, meaning that it implements an ERP system that addresses its particular needs. Many organizations are faced with the challenge of deciding whether to adopt a full-fledged ERP system or to go for a partial one. This is given the fact that the resources spent on a full-fledged ERP system, both in terms of money and time, are not justifiable unless the system is fully utilized.

Therein lies one of the challenges that face enterprise resource planning systems in contemporary organizations. It is a challenge to erect a software program that addresses the needs of the staff in the finance department as well as those of the staff at marketing department, for example. This is given the fact that the different departments in an organization have different aspirations and objectives. They all adopt different strategies that are aimed at achieving the single objective of the organization as a whole. As such, addressing these diverse needs using a single system is not an easy task.

1.2.3 Kenya Revenue Authority

Kenya Revenue Authority (herein referred to as KRA) has been in existence for the past fifteen years. It was established on July 1, 1995, and is the tax collection agency for the government of Kenya. It was established by an Act of Parliament Cap 469. Apart from enhancing the mobilization of government revenue, KRA is charged with the role of providing the government with a competent and effective tax administration while maintaining sustainability in revenue collection on behalf of the government (Kenya Revenue Authority, Fourth Corporate Plan 2009/10-2011/12).
Since the authority was established, the board of directors and other stakeholders has endeavored to set up systems, procedures and the adoption of new strategies geared towards improving the efficiency of the operations undertaken by the authority. The act of parliament that established this authority defines the functions that the authority is supposed to undertake. These functions include the assessment, collection and accounting for all of the revenues in congruence with the written laws and the specified provisions of the written laws (Kenya Revenue Authority, Fourth Corporate Plan 2009/10-2011/12).

The authority is also charged with the role of advising the government, the parliament of Kenya and other stakeholders on matters touching on the administration of and collection of revenue under the written laws or the specified provision of the same written laws (Kenya Revenue Authority, Fourth Corporate Plan 2009/10-2011/12). The authority is also supposed to perform other functions in relation to revenue as the Minister of Finance may so direct (Kenya Revenue Authority, Fourth Corporate Plan 2009/10-2011/12).

KRA can be conceptualized as one of the largest parastatal in the Republic of Kenya. This is both in terms of the clientele served by the authority and the geographical coverage of the same. Every business and every individual in Kenya is supposed to submit their taxes to the government of Kenya through the Kenya revenue authority. This has created the impetus for the authority to embrace technology in order to enhance its operations.
To this end, Kenya Revenue Authority has adopted Enterprise Resource Planning (herein referred to as ERP) in order to efficiently manage its internal and external resources (Kenya Revenue Authority, Fourth Corporate Plan 2009/10-2011/12). This includes the authority’s tangible assets such as buildings, materials and financial and human resources at the disposal of the authority. In this regard, Kenya Revenue Authority engaged Alliance Technologies, a software engineering and development firm in Kenya to provide it with A1 ERP for the Public Sector (Ochieng, 2009).

It is a fact beyond doubt that Kenya Revenue Authority has accrued many benefits from the adoption of ERP system. For example, the efficiency in operations is discernible, and the authority has managed to cut back on unnecessary paper work. The ERP system has been in line with the reforms that have been evidenced in KRA in the recent past.

The extent to which Kenya Revenue Authority has adopted enterprise resource management system is evidenced by the recognition that has been conferred to this authority towards the same. For example, on 27th May 2009, Kenyan revenue authority was honored during the inaugural Kenya Open Source Award Ceremony (Kenya Revenue Authority, 2009). The honor was in appreciation of the authority’s contribution towards the adoption of an ERP system using the Free Open Source System (FOSS). These benefits and recognitions notwithstanding, it will be erroneous to assume that the implementation of the enterprise resource planning at Kenya Revenue Authority has been without challenges and hurdles. In fact, according to Alliance Technologies (2010), it is the attending challenges that have informed the degree of success as far as the adoption
and implementation of the system is concerned. These challenges include difficulties in changing the attitudes of the employees at KRA and the organization culture in place to adopt the system. Others include the lack of congruence between the ERP installed and the needs of Kenya Revenue Authority and various employees within the same.

The A1 ERP system, according to Alliance Technologies (2010), is based on a “best-of-breed” approach that was tailored to fit the authority’s business model that is unique to it. The system was aimed at serving the employees of Kenya revenue authority who could access it through the A1 Web 2.0 UI portal (Alliance Technologies, 2010). The modules that were deployed under this system included public sector finance, procurement and human capital management.

This project was aimed at addressing the challenges that are faced by Kenya Revenue Authority in the implementation of Enterprise Resource Planning. Through the research proposed, the researcher looked at how the Kenya Revenue Authority was dealing with these challenges in implementation, and how the challenges have affected the success of the program.

1.3 The Statement of the Problem

Strategy implementation has become a big challenge in many companies. The problem is illustrated by the unsatisfying low success rate of the already well formulated intended strategies. According to Mintzberg & Ruins (1991), over 65% of organizational strategies fail to get implemented collectively. A fortune Magazine pointed out that 7 out of 10
CEO’s fail to do so not because of bad strategy, but because of bad execution and one in three companies have been achieving significant success (Parkinson, 2005). This clearly shows that effective strategy realization is key for achieving strategic success.

KRA adopted the ERP system to streamline its support departments’ operations with the eventual goal of efficiency in running its core business of revenue collection. The purpose of the ERP was to modernise the support departments Finance department, Human Resource department and Procurement and Supplies department. This adoption has been marked by a mixture of success and challenges. Reports on the adoption, state that customization of the ERP software from the vendors to KRA business operations has been limited. The ERP system has also been very expensive. ERP implementation is considerably also more difficult and politically charged because the organisation is structured in such a way that there are independent support departments, each responsible for their own reports, because they each have different processes, rules, data semantics, authorization hierarchies and decision centers. This study sought to find out the challenges facing the implementation of this tool.

Poba-Nzaou et al. (2008) estimate the failure rate of ERP implementations in developed countries to be between 66% and 70%. Huang & Palvia (2001), did a study titled ERP Implementation Issues in Advanced and Developing Countries and argued that ERP implementation is likely to be more problematic in less developed countries like Kenya, given that ERP technology faces additional challenges in developing countries related to economic, cultural, and basic infrastructure issues. Robert Campbell Pitney (2005) also
did a study titled *Business Process Optimization in the Public Sector: Ten Rules for Maximizing ERP System Impact* came up with ten rules that should be followed by public organizations and in extension other organizations, in implementing ERP systems. According to Pitney (2005), when these rules are adhered to, the adoption of ERP systems in organizations is likely to be a success.

Out of the several studies carried out in this field, it is important to note that there are very few of these studies address ERP implementation in Kenya. In fact, there has been no study that has specifically addresses challenges facing the implementation of ERP system at KRA. It is from this realization that the researcher seeks to carry out a study that will bridge this gap in knowledge. The study sought to address this problem. The challenges that were faced by Kenya Revenue Authority in the implementation of the Enterprise Resource Planning were addressed in detail.

### 1.4 Research Objectives

Research objectives are the aims that the researcher aspires to achieve by conducting the study. The objectives of the study can also be conceptualized as the goals that are meant to be met by the findings of the study.

The objectives of this study were therefore:

i. To determine how the ERP system has been implemented in KRA.

ii. To establish factors influencing implementation of the ERP system.
1.5 Significance of the Study

There are various benefits that the findings will accrue to the field of enterprise resource management in Kenyan organizations especially in the public sector. These benefits are indicative of the significance of the study and the justifications for the same.

The findings of this study will help identify the challenges that are faced by organizations when they are adopting new technologies in Africa, and especially in Kenya. This knowledge will help managers and other stakeholders in the organization to come up with strategies that can be used to increase the benefits that the organization can accrue from a new technology.

The knowledge on the challenges that face the implementation of Enterprise Resource Planning will help managers and other stakeholders in Kenyan organizations come up with strategies that can be used to address the same. This is especially so for the managers of KRA. With identification of the challenges, the organization can come up with policies that can be used to avert them in future.

The findings of this study will also be beneficial to the providers of technologies in Kenya, especially the vendors of enterprise resource planning software and programs in Kenya. This is given the fact that the findings will provide them with knowledge on some of the challenges that affect the adoption of their technology in the country. Using this knowledge, they can come up with products that can be adopted and implemented by organization with reduced number of challenges.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents literature on strategy implementation and Enterprise Resource Planning. The chapter also brings out what other authors have done before, available gaps for further research and their findings and lessons learned.

2.2 Strategy Implementation Process

Strategy is the plan of action an organization prepares in response to or anticipation of changes in its external environment. Strategy is designed to transform the firm from the present position to the new position described by objectives, subject to constraints of the capabilities or the organization's potential (Kaplan, R. & Norton, D. 2001).

Strategic decisions determine the organizational relations to its external environment and encompass the entire organization and depend on input from all of functional areas in the organization. They have a direct influence on the administrative and operational activities and are critically important to the long term survival of the organization (Shirley, 1982). Strategies must be well formulated and implemented in order to achieve organizational relations to objectives and that strategy implementation process included many components of the management and had to be successfully acted upon to ensure that the desired results are achieved (Schermerhorn, 1989). This therefore means that effective and successful strategy depends on the achievement of good 'fits' between the strategies and their means of implementation.
Robbins & Coulter (1996) noted that no matter how effectively a company has planned its strategies, it may not succeed if the strategies will not be implemented properly. Beer et al (1990) & Woolridge and Floyd (1990), emphasized that the strategy implementation process could be more than strategy formulation. Harrison & Pelletier (1998) stated that the real value of a decision is only realized only after its implementation. This means that it may not be enough to select it good decision but also requires that the decision is adequately implemented to be able to attain good results.

Wessel (1993) emphasized that there are certain barrier, to strategy implementation. This may include too many and conflicting priorities, insufficient top team functions, a top down style of management, inter-functional conflicts, poor vertical communication and also inadequate management development and inadequate resources. McGrath et al (1994) singled out that the political turbulence might be the critical issues facing the implementation of a strategy. Lingle & Schieman (1994) emphasized that the people, market conditions, finance, operation, adaptability and environmental factors play an important role to the long term successful strategy implementation.

Christensen and Donovan (1998) indicated that the intended strategies would be successfully implemented as they have been envisioned if three conditions have to be met. First, the employees in the organization must understand each important detail in the management’s intended strategy. Secondly, if the organization is to take a collective action, then it needs to make much sense to the members in the organization as they view the world from their own context as it does to the top management. Finally, the collective
aims must he realized with little unanticipated influence from the outside political, market forces, and the technological factors.

McKinsey’s (1982) model describes the seven factors critical for effective strategy execution. The model helps focus managers' attention on the aligning of all the organizational variables and the processes that lead to successful strategy execution. The various elements of the 7-S framework identity the seven factors as the strategy, structure, systems, skills, style/culture, and the shared values. Strategy therefore is designed to transform the organization from the present position to the desired position (Kaplan, R. & Norton, D, 2001).

Or the other hand the structure refers to the way tasks and people specialized and divided, and the authority is shared, how activities and reporting relationships are grouped and the different ways in which the organizations activities are coordinated (Kaplan, R. & Norton, D. (2001).
2.3 Challenges involved in Strategy Implementation

Successful strategy implementation depends largely on how a firm is organized. Developing a logical approach to strategy implementation represents a real challenge to the management. A host of factors such as politics, inertia, and resistance to change can get into the way of strategy implementation. There are many organizational factors that make implementation of a strategy difficult. These can either be institutional or technical.

According to Thomson & Strickland (1989), the main challenge in the implementation of strategy is to create a series of tight fits between strategy and the organization's competences, capabilities and structure, policies, strategy and the internal support systems, strategy and reward structure, and the link between strategy and corporate culture. The four 'soft' S in the MacKinsey model that is staff, style, shared values and skills are considered key to business success.

2.3.1. Structural Challenges

Lorsch (1967) suggested that the organizations should be structured in such a way that they are flexible and adaptable so that they can respond to pressure to change from the environment and to be able to pursue any appropriate opportunities which are spotted. Thompson & Strickland (1980), emphasized that while strategy formulation requires the ability to conceptualize, analyze and judge, implementation involves working with and through other people and institutions of change. Of importance therefore is that in designing the structure and making it operational, certain aspects need to be considered and these are employee empowerment, motivation and reward. The organizations
structure is a firm's formal role configuration, procedures, governance, central mechanisms, authority and decision making process. The structure is aimed to breakdown how work is to be carried out in the organizational units and departments. Structure helps an organization to identify its activities and the way in which it coordinates them to achieve the firms' strategic objectives.

It helps pull the employees together in their activities that promote effective implementation of the strategy. It provides managers with a tool to exploit fully the skills and capabilities of the employees with minimal possible costs and at the same time enhance the firms' capacity to achieve superior efficiency, quality, innovation and customer responsiveness (Pearce & Robinson, 2007).

Successful strategy execution depends greatly on good internal organization and competent personnel. Developing in internal organization that is responsive to the needs of strategy building and nurturing the skills and the competencies in which the strategy is based, and to oversee that the organization has the managerial talents, technical know how and the competitive capabilities (Thompson & Strickland, 1989).

Organization structure and behavior should support the strategy implementation. According to McCarthy et al (1996), the major challenge in strategy implementation is matching the structure to strategy. That the major challenge for the managers is the selection of the organizations structure and control that will help implement the chosen strategies effectively. The symptoms of an ineffective organizational structure include too
many levels of management too much attention being directed toward solving inter-
departmental conflicts, too large span of control and too many unattained objectives
(David, 1997). The managers should understand and use the organizations structure for
the success of the organization.

2.3.2. Cultural Challenges

Organizational culture is a set of important assumptions that members of an organization
share in common that is shared values and beliefs (Pearce & Robinson. 1997). According
to Thompson & Strickland (1989), each and every organization has its own unique
culture and that it is not always visible, but it controls the form and the functions of what
the organization ends up being. Culture affects the employees, customer behavior as well
as the community relationship. Organizational culture has a powerful impact on the
employees' morale and productivity. The managers create a positive or negative climate
in their organization and their values can influence the direction of the firm. Therefore, to
be able to effectively implement the ERP system, there should he a fit between the new
changes and the firms' culture. Ansoff (1965) observes that behavior is not value free and
that people show preferences for a certain behavior and may persist with it even if it leads
to sub optimal results. For a strategy to be successfully implemented, it requires an
enabling cultural setting.

According to Thompson & Strickland (1989), creating a fit between a strategy and
culture usually becomes a strong challenge to the strategy-implementers. The top
managers have to diagnose which facets of the present culture are in line with strategy
and which one is not. Therefore one has to develop ways to make the needed changes in culture, use available opportunities to make the incremental changes that improve alignment of culture and strategy, insist that the subordinate managers take actions of their own and to proactively build and nurture the emotional commitment of both the managers and the employees.

Thompson et al (2007) stated that there are four types of unhealthy cultures; cultures that are highly political and characterized by empire building, those that are resistant to change, those that are insular and inwardly focused and the cultures that ethically unprincipled and are driven by greed. David (1997) stated that changing a firms' culture to fit the strategy is usually more effective than changing the strategy to fit the existing culture. That changing the company's culture is tough and time-consuming and therefore requires a competent leadership at the top. That the key to successfully change culture is leadership that communicates openly and that can use power and politics in positive ways and to paying attention to its employees, customers and stakeholders and thus ensuring that the culture can change when the strategy changes.

2.3.3 Leadership Challenges

According to Jones & Hill (1997), leadership is the key to effective strategy implementation. The role of the CEO is fundamental because a CEO is seen as catalyst closely associated with and ultimately is accountable for the success of a strategy. Parkinson (2005) defines leadership as an ability of an individual to influence, motivate and enable others to contribute towards the effectiveness and success of the
organizations. That leadership is the ability to influence the attitudes and the opinions of others to achieve a coordinated effort from diverse groups. That leadership style should always be situational that is appropriate to tints, place, culture and the people involved.

Jones & Hills (1997) stated that leadership is to the key to effective strategy implementation and that the managers/CEOs actions and the perceived seriousness to a chosen strategy will influence subordinate managers to commitment to implementation of the strategy. That the top management willingness, goodwill and ownership to drive the process is critical to effectively implement the strategy.

According to Goleman (2000), the most successful leaders have strength, in one, the emotional intelligence, two, in their competencies, three, self awareness, four, self regulations, five, motivation, six, empathy and lastly in their social skills. Leadership runs through the entire process of translating the strategy into results and is necessary to engaging the hearts and minds of the employees. Efficiency is achieved with little supervision which enables the staff to be effectively responsible. Leaders must give their employees an opportunity to develop quality decision making skills and learn to trust them. Low efficiency results from the disconnect between the top management and the staff. According to Hills & Jones (2001), all members of the organization need to focus their effort in the same direction. Such unity of direction is critical for successful implementation of the strategy. The CEO should be at forefront in providing leadership. He should provide vision, initiative, motivation and inspiration and at same time cultivate team spirit and act as a catalyst in the whole strategy implementation process.
2.3.4 Resources and Capacity

David (2003) emphasized that resource allocation is a critical management activity that enables strategy to be successfully implemented. He argues that it should be possible to implement the chosen strategy with the available resources. This organizational resource includes the physical resources, financial, technical and human resources. It is not possible to implement a strategy which requires more resources than can be made available by the company. That too little resource will tend to stifle the ability of the company to carry out the strategic plan. On the other hand, too much funding waste company's resources and hence impairs financial performance (Porter, 1985), Thompson et al (2007), stated that effective strategy implementation depends on the competencies of the personnel and the effective internal organizational systems. That no organization can hope to implement the activities required to implement the strategy without attracting, motivating and retaining talented managers and employees with the suitable skills and intellectual capital.

2.3.5 Organizational Policies, Procedures and Support Systems

Policies refer to the specific guidelines, methods, rules, forms and administrative practices established to enable, support and encourage work towards the organizations intended goals. Procedures describe a step by step breakdown of the organizations activities or operations. They aid in the implementation of policies (David, 1997). According to Kaplan, R. & Norton, D. (2001), support systems refer to formal and
informal procedures used to manage the organization, including the management control systems, reward systems, planning budgeting and resource allocation.

Policies help to communicate specific guideline to action and assist in controlling organizations' activities. Changes in strategy in most cases call for some changes in how internal activities are conducted and administered. Process of changing from old ways to the new ways has to be developed and managed. Gerry & Kevan (2002) noted that there may occur resistance to such changes and therefore needs to be managed effectively.

According to Jones & Scholes (2002), the role of new and revised policies and procedures is to establish standard operating procedures which will facilitate implementation of the strategy and counteract any tendencies of the organization to resist or reject the new chosen strategy. That manager also needs to be inventive in establishing policies that can supply vital support to the company's strategies. According to Hill & Jones (2001), well connected policies will help enforce strategy implementation by channeling all efforts, actions, behavior, decisions and practices in the direction which promotes strategy accomplishment. Policies should therefore be routinely being examined to be aligned to the current strategy.
2.4 Enterprise Resource Planning

2.4.1 The Concept of Enterprise Resource Planning

ERP is a solution to fragmentation of Information in large business organizations (Davenport, 1998). An ERP system typically comprises a central, state-of-the-art, comprehensive database that collects, stores, and disseminates data across all business functions and activities in an enterprise. By integrating all business functions, economies of scale are obtained and the business gains a significant operating cost reduction, in addition to improved capabilities and information transparency. The increased business trends of globalization, mergers, and acquisitions demand that companies must have the ability to control and coordinate increasingly remote operating units. An ERP system can help to achieve this by enabling the sharing of real-time information across departments, currencies, languages and national borders (Fiona et al, 2007).

The dream of creating an enterprise wide system began in the 1970’s, but was then unrealized due to the technological barriers at that time. Instead, most companies created what McKenney and McFarlan (1982) termed “islands of automation”, which naturally evolved as new IT applications were introduced to fill the constantly emerging business needs. This gave rise to a plethora of different systems that were loosely interfaced. As a result, information was scattered throughout an organization, and detailed analyses of an organization’s performance across its business functions were not possible. Such information was impossible to obtain unless manual record-sifting or specialized programming requirements were carried out. In time, the organizational costs to maintain
these "legacy" systems began to exceed the funds available for building new systems (Fiona et al, 2007).

According to Buckhout, Frey, & Nemec, 1999, Esteves & Pastor, 2000, Enterprise systems provide a backbone of information, communication, and control for a company and embody the current best business practices for organizational processes (Fiona et al, 2007).

Enterprise resource planning (ERP) systems are information systems that integrate processes in an organization using a common database and shared reporting tools. Simply put, an ERP system helps the different parts of the organization share data and knowledge, reduce costs, and improve management of business processes. It is this seamless integration that makes ERP systems so attractive when compared to other information systems.

An enterprise resource planning (ERP) system is a configurable software package that manages and integrates business processes across organizational functions and locations (Nah, Zuckweiler, & Lau, 2003). Unlike traditional software implementations, an ERP package encapsulates reusable best business practices. Implementing an integrated ERP system requires the organization to undergo organization-wide reengineering and change (Clyde, Yu-Min & Jen-Her, 2005). An ERP system is a set of customizable and highly-integrative real-time business application software modules sharing a common database
and supporting core business, production, and administrative functions such as logistics, manufacturing, sales, distribution, finance, and accounting.

Companies that are structurally complex, geographically dispersed, and culturally vibrant tend to present unique challenges to ERP implementation (Markus, Tanis & Fenma, 2000). Unique issues of change management are particularly important for multinational companies where their parent sites are geographically separate. This complexity involves several dimensions including business strategy, software configuration, technical platform, and management execution. Of these four, management execution contributes toward ERP implementation success to the greatest degree (Nah, Zuckweiler, & Lau, 2003). Different managerial reporting lines, languages, and national cultures also make managing a multi-site ERP implementation project challenging (Markus et al., 2000). Local management must therefore be prepared to deal with the issues of enterprise-wide implementation on a site level (Fiona et al, 2007).

Since the mid-1990s, many large- and mid-size enterprises have implemented off-the-shelf enterprise software packages (also called enterprise resource planning, or ERP systems) to integrate their business activities, including human resource management, sales, marketing, distribution/logistics, manufacturing, and accounting. Enterprise systems promise not only information integration but the benefits of reengineered and radically improved business processes as well. The business worlds embrace of enterprise systems, according to Davenport (1998), may in fact be the most important development in the corporate use of information technology in the 1990s, an assessment that's just as
valid today. However, despite a few dramatic successes, many companies still reportedly fail to realize these benefits while incurring huge cost and schedule overruns (Nikunj et al, 2004).

A key to success in implementing software is to plan and execute the project on the basis of a proven methodology. Unless project management expertise exists within the organization, it is often necessary to gain implementation methodology expertise through a software vendor or consulting firm. Very few ERP implementations have been accomplished without the use of highly specialized consulting resources. Consulting is a significant expenditure and needs to be adequately planned in order to avoid significant budget overruns (Laurie and Rebecca, 2006).

2.4.3 Drivers for ERP

As Walsham (2002) states, the 1990s was a decade where companies were turning away from decentralised computing systems in favour of enterprise-wide initiatives for organizational transformation. He argues that company managers began situating their organisations within a global context and in turn they developed a sense of worldwide business solutions. This awareness was supported by international management consultancies whose revenues increase as approaches become more widespread and standardised. Walsham (2002) argued that these consultancies were the driving force behind both ERP adoption and its precursor, Business Process Re-engineering (BPR) which forms an integral part of most ERP implementations.
In the mid- and late-1990s, Y2K compliance was a major concern for many companies as well as the wish to replace existing and poor quality systems. Management consultants were touting the global ERP software solutions available from the several vendors as a panacea to the Y2K potential nightmare. Business executives seeking expert advice about operating in the new millennium were encouraged by management consultants and ERP vendors to replace outdated, home-grown systems with a single integrated solution. Other major reasons reported in the literature as drivers for ERP adoption relate to: improving firms' performance and decision making, reducing labour costs, bureaucracy and errors.

Other reasons are: pressure from the side of the competitors, business partner requirements for faster service, integration between functional units, organisational standardization across different locations and globalisation of businesses. Acquisitions and mergers between the units are forcing companies to change and function as a single system. However, for each company the drivers for implementing ERP are different as well as their priority order depends is likely to be influenced by the organisation's context - internal and external.

Holland et al. (1999) recognised three main dimensions: strategic, operational and technical. Some studies such as Markus & Tanis (1999) narrow down the reasons even to broader groups: technological and business performance. Based on the literature review, the foremost reasons that have caused fast growth in the use of ERP systems are summarised in Table 2.4.3.
Table 2.4.3: Drivers for Adopting ERP systems

<table>
<thead>
<tr>
<th>Strategic</th>
<th>Operational</th>
<th>Technical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y2K compliance</td>
<td>Process improvement</td>
<td>Need for common platform</td>
</tr>
<tr>
<td>Globalisation of business</td>
<td>Data visibility</td>
<td>Replacement of legacy systems</td>
</tr>
<tr>
<td>Growth of an enterprise</td>
<td>Operating cost reduction</td>
<td>Systems incompatibility</td>
</tr>
<tr>
<td>Standardisation of business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>processes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve customer responsiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration between the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>units and processes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance firm’s performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and decision making</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Olson (2004) summarises two studies, which have examined the motivations for ERP adoption. One study was carried out on U.S. manufacturing organisations and the other
on Swedish firms. Organisations studied in both countries ranked the replacement of legacy systems, and the simplification and standardisation of their systems as their primary reasons. Other reasons that received high ranking were the improvement of interactions with suppliers and customers, the gaining of strategic advantage and the creation of supply-chain in order to link to global activities. Pressure to keep up with competitors, ease of upgrading systems and restructuring organisation received low ranking from both of these studies.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter the research design, population of study, data collection, and data analysis techniques are presented.

3.2 Research Design

The research problem posed was using a case study. This is because the subject of study is unique to the KRA. A case study is a comprehensive study of social unit be it a person, a group, a social institution, a district or a community. This method gave an in-depth account of how KRA has implemented the ERP system and the challenges experienced in the implementation. The design was appropriate because the study requires an in-depth understanding of the implementation process and therefore requires an intensive examination of KRA.

3.3 Data Collection

Primary data was used. It was collected at the Nairobi headquarters of KRA Times Tower, where the key departmental head offices are located. It is also where most policies are drafted and piloted before being implemented in other branch regions. This being a case study the focus was on carrying out an intensified study of the implementation of ERP system in KRA. The researcher interviewed four heads of departments in depth. An interview guide (see Appendix 1) was used for this purpose.
The persons interviewed were from Human Resource department, Finance department, Procurement and Supplies department and ICT department. These are the key people who were involved in the change process.

3.4 Data Analysis

Since the primary data to be collected was qualitative, content analysis was used to analyze it. This was a systematic qualitative description of the composition of objects or material of study. It involved observation and detailed description of objects, items or things that comprise the study (Mugenda, 1999). This approach has been used previously in similar research papers like the one by Koigi (2000). The qualitative method can be used to uncover and understand what lies behind a phenomenon under study. After the completion of data collection, the interview guides were checked for accuracy, consistency with the facts gathered, and uniformity entered. They were also edited where necessary to facilitate qualitative data analysis.
CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter discusses data analysis and presentation of the research findings. The chapter outlines a detailed explanation of the processes, techniques and procedures applied to analyze and present data acquired through the interview. These respondents were directly involved in the identification, planning and part of the implementation of the ERP system at the authority.

4.2 Profile of KRA

KRA is one of the largest Government Parastatal in Kenya both in terms of users (almost 4,500) and geographical dispersion (has offices countrywide). KRA has support services departments which assist in its day to day activities in the background; namely Finance department, Procurement and Supplies department, Human Resource department, Information and Communication department among others. As the principal revenue collection agency of the Kenya Government, KRA needed to find a suitable solution to automate its internal service and administration operations in order to improve the service delivery to the revenue collecting departments. Processes were inefficient, data was inaccurate, and system users did not trust or use the data they were retrieving from the various different systems.

KRA had big blocks of data stored in different systems in the support departments. There was need to integrate multiple systems quickly. Outsourcing initiatives for these support departments was not an option due to the sensitivity and confidentiality of most of the
information that was stored in the current systems as regards to revenue collection which is the core business of the authority. KRA wanted to reinstate its own information technology systems support. Thus it was essential to overhaul the systems and make sure they were integrated and maintainable.

KRA was to replace obsolete computer systems with current packaged systems, providing an effective and measurable solution through technology. The goal was to implement improved business processes by configuring and installing packaged ERP systems according to the results of an enterprise-wide reengineering effort.

The company had been employing separated applications to operate different functional areas. Several different in-house software was used to manage Financial operations, Human Resources processes and Procurement and Supplies procedures. This meant that employees had to re-enter transactions in order to consolidate the data from different systems, which was error-prone. Moreover, managers could not retrieve necessary information in a timely manner as they had to wait until data was re-entered.

It is then that KRA decided to adopt the ERP tool which was to be a massive software architecture that would support the streaming and distribution of geographically scattered enterprise information across all the functional units of the organisation. It would provide the business management executives with a comprehensive overview of the complete business execution, influencing decision making for managers in a productive way.
The Senior Deputy Commissioner, Information and Communication Technology Department’s main problem was the seemingly insurmountable gap between what he knew (the puzzle of the company’s current systems) and what he needed to know (business requirements for the new systems). He had very little information about how the existing systems were actually being used to conduct business. His technical managers, project managers, and the headquarters staff that supported them all wanted the package installation to succeed. All held a piece of the information needed to make it a success, but none could see the whole picture. Without the crucial understanding of the use of current systems as a basis for defining future business requirements, the implementation would be impossible.

A project team was then formed which consisted of heads of various departments; Finance, Human Resource and Procurement and Supplies, who then selected users of these everyday systems who had a good knowledge of them. These then became the major contributors to the needs requirements of the system as well as the testers. The project team also consisted of in-house software developers of the system who worked with consultants, outsourced from Alliance Technologies.

These consultants needed to find effective and measurable solutions that could be implemented quickly to deliver immediate results to ease the authority’s operating pain. They had to devise a solution that focused more on how business process and organizational change management aspects were contributing to the authority’s difficulties.
The ERP system promised immense benefits especially regarding KRA's image to the public. It would promote competition for its suppliers and ensure that the suppliers were treated fairly, it promised to promote the integrity and fairness of those procedures that involved the public and its own resources; human, material or monetary, it would increase transparency and accountability and it would also increase public confidence in the procedures applied.

4.3 Implementation of ERP at KRA

4.3.1 ERP Adoption in KRA

Several adoption process models have been developed in order to identify the process of how technology is adopted. Adoption process is divided into five stages: awareness, interest, evaluation, trial, and adoption (Beal and Bohlen, 1981). Similarly, Rogers (1995), mentions in his publication that people adopt a technology by first being aware of the existence of a technology and forming attitudes towards a technology, following by decision making process whether to adopt or reject a technology. After the adoption decision is made, adopters will use a technology and eventually reach the final stage by confirming the adoption decision if a technology could function as expected. Therefore, the adoption process could be generally defined as process starting from gathering knowledge until the actual implementation of that technology (Teng and Nelson, 1996).

To improve its business competency, KRA decided to adopt ERP software to facilitate its business process by integrating several functions together, which would enable for retrieving real-time data, producing reports, and minimizing work redundancy. This was
in line with its 4th Corporate plan in which it was stated that. “During the Third Corporate Plan period, KRA became the first public institution to implement Free and Open Source Software in the Republic of Kenya. The Authority is currently in the process of implementing a FOSS Enterprise Resource Planning (ERP) system which will merge the support administrative functions to enable efficiency, effectiveness and transparency. It will provide an integrated application with a unified database” (KRA Fourth Corporate Plan 2009/10 - 2011/12).

Even though the ERP system was capable to cover all functional areas, the company merely decided to adopt only the finance, human resource and procurement and supplies module as the company wanted to maintain using the old system for manufacturing, sales, and purchasing module separately. As a result, the program customization was required in the project in order to integrate the separated old systems with the new ERP modules.

The heads of departments interviewed indicated that standardization of processes, adaptation of processes to international best practice, improved management controls, enabling future growth, paperless office, improved internal logistical processes and increasing the system’s flexibility to respond to new market opportunities are the main reasons that justified the implementation of ERP systems. In the implementation methodology, the respondents selected the Module by module, big-bang approach and customized approaches.
During the planning stage of project implementation, users of the existing systems were analysed via a formal procedure such as a business process map. The projects did target some parts of the organization, probably to undertake a pilot study on its effectiveness. This was done after upgrading the IT infrastructure. There were several driving forces towards adoption of ERP system; amongst them were; to reduce the use of various inefficient software packages, integration of financial system and streamlining the accounting processes, workflow management-paperless office, business re-engineering and adoption of best practices.

The process of acquiring ERP system begun with a project team, which was given a mandate to identify the various system needs. Thereafter, a committee was set up to investigate the procurement and tendering processes, thereby placing a bid that was won by the lowest bidder that is Alliance Technologies. Analysis of the requirements, development, customization and implementation was then done. A few of the business processes could not be supported by ERP system; hence the need of creating out-of-system procedures to support the missing processes. The implementation and steering committee was responsible for making necessary adjustments on ERP system. This was usually done by change control process. The main considerations for choosing ERP system were found to be cost effectiveness, licenses involved and user-friendly technology.

Alliance Technologies provided A1 ERP for Public Sector. The A1 ERP solution was based on a best-of-breed approach to suit KRA's unique business model and serving its
large number of staff through the A1 Web 2.0 UI. The modules deployed include: Public Sector Finance, Procurement and Human Capital Management.

The timeframe of the project was extended from the initial plan due to the fact that the customized programs could not be accomplished in time. Apart from customizing the software to connect with the old systems, the users required additional functions and reports which were out of the project scope that had been previously defined in the initiation stage. These users were employees who had not been involved in the requirements gathering sessions at the beginning and some had involved but they could not well address business requirements at that time since they did not have a thorough understand of the work process.

When users eventually recognized that these key requirements were overlooked, they would request more. Unfortunately, most of the additional requirements could not be supported by the standard ERP system. Therefore, additional customization programs were required, which slowed down the project implementation. Moreover, employees could perform well on what they had been working only, and were unfamiliar and hesitated to learn the new system. These users were afraid of changes, which were inevitable when adopting the new system. They wanted to stick to the old work process, and preferred to adopt the system to the way they had done the business.
There was only one ICT staff assigned to support end-users. When these users encountered problems, it was difficult to get help from ICT department. The users had to rely on consultants from the ERP vendor who could not be with them all the time. Combining this together with the lack of computer skills of the users, they tended to have negative attitude towards learning the new system, which hindered the adoption speed. The project thus was accomplished late from the initial plan for almost six months, and employees still hesitate to using the ERP system.

The study revealed that there were objectives of the KRA ERP adoption. These include; To reduce the use of various software packages that may not function well with each other, thus inefficiency; Integration of Financial System thus streamlining and integrating all accounting processes in the Authority; Seamless integration and linkage of various systems/modules/departments; that is; Finance, purchasing, stock management, HR, property management; Workflow management such as; online authentication and approvals – a step towards a paperless office the concept of memos to be abolished; Employee Self-service and Business Re-engineering and adoption of best practices.

4.3.2 ERP System Progress

Even though the ERP system was capable to cover all functional areas. the company merely decided to adopt only the finance modules, the HR module and the procurement and supplies module separately.
According the interviews carried out, Pascal, Scala and custom made medical systems were the computer based information systems used prior to introduction of ERP system. The analysis of their users was therefore done as it was necessary to know their level of competency. The following functionality of the ERP modules was implemented: Procurement, Supply and chain management, and Human Resource Management.

Phase I of the ERP System was found to be well underway and scheduled to be completed within the 2011/2012 Financial Period. The areas that were being targeted by the first phase of the KRA ERP System were the Finance Department, the Human resources department and the Procurement and Supplies Division. The KRA ERP system typically attempted to automate the functions of these three departments while achieving automation integration within these three departments.

There were two main impediments to the implementation of ERP System; the users and the management. The users were not sure with their business processes and the management undermined integration testing for inter-department modules. The module that was implemented first was the leave application module, since it had a high usage and impact; the tedious procedures for leave approval. These ERP package modules were well customized. Customizations were recommended due to some form of requirements analysis; to fit into organizational procedures, while taking into account the types of users.
The main reason for the development of the web face was linked to the needs of users. The trends in technology, reaching remote stations, reduced installation time and cost necessitated web face development. The success factor information was gathered through walkthroughs and issue logs where completed modules were quantified. Interestingly, there was no analysis of the users and people and the implementation impact. The feedback from the user training incorporated into the design and implementation of the ERP modules was done via formal process of analysis of the users of the system before the implementation commenced. The users had gone for various retreats to come up with various processes. In terms of feedback received from users about ERP System implementation, resistance to change was evident. Some users still preferred using manual methods to ERP.

The resources allocation to support users was poorly done by the department administrators who were given special privileges in ERP to support their users. To some extent, the ERP implementation team was involved in the users' role analysis. On the other hand, the users were involved in identification of user roles in order to ascertain the specific configuration of ERP. There was found a huge impact on each group of users upon the physical design of the ERP system, as valuable insight on contentious business processes was brainstormed. Given that each user had different expectation on the system, the needs of the department affected the design; contrary to the needs of other business users, although the design decisions was made by departmental heads in liaison with the users.
A few of the feedback from the users regarding the changes on ERP system were received, but with mixed reactions from users hence the difference in the feedback. The difference between the reactions of the different users to the new system could be attributed to resistance to change and organizational strict procedures. Further, individuals who used to benefit from the loop holes in the manual process are unhappy since these have been sealed, while some staff found themselves with less work, due to the efficiency of the system. On the contrary, the user reactions were different to other comparable projects undertaken in the past.

The study revealed that implementation of the ERP was not on track especially due to contract conflict between the company and the consultants. Thus the implementation was not carried out in the most effective way. However, the implementation could be improved especially with better understanding of institutional processes, realistic timelines, well designed tests, and managerial planning and commitment.

4.3.2.1 Procurement and Supplies Module

The procurement section procured all sorts of items or products required by the authority, providing all departments with the necessary items requirements, kept a ready count of the quantity of the different items and deals with the suppliers in an endeavor to procure new stock. Previously the user filled in the cost of an item in the Request for Purchase (RFP) form on advice from procurement. Procurement department may not have had accurate information and this may led to over or understating the cost of the item in the RFP. The ERP was aimed to create an updated list of commonly procured items together
with the prices. This list could be sourced from Public Procurement Oversight Authority (PPOA) and updated regularly and adjusted for inflation over time.

On the receiving of goods into the stores/warehouse end, the Inspection and Acceptance Committee did not sit on a regular basis; this complicated the payment process because suppliers could not be paid before the committee inspected the goods. On service delivery from a service provider KRA relied on the end-user to advice on whether the service was delivered satisfactorily. The ERP system sought to have a provision for accepting partial delivery and partial payment. The system also scanned and stored vendor invoices. The system had a 3 way match for Invoice and Local Purchase Order (LPO) for goods. For services, the system has a two way match Invoice and Local Supply Order. The user department now has to sign the Vendor Invoice for confirmation of delivery of services. The ERP system also shows stock levels and due-ins.

There were several benefits that accrued as a result of implementation of Procurement and Supplies module; The ERP system’s procurement module put the procurement division in control of its supply chain, with streamlined functionality to minimize acquisition costs and optimize collaboration with the trading partners. Fully integrated with Financial Management & Accounting and Warehousing, this module allowed the authority to maximize cash flow by standardizing and automating processes, reduce inventory and distribution costs, while maintaining high service levels. It also enabled sharing inventory and usage information with suppliers through secure role-based browser access, and easy web services integration. control employee purchases through centralized web-based requisition management, integrate warehouse processes to reduce
waste, errors, and cycle times, respond quickly to inventory shortages, supply changes, and shipment delays.

### Table 4.3.2.1 Current Progress on Procurement and Supplies Components

<table>
<thead>
<tr>
<th>Components</th>
<th>% Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Procurement Planning</td>
<td>50%</td>
</tr>
<tr>
<td>Supplier Selection</td>
<td>50%</td>
</tr>
<tr>
<td>Request for Purchase (RFP)</td>
<td>100%</td>
</tr>
<tr>
<td>Procurement Method (Tender, RFP Proposals, RF Quotation, Direct) and Thresholds</td>
<td>68%</td>
</tr>
<tr>
<td>Bid Evaluation</td>
<td>100%</td>
</tr>
<tr>
<td>Local Purchase/Service Orders</td>
<td>100%</td>
</tr>
<tr>
<td>Award of Contracts (Procurement /Tender Committee)</td>
<td>100%</td>
</tr>
<tr>
<td>Delivery, Receipt and Inventory Management</td>
<td>50%</td>
</tr>
<tr>
<td>Stock Management/Quarterly Stock Take</td>
<td>100%</td>
</tr>
<tr>
<td>Disposal of Disused/Surplus Stores</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Overall Percentage Completion: 51.5%**

*Source: KRA FOSS ERP Business Process Analysis, February 2010*
4.3.2.2 Human Resources Module

Previously the Human Resource department was managed manually which was extremely tedious for an organization with over 4000 employees. This included processes such as internal job advertisement and application, invitation for interviews, capture of interview score sheets, preparation of letters of regret or appointment, alerts on probation, alerts on progress of the resourcing process to applicants, issuance of employee identification cards and medical cards, tying job grades to salaries and leave planning.

The benefits that accrued as a result of implementation of Human Resource module include; significant reduction of paper-based administrative burden that KRA faced which consumed as much as 80 percent of the human-resources departments’ time. ERP system offered employees self-service benefits administration, which means that they can change health insurance plans, update their contact information and increase contributions to flexible-spending accounts through a browser at any time.

On Organizational Development, the authority could simulate, analyze and experiment with proposed organizational changes and previous organizational models. The authority could attract, retain, and motivate the best people. Meanwhile, on recruitment; the authority can now find the people through filtering of fields needed in the system and then manage and track candidates throughout the entire recruiting process via a streamlined automated workflow process. On employee self-service, this aligned the individual goals of the employees with corporate strategy, as ERP demonstrated that Human Resource strategies and solutions benefit the company's bottom line.
<table>
<thead>
<tr>
<th>Components</th>
<th>% Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Information Manager:</td>
<td>70%</td>
</tr>
<tr>
<td>Staff Registration</td>
<td></td>
</tr>
<tr>
<td>Staff Details</td>
<td></td>
</tr>
<tr>
<td>Employee Resourcing:</td>
<td>70%</td>
</tr>
<tr>
<td>Recruitment, Promotions, Acting Appointments, Transfers, Separation, Secondments, Contracts,</td>
<td></td>
</tr>
<tr>
<td>Welfare and Benefits:</td>
<td>65%</td>
</tr>
<tr>
<td>Loan Management, Medical, Leave Management</td>
<td></td>
</tr>
<tr>
<td>Human Resource Development:</td>
<td>70%</td>
</tr>
<tr>
<td>Annual Training Program, Sponsorship for Professional Courses, Membership, Study leave,</td>
<td></td>
</tr>
<tr>
<td>Employee Relations:</td>
<td>75%</td>
</tr>
<tr>
<td>Disciplinary Process, Conflict Resolution, Code of Conduct,</td>
<td></td>
</tr>
<tr>
<td>Overall Percentage Completion:</td>
<td>70%</td>
</tr>
</tbody>
</table>

**Source:** KRA FOSS ERP Business Process Analysis, February 2010
4.3.2.3 Finance Module

Previously before the ERP system the system used in finance was Scala but there was still a lot of paperwork involved. There was difficulty in follow up of work. Weaknesses included differences in the payment from treasury amounts between the voucher and the amount in the system as vouchers are manually prepared which forced a rounding effect. Since the payment voucher was manually done there were a lot of variances between the system and the manual voucher causing a lot of delays and time wasting. Also the Scala system did not allow for multi currency and withholding of VAT. Reporting ability and flexibility in the Scala system was limited with most of the reports being manually done. Imprest processing was also manual, and thus follow-up and generating the staff debtors list a very manual and pains taking process.

The benefits that accrued as a result of implementation of the finance module was evident since the system took care of all accounts related entries and their impact on the whole system. How the finance comes and how it is been utilised. Total flow of money (Cash/Bank) and total expenditures now reflected in the system. As an after effect of this, the management was able to focus on financial decisions and budgeting. They can come to know about company’s financial position at any point of time. All sorts of important financial reports that Trial Balance, Trading account, Profit and Loss account, Balance Sheet, Debtor’s Balance, Creditors Balance, Cash/Bank Fund position.
The Accounting Module is completely Transaction based unlike journal based. This implies most of the accounting functions are handled through relevant transactions in other Modules thereby saving lot of time. The Module contains complete functionality required for any Accounting Department right from vouchers to the Balance Sheet. Budgeting and variance analysis between budgeted and actual figures helped in controlling the enterprise expenses and income efficiently. The module also included cost centres, which is completely flexible in terms of defining cost centres and their components. Cost allocations for general overheads can also be done on a pre-defined basis and required outputs could be generated for analysis purposes. Outstanding of Payables and receivables with ageing analysis of both debtors and creditors can now easily be done Overall the module takes care of complete functions of any Accounting department.
Table 4.3.2.3 Current Progress on Finance Components

<table>
<thead>
<tr>
<th>Modules</th>
<th>% Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Budget:</strong></td>
<td>43%</td>
</tr>
<tr>
<td>RPF, LPO Funds Commitment, Booking Actual Expenditure, Reports</td>
<td></td>
</tr>
<tr>
<td><strong>Cash Office:</strong></td>
<td>40%</td>
</tr>
<tr>
<td>RTGS Payments, Cheques, Petty Cash, Receipting, Cash Books, Reports</td>
<td></td>
</tr>
<tr>
<td><strong>General Ledger:</strong></td>
<td>67%</td>
</tr>
<tr>
<td>Invoicing, Payroll Link, Link to accounting centre, Customer Reports, GL Reports</td>
<td></td>
</tr>
<tr>
<td><strong>Expenditure:</strong></td>
<td>37%</td>
</tr>
<tr>
<td>Imprest Payments, Imprest Surrenders, Supplier Payments, Staff payments, Reimbursements, Medical Payments, Reports</td>
<td></td>
</tr>
</tbody>
</table>

**Overall Percentage Completion: 46%**

Source: KRA FOSS ERP Business Process Analysis, February 2010
4.3.3 ERP Implementation Outcome

Most of the projects whose implementation was not completed in time were found to be stretching to more than three months after the scheduled time. Occasionally, there was a variance in the actual budget and planned budget, especially where the actual budget exceeded the planned budget by more by about 10%.

ERP software has so far facilitated KRA’s business process by integrating several functions together, which would enable for retrieving real-time data, producing reports, and minimizing work redundancy.

It was noted that the general outcome of the implementation project was below the original expectations, although some improvements were realized. The introduction of SAP/Baan had not been implemented hence the significance of the impact on how the majority of users completed their work was not measurable. However, since some modules had been implemented, the implementation was somehow successful. As such, it was noted that many KRA business processes had been understood and the finance department were able to consolidate their operations.
4.4 Factors Influencing Implementation of ERP at KRA

4.4.1 Working with functionality and maintaining scope

KRA sought to align its business processes to best practices that are most suitable for Adempiere. One of the respondents mentioned that Business Process Reengineering (BPR) was the most difficult part of the job. Although best practices were chosen many people used to do their jobs in traditional ways. Respondents said that the most important factor and the hardest job in ERP implementation is BPR. Resistance against changes and using traditional ways of doing jobs created most problems in ERP implementations in KRA.

The package selection in KRA was based on opportunities to buy software from a well known brand. KRA started its implementation according to Application Implementation Methodology (AIM). They used it as their initial blueprint and scope and defined their plan, resources and budget according to it. During implementation KRA tried to maintain initial scope by aligning all phases to AIM. In implementation methodology, respondents admitted that although the selected method was big bang method but somehow they could call it phased approach, because the go-live date for different departments and modules was different but the main approach was big bang.
4.4.2 Project team, management support and consultants

KRA usually selected the best consultants that were familiar with KRA business. Some KRA staff selected and other team members were selected from Alliance Technologies which in many projects had cooperated with KRA that has technical knowledge of the Adempiere and the experience of implementing ERP in Kenya. Respondents believed that this was the best team that could be selected. However they believed that if they had a team that had better knowledge in their business and the Adempiere system they could achieve better results. Respondents said that the team members should be experienced, have the ability to accept changes, have business and technical knowledge.

All project team members dedicated all their time to ERP implementation project. But some persons in the team had various responsibilities that reduced the time that they worked on projects hence were not able to dedicate satisfactory time for project. The respondents indicated that although compensation could motivate members to do their responsibilities better and complete project phases in promised time; they did not use compensation system at all because of the fear to raise it with the management. To do the jobs better, a special committee was created amongst the different managers and ICT Project Management office head was chairing the committee. Although there were some disagreements between respondents, they believed that there was a strong management support for the project. Management approved and supported implementation before and during implementation. Management committed with its own involvement and allocated valuable resources. Management had middle role in times of conflict. KRA tried to select consultants that have both knowledge of business and software.
4.4.3 Internal readiness and training

For training and education, KRA had started from the initial stages of implementation by publishing articles in the internal news flash magazine. Then several seminars were conducted for different levels of employees with simple data and simple roles to begin with. Also KRA had a different training department whose responsibility was to train staffs in all fields relevant to the performance at KRA. The training was done from the beginning of the project and still during the project. Respondents thought that there was still need to educate users and re-skill them to be able to use all system capabilities and avoid human errors in the system. Some respondents stated that there was need for more effort to prepare people and the organisation to accept changes and challenges. They indicated that some staff and departments did their jobs traditionally and some accepted changes very well and were doing their jobs according to the new system.

In order to involve users in implementation process and business process reengineering, from each target department that KRA wanted to implement the ERP, it selected several people and a leader among them and called them power users. These users selected from the most knowledgeable were trained and prepared for doing BPR and implementing ERP modules. IT department had the responsibility of supporting users. The department did tasks of support in several levels, even support to the vendors, training consultant. However, sometimes the outsourced vendor provided support for users.
4.4.4 Organizational diversity

KRA is a diverse organisation that has more than 5000 employees in different departments and business units. The respondents believed that this diversity had an important effect on the implementation of any system. Doing Business process reengineering in every department managing changes and training employees to use new system were the most difficult parts of implementation process. According to the respondents, diversity has a negative effect on implementation outcome.

In KRA the single model for sharing information was used according to respondents. A large database with more than 18000 tables shared all information in the organisation. Respondents said that it was a challenge to determine what should be common throughout the organisation and what should be allowed to vary, noticing that responsibilities of department and business units were tied to each other.

4.4.5 Planning, development and budgeting

Opinions about planning were very different among respondents. Also ERP project manager said that there was a clear plan for implementing ERP but other respondents say that although there were some plans to clarify resources, costs, risks and timeline, there were no particular and documented plan to propose strategic and tangible benefits, and there was no clear business model and justification for the investment. According to respondents there was a project plan with all specified costs and budget, timeline and specified resources, but not a specific plan for a complex project like ERP implementation, KRA into the ERP acquisition partly because of the ERP buzz.
On development the software package was bought off the shelf but enhancements on the system are done by in-house developers. Some additional interfaces in the system were developed in-house and the interviewees say they are working properly with no negative effect on systems performance. The problem in development was that the module was not working due to incongruence with the legacy system that was already in place or lack of proper customization of the software package to meet the needs of the organisation. Developers, that is, consultants and in-house developers, had to then go back to the drawing board. This consumed resources in terms of time and money. On budget, the ERP implementation in KRA has not been within budget, interviewees said that KRA tried to keep within the project budget and also in specific time frame, but there were some additional costs for the project. It needed more resources than what was specified in the plan.

4.4.6 Adequate testing

In KRA the test phase started by using ERP system in parallel with legacy systems to test and compare the output of the two systems. Also integration test was performed in KRA to ensure that communication between different modules and systems working properly.
4.5 Discussions of Findings

There were several driving forces towards adoption of ERP system; amongst them were; to reduce the use of various inefficient software packages, integration of financial system and streamlining the accounting processes, workflow management-paperless office, business re-engineering and adoption of best practices. Clyde, Yu-Min and Jen-Her, (2005) argues that implementing an integrated ERP system requires the organization to undergo organization-wide reengineering and change. The process of acquiring ERP system began with a project team that identified the various needs. A few of the business processes could not be supported by ERP system; hence the need of creating out-of-system procedures to support the missing processes.

The main impediments to the implementation of ERP System were users and the management. The users were not sure with their business processes and the management undermined integration testing for inter-department modules. Some of the challenges that are faced by an organization when it is implementing an ERP are as associated with the mode of adoption by the organization (Mehdi, 2006). The module that was implemented first was the leave application module, since it had a high usage and impact; the tedious procedures for leave approval. These ERP package modules were well customized. Customizations were recommended due to some form of requirements analysis; to fit into organizational procedures, while taking into account the types of users.
The main reason for the development of the web face was linked to the needs of users. The trends in technology, reaching remote stations, reduced installation time and cost necessitated web face development. The success factor information was gathered through walkthroughs and issue logs where completed modules were quantified. There was a formal process of analysing the users of the system before the implementation commenced, although a few of the business processes could not be supported by ERP system. According to Pearce & Robinson, (1997), implementation of the strategy is a critical phase of strategy management process which involves translating the strategic plans into actions.

The resources allocation to support users was poorly done by the department administrators who were given special privileges in ERP to support their users. Schermerhorn, (1989) stated that implementation process included many components of the management and had to be successfully acted upon to ensure that the desired results are achieved. To some extent, the ERP implementation team was involved in the users’ role analysis. On the other hand, the users were involved in identification of user roles in order to ascertain the specific configuration of ERP. There was found a huge impact on each group of users upon the physical design of the ERP system, as valuable insight on contentious business processes was brainstormed. Given that each user had different expectation on the system, the needs of the department affected the design; contrary to the needs of other business users, although the design decisions was made by departmental heads in liaison with the users.
The study revealed that implementation of the ERP was not on track especially due to contract conflict between the company and the consultants. Thus the implementation was not carried out in the most effective way. However, the implementation could be improved especially with better understanding of institutional processes, realistic timelines, well designed tests, and managerial planning and commitment. These findings are consistent with those of David (1997) who pointed out that only 10% of formulated strategies are successfully implemented while 90% of well formulated strategies fail at the implementation stage.

The study revealed that KRA sought to align its business processes to best practices that are most suitable for Adempiere. Business Process Reengineering (BPR) was the most important factor and the most difficult part of the job. Yusuf et al. (2004) suggested that to take full advantage of ERP software, business process reengineering is a prerequisite. Although best practices were chosen many people used to do their jobs in traditional ways. Resistance against changes and using traditional ways of doing jobs created most problems in ERP implementations in KRA. Gargeya and Brady (2005) postulated that thorough planning is a close partner that threaded through the plans from scope to budget. There was need for more effort to prepare people and the organisation to accept changes and challenges. They indicated that some staff and departments did their jobs traditionally and some accepted changes very well and were doing their jobs with the new system. Education should be a priority from project initiation and money and time should be spent on various forms of education and training (Roberts and Barrar, 1992).
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the findings as well as the conclusions gathered from analysis of data. Findings have been summarized alongside the objective of the study; conclusions have been drawn from the study and the recommendations for actions given.

5.2 Summary of the Findings

The purpose of this research was to find the impact of the use of Enterprise resource planning systems in organizations with a look at the operation and managerial aspect. The specific objectives or research questions were as follows:

5.2.1 Process of ERP implementation

Planning and policy integrating are the key elements that need to be taken into consideration when setting up ERP systems. ERP is an expensive affair that requires support from all stakeholders and cooperation between various departments in order to attain the element of data integrity and a smooth flow of information.
5.2.2 Benefits of ERP on KRA

From the data collected the main benefits were: better human resource management, greater error elimination, better report presentation, better transparency and accountability, lower wastage and better service delivery to internal users and external users like suppliers.

5.2.3 Factors Affecting ERP Systems in KRA

The study also brought out several factors that influenced implementation of ERP at KRA. These were working with functionality and maintaining scope, the teamwork amongst the project team, management support and consultants, internal readiness of the organisation and training, organizational diversity, planning, development and budgeting and adequate testing of the newly acquired system.

5.3 Conclusion

Based on the findings of the study, the following can be concluded: Implementation of strategy is a very important aspect of an organisation's continuity even in government. ERP implementation in KRA was a part of the organisation's 4th corporate plan, for efficiency in its daily operations as well as transparency and accountability to the general public.

During the implementation phase of ERPs, the management should include and involve the employees to enable them to become familiar with the system and its use as well as reduce resistance to the use of the system. The fundamental role of ERP systems is to
make business operations easier and more efficient. This includes functions like accounting, Human Resource procedure, and procurement and stores management. The key factors that affect the implementation of ERPS in business were working with functionality and maintaining scope, the teamwork amongst the Project team, management support and consultants, internal readiness of the organisation and training, organizational diversity, planning, development and budgeting and adequate testing of the newly acquired system.

In general, ERP systems have a positive impact on business because apart from making businesses more efficient and effective they also make businesses competitive both locally and globally.

5.4 Limitations of the study

The main challenge faced was the administration of the interview; the time set to do the study proved to be limited and this hindered the interview process since getting an appropriate time with the interviewees was not easy.

Another limitation of this study is its generalizability. This study presents the viewpoints of KRA, which is located in Kenya. It is difficult to say whether the findings can be generalized to other companies or even other regions of the world.
5.5 Recommendations

The management should embrace change to enhance success implementation of the ERP system at the KRA. The training of the developers and technical staff should be given consideration. KRA should therefore invest heavily in the training of its human capital. While implementing ERP the management should take care of redundancy issues amongst employees since the various duties created from the use of the system need more departments integrated as others are formed. All the major driving forces towards adoption of new systems should be carefully considered.

Timelines should be realistic. The scheduled time for completion of implementation and cost is inevitable to ensure that the desired results are obtain as agreed in the contract. For the implementation of the ERP to be successful, a better understanding of what is involved and the expectations of all stakeholders should be made clear in the initial stages, even as the project progresses.

Successful ERP project needs a match between the organizational processes and the ERP system. Therefore, the ERP implementing company should carefully assess and select ERP software. The selection of a suitable ERP system is an important step but time consuming and challenging. Companies intending to select ERP software must have a detailed requirements plan. A thorough assessment of the ERP system features is necessary before selecting the ERP vendor. The main criterion for choosing ERP software is that which fits well with local requirements. The ERP system should be compatible with existing business processes to minimize the need for BPR.
The adopting company should select a suitable ERP vendor that is able to offer an ERP system with maximum flexibility and easy to customize, such that time and money spent on modification is minimized. Organizational change should be achieved step by step, by using a milder change strategy such as business process improvement.

The various governmental regulations and the legal context of countries oblige companies to have country-specific requirements. ERP vendors should prepare themselves to deal with problems of the environment in which their ERP software is implemented. International ERP vendors should localize their ERP systems to reflect the characteristics of local management. Localization of ERP software means that development of the system fits the requirements of the user's context. The requirements usually depend on country, language, and cultural codes.

5.6 Suggestions for Further Studies

This study concentrated on implementing Enterprise Resource Planning system at Kenya Revenue Authority. Further studies should be carried on the impact of ERP system. Future research should also examine other factors relating to the organization of the ERP system itself.

Also, this study was a case study, based at the KRA headquarters; further studies on the same objectives should be undertaken through a descriptive survey methodology for an in-depth of when, how, who of a phenomenon of the study.
REFERENCES


Kenya Revenue Authority Fourth Corporate Plan 2009/10 - 2011/12.


Ochieng, 2009, Alliance Technologies Retrieved September 2010, from [http://www.at.co.ke/kra](http://www.at.co.ke/kra)


A. General Implementation Process

1. Which ERP system(s) is your company currently using? (Check all that apply)
   - SAP
   - J.D. Edwards
   - Oracle
   - PeopleSoft
   - Baan
   - Other, please specify:

2. What ERP functions / modules are currently implemented at your company? (Check all that apply)
   - All ERP functions
   - Financial Accounting
   - Management Accounting (controlling)
   - Production Management
   - Sales and Distribution
   - Human Resource Management
   - Payroll
   - Industry Solutions
3. What reasons justified the implementation of the ERP system? (Check all that apply)

( ) Standardisation of processes

( ) Adaptation of processes to international best practice

( ) Improvement of existing customer-facing services

( ) Creation of new types of customer-facing services

( ) Improved internal logistical processes

( ) Improved management controls

( ) Enabling of future growth

( ) Increasing the system’s flexibility to respond to new market opportunities

( ) Other, please specify:

4. What was the total cost of implementation of the ERP system?

5. Which approach was adopted during the implementation? (Check which one (s) applies?)

( ) Best of breed approach

( ) Vanilla approach

( ) Big-Bang approach

( ) Module by Module approach

( ) Customised approach
6. If the company adopted a Vanilla approach were there conflicts emerging from company specific requirements and the functionalities provided by ERP system?

() Yes

() No

7. If yes, Please specify the degree to which conflicts between functional departments emerged during the implementation phase by ticking the appropriate cells:

<table>
<thead>
<tr>
<th>Cross-functional relationship does not exist in the ERP implementation project</th>
<th>PM</th>
<th>PF</th>
<th>MF</th>
<th>MS</th>
<th>SF</th>
<th>HRF</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>No conflicts emerged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Conflicts emerged which were quickly settled by the project team</td>
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<tr>
<td>Major conflicts emerged which had to be resolved by the steering committee</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major conflicts emerged which have not yet been resolved</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

8. How detailed was the planning stage of the project initiation?

9. Was there an analysis of the users of the existing systems?
10. Was there any formal process of analysing the users of the system before the implementation commenced?

11. What was the scope of the project did you target some parts of the organisation or overall organisation? Did you consider upgrading your IT infrastructure?

12. What was the driving force or motivation to adopt ERP system in your organisation?

13. Kindly describe the process of acquiring ERP system from the time the idea was conceived to when it was installed? Approach: project team.

14. Were there business processes which ERP system could not support yet they were essential to the organisation? If yes, how did you resolve the conflicts?

15. How were the decisions made when changes were needed in the ERP?

16. What were the considerations for choosing the ERP software?

17. How successful do you feel the implementation has been thus far?

18. What types of things were documented as success factors for the implementation?

19. What types of success factors were identified for the each module portion of the implementation?

20. How was this information gathered to identify the success measures for this project?

21. Was there any type of analysis of the users and people that this implementation would impact?

22. Is/was the implementation of ERP on Schedule?

Given that, is the project likely to on budget?

23. Has the introduction of SAP/Baan had a significant impact on how the majority of users complete their work tasks? Specific examples? Feedback from Development teams?
24. What (in your perspective) has been the biggest impediment to the implementation so far? User interaction? Technical Issues? Organisational issues?

25. Which module implemented first?

Was there a reason for it being implemented first?

26. To what extent was ERP package module(s) customised?

27. What lead to these customisations being recommended / completed?

28. Were the types of users taken into account?

29. Was the objective to change the software to fit the organisational procedures, or was it the other way around?

30. What was the reason for the development of the Web face?

Was this linked to the needs of users?

31. What input did you have in the development of the user training?

32. How were the resources allocated for the support for users?

33. Was the ERP implementation team involved in the User's Role analysis?

34. With respect to the Role Analysis, did the users have any involvement in the identification of roles, in order to identify the specific configuration of ERP?

**B. Project Outcome**

35. If the project implementation was not completed in time, for how long was it delay?

   () More than 3 months over schedule
   () More than 1 month over schedule
   () Less than 1 month over schedule
36. If the actual project budget exceeded the planned budget, by what estimate did it exceed?
   () More than 10% over planned budget
   () More than 5% over planned budget
   () Less than 5% over planned budget

37. What has been the general outcome of the implementation project with regard to original expectations?
   () Outcome surpassed original expectations
   () Outcome met original expectations
   () Outcome below original expectations but still some improvements realised
   () No improvements realized

38. What was the impact of each group of users upon the physical design of the ERP system?

39. Did the needs of your department affect the design in a way that was contrary to the needs of other business users? Who made these design decisions?

40. Was the feedback from the User Training incorporated into the design and implementation of the ERP Modules? Was there any formal process of analysing the users of the system before the implementation commenced?

41. What type of feedback have you received from your users about the implementation? Any resistance to change?

42. Have you received feedback from the users regarding the changes to their view of the ERP system? Difference in the feedback of certain users?

43. Have you noticed a difference between the reactions of the different User's to the new system? What do you attribute this to?
44. Have the user reactions been different to any other comparable projects you have been involved in? Is/was the implementation of the ERP on track?

45. What have been the main problems?

46. Do you feel the implementation could have been improved?

47. What Information do you think could have assisted the project?

48. Do you think the implementation was carried out in the most effective way?

C. Demographics

49. Who owns your firm (in percent)?

() State () Collective entity () Private Kenyan entity () Foreign entity () public

50. Approximately, what was your company's total revenue for the last fiscal year?

51. Approximately, how much were your company's total assets at the end of the last fiscal year?

52. What is your company's total number of full-time employees?

53. What is the average percentage of your IT budget (for HW and SW) with respect to your firm's revenues?

() Less than 1% () 1-2% () 2-3% () 3-4% () 4%

54. Did your company have a computer-based information system before ERP was adopted?

() Yes
55. If yes, please indicate computer-based information systems, which have been used prior
to the ERP implementation project