

**THE INFLUENCE OF INFORMATION AND COMMUNICATION  
TECHNOLOGY ON THE DEVELOPMENT OF STRATEGIC  
GOALS AT KENYA REVENUE AUTHORITY**

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## DECLARATION

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

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This management research project has been submitted for examination with my approval as the University Supervisor.

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## **DEDICATION**

This work is dedicated to my beloved family, wife Betty Jeptepkeny and sons Wayne Kiprotich, Ted Kipngetich and Lionel Kimutai. It was through your support, prayers, patience and understanding that I was able to complete this work.

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## **ABSTRACT**

Information and Communication Technology (ICT) is one of the contemporary themes affecting strategy development in a number of organizations at the moment. The re-engineering process faced by organizations as a result of ICT raises a number of key questions which include how to take advantage of advances in ICT to make a significant change in the way organizations are doing business so that they can gain a competitive advantage; or should organizations invest and concentrate on ICT to improve their approach to the marketplace; and whether they should centre their efforts around internal improvements in the way they currently carry out the activities of the organization. This study set out to establish the extent to which development of strategic goals at Kenya Revenue Authority (KRA) have been influenced by advances in ICT. The research was a case study conducted by collecting primary data from selected employees of KRA through an interview with the aid of a structured interview guide from which findings were deduced. It was established that the development of corporate goals at Kenya Revenue Authority had been influenced to some extent by advances and developments in ICT. On the one hand ICT is directly responsible for the development of some corporate goals, while on the other hand investment in the use of ICT is required for the attainment of some other goals. From the research findings, the researcher recommends an evaluation of the existing ICT investments and the exploration of avenues for their modernization, improvement and enhancement to be institutionalized as part of the goal development process at KRA. The second recommendation is for KRA's management to continually acquire knowledge, and remain current, on available and emerging ICT technologies, their application as well as business capabilities. This is because some corporate goals are made feasible only through investment in the use of ICT, hence guarding against missed opportunities.

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## **ABBREVIATIONS AND ACRONYMS**

<b>CAMIS</b>	Cargo Management Information System
<b>CCRS</b>	Common Cash Receipting System
<b>CIAT</b>	Inter-American Centre of Tax Administrations
<b>CMMI</b>	Capability Maturity Model Integrated
<b>COBIT</b>	Control Objectives for Information and Related Technology
<b>COSIS</b>	Customs Oil Stocks Information System
<b>DLMS</b>	Driving License Management System
<b>DTD</b>	Domestic Taxes Department
<b>ECTS</b>	Electronic Cargo Tracking System
<b>ERP</b>	Enterprise Resource Planning
<b>FAQs</b>	Frequently Asked Questions
<b>GEOCRIS</b>	Geo-spatial Revenue Collection Information System
<b>ICT</b>	Information and Communication Technology
<b>ISO</b>	International Organisation for Standardization
<b>IT</b>	Information Technology



<b>ITIL</b>	Information Technology Infrastructure Library
<b>ITMS</b>	Integrated Tax Management System
<b>ITSM</b>	Information Technology
<b>KRA</b>	Kenya Revenue Authority
<b>KRAVS</b>	KRA Valuation System
<b>LAN</b>	Local Area Network
<b>PAC</b>	Psychometric Assessment Centre
<b>SWOT</b>	Strengths, Weakness, Opportunities & Threats
<b>VMS</b>	Vehicle Management System
<b>WAN</b>	Wide Area Network
<b>WCO</b>	World Customs Organization

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

In today's competitive business environment, Information and Communication Technology (ICT) plays a critical and strategic role in enabling organizations meet their goals and objectives. There is little disagreement on the strategic importance of information technology, as senior executives, strategic planners, and information systems managers are increasingly turning their attention to opportunities for achieving competitive advantage through application of information technology, (Bakos & Treacy, 1986). The re-engineering process faced by organizations as a result of ICT raises a number of key questions which include how to take advantage of advances in ICT to make a significant change in the way organizations are doing business so that they can gain a competitive advantage; or should organizations invest and concentrate on ICT to improve their approach to the marketplace; and whether they should centre their efforts around internal improvements in the way they currently carry out the activities of the organization (Benjamin, Rockart, Morton & Wyman, 1983)

Kenya Revenue Authority is the tax collecting agency for the government of Kenya, established through an act of parliament. Its core mandate is the collection of revenue for the Central Government through effective tax administration and customs control. KRA is required by Kenyan law to assess, collect, and account for most government revenues in accordance with the various revenue Acts and advice on matters relating to the administration and collection of revenue. To deliver on its mandate KRA has embarked

on various automation programmes involving the use of various information and communication technologies (KRA 4<sup>th</sup> Corporate Plan, 2009).

### **1.1.1 Development of Strategic Goals**

Corporate strategy can be described as the identification of the purpose of the organization and the plans and actions to achieve that purpose (Lynch, 2006). The development of a corporate strategy therefore entails establishing the purpose and scope of the organization's activities and the nature of the business it is in, taking into consideration the environment in which it operates, its position in the marketplace, and the competition it faces. Developing a competitive strategy is developing a broad formula for how a business is going to compete, what its goals should be, and what policies will be needed to carry out those goals. Competitive strategy is a combination of the ends (goals) for which the firm is striving and the means (policies) by which it is seeking to get there (Porter, 1980)

There are two approaches to strategy development, the prescriptive and the emergent approach. A prescriptive corporate strategy is one whose objective has been defined in advance and whose main elements have been developed before the strategy commences, whereas an emergent corporate strategy is one whose final objective is unclear and whose elements are developed during the course of its life, as the strategy proceeds (Lynch, 2006). Strategy development can be driven by opportunities afforded by a changing environment. Sometimes known as the search for strategic fit, such development implies the change of internal strategic capabilities to better fit such opportunities (Johnson, Scholes & Whittington, 2005).

### **1.1.2 Information and Communication Technology**

Information and Communication Technology (ICT) is one of the contemporary themes affecting strategy development in a number of organizations. Johnson, et al (2005) identified four themes namely internationalization, e-commerce, changing purposes and knowledge/learning as overreaching and impacting on many if not most organizations at the time. An organizations competitive strategy can be transformed through ICT over and above the resulting improved efficiency. ICT influences an organizations strategy development in a number of ways. On the one hand, it impacts on core competence by ensuring that its product/services are valued by customers, outperform competitors and contribute to the robustness of competencies. This constitutes strategic capability of the organization.

The second way is through the setting of universal standards of performance that become applicable and are not restricted to a particular industry or sector. Third, ICT has precipitated a change in business models, which describes the structure of product, service and information flows and the roles of the participating parties. Lastly, ICT contributes to improved ways of organising to create and support successful strategies (Johnson, et al, 2005). However, despite the said advantages, there is a danger that ICT might take on a life of its own and fail to be aligned with the organizations strategies.

### **1.1.3 Kenya Revenue Authority**

The Kenya Revenue Authority was established by an Act of Parliament (Cap. 469) in July 1995 for the purposes of enhancing mobilization of Government revenue, while providing effective tax administration and sustainability in revenue collection. Prior to

1995, the revenue collection functions of the Government were distributed among at least five different ministries and/or departments. Due to poor co-ordination, their performance was characterized by inefficiency and low levels of accountability. The rationale behind the establishment of the Authority arose from the need to enhance efficiency, transparency and accountability in this critical area of the public sector. The main objective of the establishment of KRA, therefore, was to streamline the public revenue-generation function by bringing the relevant agencies under the umbrella of the central finance agency, the Ministry of Finance. This restructuring was expected to provide an effective administration for the enhanced mobilization of Government revenue in a sustainable manner (KRA 4<sup>th</sup> Corporate Plan, 2009).

KRA strategy is guided by three year corporate plans with the current one being the 4<sup>th</sup> corporate plan covering the period 2009/10 – 2011/12. The Third corporate plan focused on the four strategic goals, namely, developing a dedicated and professional team, re-engineering business processes and modernizing technology, improving and expanding taxpayer services, and enhancing revenue collection, improving compliance and strengthening enforcement (KRA 4<sup>th</sup> Corporate Plan, 2009).

KRA entered its Fourth Corporate Plan period (2009/10 – 2011/12) against a backdrop of an ambitious Government development agenda outlined in the Kenya Vision 2030 blueprint, whose aim is to create a globally competitive and prosperous country with a high quality of life by the year 2030. There are a number of strategic goals identified as guiding the future direction of KRA during the Fourth Corporate Plan. First is to develop a professional team that is well remunerated. Second is the creation of an enabling work environment. Third is the full automation of the Authority and ensuring that KRA ICT is

fully integrated allowing for a single view of the taxpayer and full utilization of ICT to promote compliance. Fourth is the completion of the transition to a fully functional organization. Fifth is to minimizing customer compliance costs and enhancing customer service. Lastly is achieving revenue targets by rolling over uncompleted revenue mobilization initiatives, whilst pursuing new revenue and compliance (KRA 4<sup>th</sup> Corporate Plan, 2009).

In the third corporate plan, KRA had a strategic objective of re-engineering business processes and modernizing technology. Under this objective, it undertook a number of ICT related initiatives. First is modernizing ICT systems for improved service and enforcement which involved fifteen items (e.g. modernization of Customs Services Department through Simba system rollout, Setup of a 24-hour document processing centre, Customs oil stock information system , valuation database, deployment of X-ray cargo scanners, cargo management information system, electronic cargo tracking system and modernization of Domestic Taxes Department through the integrated tax management system, modernization of Road Transport System through the vehicle management system). Second is to ensure Information Technology (IT) services meet international standards and support operational needs (through the introduction of ICT service desk and incident management, availability management and business continuity), Modernizing and improving business processes and infrastructure (e.g. Regional exchange of information among revenue authorities, one stop border post) (KRA 4<sup>th</sup> Corporate Plan, 2009).

In the fourth corporate plan, the Authority has the strategic goal of full automation and ensuring that IT is fully integrated allowing for a single view of the taxpayer and full

utilization of IT to promote compliance. This goal has three objectives: enhancement of ICT services, information systems security and ICT governance; modernization, maintenance and integration of IT systems; and enhancement and maintenance of ICT infrastructure (KRA 4<sup>th</sup> Corporate Plan, 2009).

KRA has made significant investments in ICT and is recognised as leader in ICT adoption in the public sector. KRA has made remarkable progress in implementing the Revenue Administration Reform and Modernization Programme (RARMP) projects that have propelled KRA to meet its revenue targets. Further, the automation programme has significantly improved the level of efficiency in service delivery. In 2006/07 and 2007/08, KRA's efforts in promoting ICT in the public sector were recognized through the conferment of the ICT Excellence Award by the Computer Society of Kenya. Indeed, in 2007, KRA was voted the most respected public sector entity in Kenya. KRA is a pioneer in the use of radio frequency identification (RFID) technology in tracking cargo electronically in Africa, KRA in 2011, received recognition at the 46<sup>th</sup> Inter-American Center of Tax Administrations (CIAT) General Assembly held in Santiago Chile for innovating the real estate geo-mapping initiative known as the Geo-spatial Revenue Collection Information System (GEOCRIS). The initiative was cited as one of the three leading innovations undertaken by tax administrations in the past year (KRA 4<sup>th</sup> Corporate Plan, 2009). KRA has automated to a great extent, and as such, it would be expected that ICT has had an influence in the development of its strategic goals.

## **1.2 Research Problem**

Analysis and evaluation of the strategic position of an organization is concerned with identifying the impact of the external environment, the organization's strategic capability (resources and competences) and the expectations and influence of stakeholders on strategy. This analysis allows the organization to formulate strategic choices that address the circumstances in which it operates. The development of strategic goals and objectives is expected to make use of the various opportunities available to the organization including developments and advances in ICT.

The financial services industry, in which KRA operates, can be classified as being engaged in information-intensive developments. For such organizations, exploitation of ICT is a central strategic issue. KRA is a public sector organization tasked with the collection of various taxes on behalf of the Government of Kenya. In the past few years, there has been an increased reliance on KRA by the Government of Kenya in meeting a large percentage of its budgetary requirements. Increased reliance coupled with a more informed taxpaying public has raised the performance bar for KRA. To meet the increased expectations of both stakeholders, it is necessary to review the organization's strategies and align them to the changed environment.

There have been a number of studies carried out on KRA and the various automation initiatives undertaken by the organization involving the use of ICT. Sigey (2010) studied the impact of automations as a structural change strategy on customs clearing procedures at KRA. The findings concluded that automation resulted in reduction in costs and improvements in efficiency, effectiveness, staff skills and governance. Siror, Huanye,



Dong and Jie (2009) researched on the application of RFID technology to curb diversion of transit goods in Kenya and demonstrated the effectiveness of the solution in curbing diversion, in facilitating trade between Kenya and her neighbours and shortening of turnaround time of transit trucks. Aliet (2008) researched on responses by KRA to challenges in the implementation of the Customs' reforms and modernization. Aliet's study deduced that resistance to change and lack of requisite skills was the greatest challenge and this was overcome through training, sensitization of staff and stakeholders. Siror (2010) studied automating customs verification process using RFID Technology. The study ascertained that automation with RFID technology helps in solving the greatest challenge and weakness of manual based verifications that have been susceptible to corrupt practices and have often been used to defeat other intelligent systems through incorrect feedback given to update intelligence databases. Odundo (2007) while researching on change management practices adopted by KRA in its reform and modernization programme identified essential components for successfully undertaking KRA reform and modernization programme as consideration for change management, communication, automation and staff involvement. Siror, Guangum, Kaifang, Huanye, and Dong (2010) researched on the impact of RFID technology on tracking of export goods in Kenya. The research demonstrated that RFID based tracking has a great impact on curbing diversion and considerable benefits to transporters and other stakeholders through increased efficiency and reduced turn-around time. These studies have largely been geared at evaluating how successful automation initiatives have been at KRA in meeting their intended automation goals as well as identifying the challenges faced during implementation, and how the challenges were overcome.

There have been a number of developments in ICT that have been exploited at KRA including e-commerce applications, radio frequency identification technologies used in cargo tracking and mobile money solutions. Such developments present organizations with new opportunities for improvement and transformation and need to be considered in developing the organization's strategic goals. Studies on whether this is the case at KRA have not been done

This study therefore sought to answer the question: Have developments and advances in ICT contributed to the development of strategic goals at KRA?

### **1.3 Research Objective**

The study sought to achieve the following objective:

To establish the extent to which the development of strategic goals at KRA have been influenced by developments and advances in ICT

### **1.4 Value of the Study**

This study has added to the available body of knowledge on strategic management. It is expected that the study will be of benefit to both academicians and students of strategic management as it has presented the challenges met in identifying and quantifying the influence of contemporary themes on the development of strategic goals.

The research is also expected to be of benefit to KRA, as the findings have documented the influence of developments and advances in ICT in the development of its strategic goals. The research has also documented the extent to which KRA's strategic goals are influenced by these advances and developments. Further, the findings have given an

indication of how much weight contemporary themes have on the development of strategic goals. This information is useful in informing future strategy reviews.

The study is also expected to benefit public corporations in the financial services sector, especially on how to integrate developments and advances in ICT in the development of their strategic goals.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter provides a review of literature on the link between information and communication technology and corporate strategy. It explains the role of ICT in competitive strategy and in organization design. It explores how ICT can be employed to achieve sustained competitive advantage, enhance an organization's internal strategy and business portfolio strategy.

#### **2.2 Formulation of Strategic Goals**

Strategy can be viewed as the configuration of an organization's thought process, actions, resources, and capabilities for charting its long-term direction and success within the changing external environment (Machuki & K'obonyo, 2011). Lynch (2006), identifies three core areas of corporate strategy as strategic analysis, strategy development and strategy implementation. He explains that strategy development entails strategy options being developed and then selected. He proposes that successful strategies are likely to be built on the particular skills of the organization and the special relationships that it has or can develop with those outside – suppliers, customers, distributors and government. He states that every strategic decision involves three elements - context, content and process. He defines context as the environment within which the strategy operates and is developed, content as the main actions of the proposed strategy, and process as how the actions link together or interact with each other as the strategy unfolds against what may be a changing environment.

Strategy is expressed in strategic goals and developed and implemented in strategic plans through the process of strategic management. Strategy is about implementation, which includes the management of change, as well as planning. An important aspect of strategy is the need to achieve strategic fit. Emphasizing an organization's "fit" with its external environment; strategic planning approaches are designed to identify the most fundamental issues facing an organization in the long run and to develop strategies to resolve those issues effectively. A critical part of this process often entails a so-called SWOT analysis to assess organizational strengths and weaknesses as they relate to external opportunities and threats. The resulting strategic plans usually define strategic goals and objectives (Poister, 2003)

Strategy can also be looked at from three major views; internal, competitive, and business portfolio strategies (Bakos & Treacy, 1986). Internal strategy is concerned with the development of efficient and effective organizational structures and processes for achieving goals and objectives. Competitive strategy focuses on competitive moves within the industry in which the organization does business. Business portfolio strategy concerns the choice of which industries to compete in and how to position the organization in those industries. Bakos and Treacy (1986), relates these strategy views with perspectives in which opportunities from IT can be viewed. Firstly, being that of an organizational designer trying to improve the efficiency and effectiveness of the current organization. Secondly, that of an industry insider trying to out-manoeuvre other participants in a competitive game, and thirdly being that of an outsider investigating whether to enter an industry.

An important feature in strategy formulation is how to analyze the external environment in order to make sense of it (Finlay, 2000). He identifies the first consideration as concerning the level of influence that the business can have on the elements in its environment and vice versa. Two environments are identified, the operating environment and the remote environment. The operating environment consists of factors such as markets that a business is operating in, its competitors, its suppliers and other stakeholders: elements over which the organization would have some influence. He also identifies the remote environment, consisting of such items as government pressure and actions, information technology developments and demographic trends. The individual business has no significant influence over elements in the remote environment, though they may have a major effect on the operating environment and on the business.

Porter (1980) in his framework for developing strategy in a competitive environment, suggests that, for any company, significant strategic actions consist either of diminishing supplier or customer power, holding off new entrants into their industry, lowering the possibility of substitution for their products, or gaining a competitive edge within the existing industry. Porter's generic strategies of low cost, differentiation and niche are identified as being critical to organizations success. Several writers (Porter & Millar, 1985; Bakos & Treacy, 1986; Porter, 2001) have explored the exploitation of IT in the attainment of these strategies.

### **2.3 Information and Communication Technology**

Bakopoulos (1985) defined Information technology as encompassing systems that affect the bounds in the rationality of organizational units and the limitations of their information-related process technology. He explained that these bounds and limitations

may be either internally imposed (because of human neurophysiological limitations) or external (because of technological design limitations). Simon (1955 & 1956) defined bounded rationality as referring to neurophysiological limits on memory, computational, and communication capacities of an individual (as cited in Bakopoulos, 1985). It is demonstrated by limits on the complexity and size of problems that can be solved by humans. He describes rationality as the reaction of an individual to information about changes in the state of the world demonstrating a set of goals, in correspondence to Wiener's cybernetic paradigm (which is an actor with goals reacting through his effectors to the state of the external world as perceived by his sensors, to eliminate the difference between actual and desired states of the world as measured by his error detectors). Both concepts of rationality and bounded rationality can be extended to the organizational level, and bounded rationality has been an important concept in organizational design.

Bakos and Treacy (1986) proposed bounded rationality as one of the theoretical links between information technology and competitive advantage. They explained that extending the bounds of organizational rationality has direct implications for both bargaining power and comparative efficiency, as it affects the cost of search (by improving the generation and evaluation of alternatives), as well as transaction costs in organizational interfaces. Transaction costs is affected, for example by reducing contracting and monitoring costs (thus mitigating the effect of opportunism), improving the generation and evaluation of alternatives (thus mitigating the effect of environmental uncertainty and complexity), and either decreasing or increasing information asymmetries. They proposed industrial economics as the second theoretical link between

information technology and competitive advantage that comes from the effects of IT on production processes. They explained that this is through improving the adaptability of products, and allowing the realization of scale economies from smaller production runs. IT can therefore change the economies of production, and facilitate product differentiation based on unique features. Furthermore, information technology can allow assets to be less specific to the particular economic transactions involved, potentially decreasing the costs of switching to alter-native customers and suppliers.

## **2.4 ICT and Corporate Strategy**

Advances in ICT have far reaching effects on competition. Porter & Millar (1985) identified three vital ways that the information revolution affects competition. Firstly, by changing industry structure, and in so doing, alters the rules of competition. Secondly, by creating competitive advantage giving companies new ways to outperform rivals; and lastly by spawning whole new businesses, often from within a company's existing operations. The structure of an industry is as a result of the five competitive forces that collectively determine industry profitability: the power of buyers, the power of suppliers, the threat of new entrants, the threat of substitute products, and the rivalry among existing competitors. ICT can alter each of the five forces and, hence, industry attractiveness as well. Porter (2001) identifies the Internet, advancement in ICT, as an open system whose technological advances level most industries' playing fields - thus intensifying competitive rivalry and reducing entry barriers. He adds that the internet dramatically increases available information, shifting bargaining power to buyers.

Competitive advantage is created through the use of technology in lowering of costs and enhancement of differentiation (Porter & Millar, 1985). This is through its effects on an



organization's value activities, or by exploiting changes in competitive scope. ICT can alter a company's cost in any part of the value chain and allows product customizations in support of differentiation. ICT Increases a company's ability to coordinate its activities regionally, nationally and globally. In so doing, it can unlock a broader geographical scope to create competitive advantage. Porter (2001) credits ICT (in particular the Internet) with delivering sustained competitive advantage from operational efficiency (doing what your competitors do, but better) or strategic positioning (doing things differently than your competitors). He argues that a firm's advances in operational effectiveness can be easily copied by competitors and therefore strategic positioning becomes most important. The internet therefore becomes a strategic complement in making it easier to maintain strategic positioning. This is because it lets you create a customized, common information technology platform for all your company's activities - resulting in unique, integrated systems that reinforce the strategic fit among your firm's many functions. Competitors can't easily imitate these systems. The Internet can complement traditional ways of competing as well as integrating virtual and physical activities to compensate for the Internet's performance limits in physical touch and product test.

Porter and Millar (1985) identified the "value chain" as an important concept that highlights the role of information technology in competition. They explained that Information technology is permeating the value chain at every point, transforming the way value activities are performed and the nature of linkages among them. They further explained that IT is affecting competitive scope and reshaping the way products meet buyer needs. Mata, Fuerst and Barney (1985) argue that the ability of IT to add economic

value to a firm by either reducing a firm's costs or differentiating its products or services is not the same as IT being a source of sustained competitive advantage for a firm. They use the resource based view of the firm is based on two underlying assertions, that the resources and capabilities possessed by competing firms may differ (resource heterogeneity), and that these differences may be long lasting (resource immobility). They explain that a firm may use its IT resources to help implement a wide range of strategies, including cost leadership, product differentiation, strategic alliance strategies, diversification strategies, and vertical integration strategies. If those resources are heterogeneously distributed across competing firms, and if firms without these resources find it more costly to develop, acquire, and use them to implement a strategy than firms that have already used them to implement that strategy, these resources can be a source of sustained competitive advantage.

Advances in ICT are creating completely new industries in three ways. First, it makes new businesses technologically feasible, for example the mobile money technology. Second, ICT can spawn new businesses by creating derived demand for new products, for example mobile banking, which was not feasible before the advent of mobile money. Third, ICT creates new businesses within old ones; this could be through sale of excess capacity created (Porter & Millar, 1985).

Industry-level impacts of ICT have important strategic implications for the portfolio of industries in which a firm is competing. Specifically, a firm may be able to improve this portfolio by taking advantage of structural changes catalyzed by advances in ICT. Alternatively, a firm can actively seek opportunities to exploit its ICT-related skills and resources in new industries (Bakos & Treacy, 1986). They further propose that ICT affects

the efficiency and effectiveness of the organization primarily by reducing the effects of bounded rationality of the individual and group decision making.

Advances in ICT, and Internet technology in particular, tends to weaken industry profitability without providing proprietary operational advantages (Porter, 2001). Porter argues that it is more important than ever for companies to distinguish themselves through strategy adding that winners will be those that view the Internet (and ICT by extension) as a complement to, not a cannibal of, traditional ways of competing. Deliberate consideration for advances in ICT in strategic decisions-making is an imperative in industries where the rate of technological and competitive change is so extreme that market information is often unavailable or obsolete, where strategic windows are opening and shutting quickly, and where the cost of error is involuntary exit (Bourgeois & Eisenhardt, 1988).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the methods, techniques and approaches the researcher used in collecting data in order to achieve the study objectives. The study design was a case study with field research and was qualitative in nature. Evaluative and descriptive methods were used in the analysis of the data

#### **3.2 Research design**

The research was a case study of the Kenya Revenue Authority. Case studies are relevant when conducting research on phenomena that are unique to an organization (Swanson & Holton, 2005).

The objective of this research was to establish the extent to which the development of strategic goals at KRA has been influenced by developments and advances in ICT. This required an in-depth understanding of KRA and its strategy development process. Yin (2003) suggests that case studies are very appropriate when the researcher is interested in process or seeks an in-depth understanding of a phenomenon because of its uniqueness.

#### **3.3 Data collection**

The study relied on primary data. Data was collected through interviews with the aid of an interview guide with unstructured (open ended) questions to elicit information from the interviewees. The interview guide presented questions on KRA's 4<sup>th</sup> corporate plan strategic goals aimed at establishing linkage between the strategic goals and advances in ICT.

Six respondents were interviewed. The respondents were from the Information and Communication Technology department, Human Resources department, Research and Corporate Planning department – who are charged with the responsibility of coordinating and developing KRA corporate plans, and Business Automation Office representative in Customs Services department and Domestic Taxes department

### **3.4 Data Analysis**

This being a qualitative study, content analysis was used. Content analysis is used to identify and extract key themes, concepts and arguments. The researcher quantified and analyzed the presence, meanings and relationships of such themes, concepts and arguments then made inferences about them within the interview results.

The data analysis sought to establish the extent to which the development of strategic goals at KRA has been influenced by developments and advances in ICT. Data collected was analysed and results interpreted with respect to research question and applicable theory.

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the results of the analysis and findings of the study. The study was based on interviews administered to six respondents. The first part of the interview sought information that was general in nature while the second part sought to establish linkages between development of KRA strategic goals and advances in ICT. The data was analysed and resulted in the findings presented in several sections in this chapter.

#### **4.2 Profile of Respondents**

The interview was administered to six respondents from different key departments. The respondents were from the Information and Communication Technology department, Human Resources department, Research and Corporate Planning department – who are charged with the responsibility of coordinating and developing KRA corporate plans, and Business Automation Office representative in Customs Services department and Domestic Taxes department. Each of the respondents was a head of department or senior officer who had worked at KRA for more than five years and had been involved in strategy development.

#### **4.3 Link between KRA Corporate Goals and ICT**

KRA had six corporate goals in its fourth corporate plan period. The strategic goals for the plan period were: first developing a professional team that is well remunerated, second was the creation of an enabling work environment, third was full automation of the Authority and ensuring that the Authority's IT is fully integrated allowing for a single view of the taxpayer and full utilization of IT to promote compliance, fourth was

completion of the transition to a fully functional organization, fifth was minimizing customer compliance costs and enhancing customer service, and lastly achieving revenue targets by rolling over uncompleted revenue mobilization initiatives, while pursuing new revenue and compliance initiatives. Each respondent was interviewed to gather their views on the link between the development of these corporate goals and advances and developments in ICT.

#### **4.3.1 Full automation of the Authority and ensuring the Authority's IT is fully integrated allowing for a single view of the taxpayer and full utilization of IT to promote compliance**

The goal of full automation of the authority and ensuring that the Authority's IT is fully integrated allowing for a single view of the taxpayer and full utilization of IT to promote compliance was identified by all the respondents as having been developed as a result of advances in ICT. The goal was developed primarily to take advantage of ICT developments and advances. The plan to enhance ICT services, Information Systems Security and ICT governance was to be achieved through implementation of various ICT initiatives and the adoption of ICT best practices. Specific initiatives identified include the use of service level agreements; the acquisition of monitoring and control solutions for networks, applications and databases; enhancement of system reliability and security; development of a disaster recovery and business continuity plan, contingency plans and other measures to ensure business continuity at all times; deployment of an intrusion prevention system; and implementation of IT Service Management (ITSM).

To modernize, maintain and integrate IT systems, a number of ICT projects undertaken were identified by the respondents. The projects include implementation of an integrated tax management system (ITMS) with phase 1 of the project completed and the second

phase in progress. Modernization of Road Transport Department (RTD) operations was another identified project that entailed Common Cash Receipting System (CCRS) for cash collection, full digitization of RTD records, Vehicle Management System (VMS), Driving License Management System (DLMS). The third project was improving and rolling out SIMBA 2005 which involved Customs Oil Stock Information System (COSIS), Cargo Management Information System (CAMIS), Regional Authorities Digital Data Exchange (RADDEX), Kenya Revenue Authority Valuation System (KRAVS), Manifest Management System (MMS) and phase 1 of the Electronic Cargo Tracking System (ECTS) that have been implemented. Modernization of business operations in Support Departments was also identified as another project that encompassed WCO e-learning, Internal Audit Management System (Teamate) and KOHA Library systems that have been implemented and are in operation. The Enterprise Resource Planning (ERP) system currently under implementation was also identified. Data warehousing, Business Intelligence and Performance Management systems are another set of projects that were identified but are yet to be implemented due to funding constraints. The Revenue Portal comprising the corporate website (KRA Online) and revenue services portal was also identified.

A number of initiatives to enhance and maintain ICT Infrastructure were identified by the respondents. This includes an initiative to improve and expand ICT infrastructure in the Authority through expansion of Local Area Network (LAN) and Wide Area Network (WAN), data centre improvement project. Enhancement of the operation of the call centre through the implementation of a Call Centre solution, installation and setup of power



backups and air conditioning units, and installation of cargo scanners in key operational areas are other initiatives.

The need for improved IT governance was identified by one of the respondents as necessary consequence of the goal and this has led to the adoption of international IT best practices and frameworks such as IT Service Management framework (ITIL), Control Objectives for Information Technology (COBIT), ISO 27001/27002, and Capability Maturity Model Integration (CMMI). These are aimed at continual IT service improvement.

#### **4.3.2 Minimizing Customer Compliance Costs and Enhancing Customer Service**

The objective of minimizing customer compliance costs and enhancing customer service was identified by all the respondents to anticipate an enhanced usage of ICT. For this goal to be achieved greater facilitation through a higher level of service automation is expected. This is through increasing the scope and accessibility of services offered electronically. Some services are already available online over the internet and they include ITMS for online filing of returns, SIMBA for customs clearance and the KRA website for taxpayer information. Other services are planned to be rolled out including mobile money services.

Customer service desks have been established in some KRA Regional Offices to address electronic services with the call centre programme operating centrally. The consolidated Frequently Asked Questions (FAQs) are being captured, collated, updated and uploaded

on to the KRA website to assist taxpayers readily access information as and when they require.

The need to simplify the tax process as a means to enhancing customer service was identified as requiring ICT for it to be met. This has been done through the implementation of Phase I of the Integrated Tax Management System (ITMS) which deals with processes aimed at simplifying the tax return filing/declarations by taxpayers. This includes e-tax registration, e-filing, e-statements and e-enquiries. Through the introduction of the Common Cash Receipting System (CCRS), the burden of additional record keeping requirements on the taxpayer was reduced. Encouragement of interested stakeholders to develop returns preparation and filing software which can interface with ITMS would yield further simplification. Through this simplification taxpayers are able to upload their MS Excel returns files in ITMS instead of keying them in afresh.

### **4.3.3 Developing a Professional Team that is Well Remunerated**

The corporate goal of developing a professional team that is well remunerated was identified by some respondents as being partly driven by a number of ICT initiatives in KRA at varied stages of implementation. The changes introduced by completed initiatives as well as those anticipated to be brought about by ongoing and planned initiatives have necessitated a more robust change management process. As a result, KRA planned to institutionalize change management in its fourth corporate plan as a means to enhancing its corporate culture by espousing the organization's core values. The institutionalization of this change management resulted in the creation of a Quality Management section within the ICT department.

To enhance capacity building for the KRA team, some respondents identified the undertaking of systematic and structured training based on identified competencies and needs, and in particular the ICT related competencies required for staff to work with and support automated systems. The specific trainings identified include project monitoring and evaluation, system analysis and design, information system audit, structured software testing and product specific manufacturer training. The need for training in existing, ongoing and planned ICT initiatives was identified as being a key requirement in achieving the goal, in an increasingly automated environment.

Implementation of e-learning process was identified by some respondents as a means to achieving the goal of developing a professional team that is well remunerated, that cannot be attained without the use of ICT. The implementation of the World Customs Organization (WCO) e-learning module and institutionalization of knowledge management are other specific initiatives that were identified.

The adoption of contemporary human resource management tools in implementing human resources best practice was identified as requiring the use of ICT. The application of psychometric testing to recruit staff as well as the planned creation of a Psychometric and Assessment Centre (PAC) and equipping of the centre are specific initiatives that have and will need deployment of ICT.

#### **4.3.4 Achieving Revenue Targets by Rolling Over Uncompleted Revenue Mobilization Initiatives, Whilst Pursuing New Revenue and Compliance Initiatives to Maturity**

This goal was identified as having a direct linkage with ICT advances by all respondents. This was especially so with ICT initiatives that had been implemented in phases or could not be completed in the previous planning period. The initiatives that were identified include the Electronic Cargo Tracking System (ECTS) Phase 2, X-ray cargo scanners and valuation database for customs services department.

A robust risk management system complemented by both a data warehouse and business intelligence tools is key to a successful enforcement strategy. This is expected to in turn discourage and deter non-compliance. Exchange of information with other national and regional agencies was also identified as necessary for the detection of unregistered taxpayers, non-filers and misstatements.

#### **4.3.5 Completion of Transition to a Fully Functional Organization**

The goal of completion of transition to a fully functional organization was identified as having little linkage to advances in ICT. The development of an integrated KRA-Wide Risk Management Policy and framework in particular was identified by one respondent as a means to achieving the goal that had a direct bearing on ICT advances. This is because risks associated with automation and inherent with IT assets, for example computer and communicating equipment, needed to be captured and addressed both by the policy and framework.

Adoption of the International Organization for Standardization (ISO) Quality Management System (QMS), and its emphasis on records and documentation was identified as another link to ICT advances, since electronic records and documents are processed and stored in ICT systems. To support ISO certification and efficient and effective QMS based on Information Technology Infrastructure Library (ITIL) was put in place for ICT governance.

#### **4.3.6 Creation of an Enabling Work Environment**

Proactive management of health and safety risks as a means to achieving the goal of creating an enabling work environment were identified by one respondent as having a minor linkage to ICT advances. The installation of radio communication equipment at border stations, the fitting of cargo scanners with security features as well as computerized and reviewed work arrangement were specific minor linkages identified.

#### **4.4 Discussion**

The literature reviewed identified ICT as one of the contemporary themes affecting strategy development in a number of organizations. The findings from the study are that some corporate goals at KRA were developed with the aim of modernizing, improving and enhancing existing ICT investments, while some other goals were developed with the expectation that their attainment will require investment in ICT. The findings therefore support existing literature in that ICT influences strategy development either directly by targeting enhancement of ICT investment or indirectly through ICT facilitating the attainment of strategic goals.

From the findings, KRA has developed a number of specific corporate goals that are geared directly at modernizing, improving and enhancing existing ICT investments. This has the effect of reducing costs and is in line with the assertion in the literature reviewed that competitive advantage is created through the use of technology in lowering of costs and enhancement of differentiation (Porter & Millar, 1985). KRA has deployed a number of applications using internet technology in line with the findings reviewed in Porter (2001) where he credits ICT (in particular the Internet) with delivering sustained competitive advantage from operational efficiency (doing what your competitors do, but better) or strategic positioning (doing things differently than your competitors).

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents a summary of the research findings. It then discusses the conclusions of the study in line with the objective of the study, and makes recommendations based on the research findings.

#### **5.2 Summary**

The study findings indicate that Information and Communication Technology has had influence on the development of corporate goals at Kenya Revenue Authority. The study found that the influence occurs in two ways. The first way is through the development of specific corporate goals that are geared directly at modernizing, improving and enhancing existing ICT investments.

The second way is through the development of corporate goals whose attainment anticipates investment in the use of ICT. The influence is stronger where attainment of a goal is not possible without investment in the use ICT. It is weaker where there are alternative means to substantially achieving the goal other than investing in the use ICT.

The study found that one goal, that of full automation of the authority and ensuring that the IT is fully integrated allowing for a single view of the taxpayer and full utilization of IT to promote compliance, was geared directly at modernizing, improving and enhancing existing ICT investments. The other five goals anticipated their attainment to require investment in the use of ICT to differing extents. The development of the goal of creation

of an enabling work environment was least influenced by advances and developments in ICT as there was minimal investment in the use of ICT required to attain it.

### **5.3 Conclusions**

Based on the findings, the development of corporate goals at Kenya Revenue Authority has been influenced by ICT. On the one hand ICT is responsible for the development of corporate goals, while on the other hand investment in the use of ICT is required for the attainment of some other goals. There are however, goals whose development is not influenced by ICT since their attainment is not substantially affected by use or lack of use of ICT.

The perceived degree to which investment in the use of ICT affects the attainment of a corporate goal influences the perceived level of influence ICT has on the development of the strategic goal. Goals whose attainment depends to a greater extent on investment in the use of ICT have a greater influence than those whose attainment depends less on investment in the use of ICT.

### **5.4 Recommendations**

From the research findings, it was established some corporate goals are developed of that are geared directly at modernizing, improving and enhancing existing ICT investments. It is recommended that an evaluation of the existing ICT investments and the exploration of avenues for their modernization, improvement and enhancement be institutionalized as part of the goal development process at KRA.

It is also recommended that when developing corporate goals, investment in the use of ICT should be considered as an enabler for meeting goals. Management need to acquire knowledge, and remain current, on available and emerging ICT technologies and their application as well as business capabilities and application. This is because some corporate goals are made feasible only through investment in the use of ICT, meaning



that lack of knowledge will result in missed opportunities. The achievement of some goals on the other hand are greatly facilitated by investment in the use of ICT.

### **5.5 Limitations of the Study**

The data for the study was collected from officers in KRA headquarters in Nairobi. This left out the participation of other KRA stations spread across the country whose contribution could have enriched the study. The study was based on the 4<sup>th</sup> corporate plan and was done towards the end of the planning period. The 5<sup>th</sup> corporate plan which was under development at the time of study would have been a more current reference.

### **5.6 Suggestion for Further Study**

This study was based on KRA which is a state corporation. Further studies are required to establish the linkage between development of corporate goals and ICT in other Kenyan organizations.

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## APPENDICES

### Appendix A: Interview Guide

#### SECTION 1 - BIO DATA

What is your department? .....

How long have you worked at KRA? (Pease tick against the category)

Less than 1 Year.....

Between 1 and 3 years .....

Between 3 and 5 years .....

More than 5 year.....

Are you involved in strategy development at KRA? Yes.....No.....

#### SECTION B

KRA in its 4<sup>th</sup> Corporate Plan period of 2009/2010 – 2011/2012 has six strategic goals. The six strategic goals are further broken down into strategic objectives, with a number of strategies aimed at meeting the objective and attaining the strategic goal. The strategic goals are: (a) to develop a professional team that is well remunerated, (b) creation of an enabling work environment, (c) full automation of the Authority and ensuring that KRA

IT is fully integrated allowing for a single view of the taxpayer and full utilization of IT to promote compliance (d) completion of the transition to a fully functional organization, (e) minimizing customer compliance costs and enhancing customer service, and (f) achieving revenue targets by rolling over uncompleted revenue mobilization initiatives, whilst pursuing new revenue and compliance.

- 1) Which ICT developments deployed at KRA before the year 2009 could have been the reason for the adoption KRA strategic goal? Which specific strategic goals are these?
- 2) How does the attainment of KRA strategic goals require ICT? Which specific strategic goals are these?
- 3) Which ICT that is new and had not been deployed at KRA before 2009 could have been the reason for the adoption of KRA strategic goals? Which specific strategic goals are these?
- 4) How is the adoption of KRA strategic goals related with ICT developments? Which specific strategic goals are these?
- 5) How is the adoption of KRA strategic goals meant to explore new uses for ICT in KRA? Which new uses are these?
- 6) How does the adoption of KRA strategic goals expand ICT usage at KRA?
- 7) How does KRA encourage the search for ICT opportunities in support of KRA strategic goals?
- 8) How has KRA aligned identified ICT opportunities with KRA strategic goals?