THE ROLE OF INFORMATION MANAGEMENT IN SUPPORTING e-GOVERNANCE IN THE MINISTRY OF FINANCE, KENYA.

BY

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A Thesis Submitted in partial fulfillment of the Requirements for the Degree of Master of Philosophy in Information Sciences (Library and Information Studies), Moi University

MAY 2011
DECLARATION

Declaration by Candidate

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This thesis has been submitted for examination with our approval as University Supervisors.

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DEDICATION

This thesis is dedicated to my late father, who taught and encouraged me that the best kind of knowledge to have is that which is earned through hard work. It is also dedicated to my mother, who taught me that even the largest task can be accomplished if it is done one step at a time through patience and perseverance.
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<tr>
<th>Abbreviation</th>
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<tr>
<td>AIE</td>
<td>Authority to Incur Expenditure</td>
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<tr>
<td>B2B</td>
<td>Business to Business</td>
</tr>
<tr>
<td>C2G</td>
<td>Citizen to Government.</td>
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<tr>
<td>EMACS</td>
<td>Electronic Messaging and Collaboration System</td>
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<td>G2G</td>
<td>Government to Government.</td>
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<td>G2C</td>
<td>Government to Citizen.</td>
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<td>G2B</td>
<td>Government to Business.</td>
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<tr>
<td>GCCN</td>
<td>Government Common Core Network</td>
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<td>GITS</td>
<td>Government Information Technology Services</td>
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<td>GOK</td>
<td>Government of Kenya</td>
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<td>ICT</td>
<td>Information and Communication Technology.</td>
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<td>IFMIS</td>
<td>Integrated Financial Management System.</td>
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<tr>
<td>ISP</td>
<td>Internet Service Provider</td>
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<tr>
<td>SAN</td>
<td>Storage Area Network</td>
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<tr>
<td>WAN</td>
<td>Wide Area Network</td>
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<tr>
<td>XML</td>
<td>eXtensible Mark up Language</td>
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ABSTRACT:

This study set out to examine the role of Information Management in supporting e-Governance at the Ministry of Finance, Kenya. The study objectives were; to examine the extent to which the e-Governance strategy has been adapted in the Ministry of Finance, to examine the status of e-Readiness within the Ministry of Finance and its contribution to the e-Governance strategy, to find out what constitutes Information Management within the Ministry of Finance and the extent to which this is appreciated and supported by top management and staff in general, in addition it was also to find out the extent to which Information Management is incorporated in the Ministry of Finance’s e-Governance strategy, to examine the benefits and challenges of implementing both e-Governance and Information Management within the Ministry of Finance and to propose an Information Management and e-Governance framework for the government. The study was based on the e-Governance Maturity Model (Gartner) which was formulated by an International e-business Research Consultancy firm in the year 2000. The study was confined to selected departments in the Ministry of Finance. Both Qualitative and Quantitative research methods were used in this study. Stratified random sampling method was used to ensure representativeness of the research study. Among the key findings of the study were issues related to improvement of service delivery and infrastructure, increased transparency and accountability as well as development of human capacity for support and sustainability. The study concluded that the Ministry of Finance as a Government Institution that plays a key role in economic development of the country needs to implement a proper Information Management and e-Governance framework that will provide guidance towards effective and efficient service delivery both to the citizens of Kenya and staff. Among the recommendations made focused on sensitization of staff, creation of a centralized unit for Information Management and e-Governance, and improvement of network infrastructure and security.
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First and foremost, I thank the Almighty God for giving me the strength to work on my thesis. I also would like to thank the Ministry of Finance, Government Information Technology Department for providing funds that enabled me to pursue my Master’s degree. I am particularly grateful to the Director, GITS and the Head of training, GITS who encouraged and supported me throughout my studies. Many thanks to my colleagues who played a big role in making this a success. Special thanks go to my supervisors Prof. Justus Wamukoya and Dr. David Gichoya who tirelessly assisted me with my research work. To my mum and sisters, a special thanks for your understanding and support. May God bless you.
CHAPTER ONE

BACKGROUND TO THE STUDY:

1.0 INTRODUCTION
This chapter presents the background of the study, Statement of the problem, Aim, Objectives, Research Questions, Research Assumption, Significance, Scope and Limitations of the study.

1.1 INFORMATION MANAGEMENT
Information Management is a widely used term in many organizations. It can be defined as the collection and management of information from one or more sources and the distribution of that information to one or more audiences. Information Management is both a strategy, driven by customer needs and an infrastructure shaped by technology, for handling and distributing information. It crosses both disciplinary and administrative boundaries.

Information Management is and was an important component in the rise of the modern information society. It is therefore no wonder that today Information Management uses modern technology. Laffan describes Information Management as:

> Information Management describes the means by which an organization efficiently plans, collects, organizes, uses, controls, disseminates and disposes of its information and through which it ensures the value of that information is identified and exploited to fullest extent.
Further Information Management is an interdisciplinary field that draws on and combines skills and resources from librarianship and information science, information technology, records management, archives and general management. It focuses on information as a resource, independent of the physical form in which it occurs. Books and periodicals, data stored on local or remote computers, microforms, audio-visual media and the information in people’s heads are all within its scope.

Information Management is concerned with how to provide what information to whomever needs it, when, where and why. So, which purposeful activities does Information Management serve in government? Why is it used? According to a recent study on electronic government “control systems traditionally serve three functions in management” (Fountain, 2001). These are:

- Efficacy [does it produce the desired outcome?]
- Alignment [does it conform to the agency goals?] and
- Strategy [does it enable flexible decisions?]

And which means does Information Management use to support governance needs? How is it used? According to Pearlson (2001), the methods used in government must transform business practices so as to meet governance requirements as follows:

- From cost reduction to performance improvement.
- From product differentiation to service specialization and
- From customer focus to client/constituency customization.
Information Management manifests itself in a variety of forms. These are: Database management, Library management, Archives management, Web Content Management and knowledge management to mention but a few. Information Management whether data or knowledge needs to be well organized and planned with its own personnel, programs and hardware/software technologies.

1.2 E-GOVERNANCE.

E-Governance can be defined as a collective term of governmental activities provided by digital processes using a computer network. E-Governance plays a key role in mediating between the government and members of the public and also between Government and private sector. Unlike e-Government which is mostly technology, e-Governance is uniquely linked to the responsibilities of government in a democratic society.

“E-Governance is much more than just the act of automation (computerization) itself” (Saxena, 2006). It is not just about executing administrative tasks but also about attaining individual interests. E-governance means real empowerment of citizens (Carlitz and Gunn 2002).

Different international bodies highlight the issue of governance as per their imminent interests and objectives. For example, the World Bank’s concern on governance is exclusively related to the contribution they make to social and economic development by economic and structural liberalization. Therefore, to them, e-Governance implies the use of ICT channels to change the way citizens and business interact with government to enable citizen’s involvement in decision making, increased access to information, more transparency and civil society strengthening.
The United Nations Development Programme (UNDP) relates the concept governance to that of sustainable human development. It views e-Governance as a process of “creating public value with the use of modern ICT.” Public value is defined as a notion “rooted in people’s preferences”. United Nations Development Programme’s perception of e-Governance is that it” It thinks e-Governance can “equip people for genuine participation in an inclusive political process that can produce public consent, the ever more prevalent basis for legitimacy of governments”

E –Governance is therefore a combined process of integration and interaction. Billions and billions of bytes of information find their way into this system by users. It requires sound technology and infrastructure to effectively access and use this ever growing information and knowledge database. E-Governance needs to maintain a powerful integrated hardware and software network.

Successful e-Governance model provides a platform where various communities and special interest groups represent themselves. It is a transition process from conventional to people-oriented proactive electronic system. This is a big change in the mind set of people and also a transition.

E-Governance is a partnership of people and administrators in conventional administration, the administrators are proactive and the people are reactive. Successful e-Governance requires both government and people to be proactive and interactive. E-Governance is a vehicle to create a knowledge society, which would lead to improvement of the common good for all.
E-Governance that lays too much emphasis on technology rather than on people and institutions is unlikely to have meaningful impact on governance and also on business processes. Richard Heeks, notes that “e-Governance” may be unhelpful by suggesting wrongly, that delivery of ICTs is an end in itself. It may be more appropriate to talk of “i-Governance” (integrated governance or perhaps intelligent governance) that places governance objectives in the driving seat, with ICTs seen as one part of the means to deliver those objectives alongside people, processes and information”.

1.3 INFORMATION MANAGEMENT AND E-GOVERNANCE.

Information Management and e-Governance have become key assets underpinning the work of any organization. Information distribution internally and to the public is becoming more and more crucial and important to government departments and agencies in this era whereby service delivery programs are online. Service delivery programs, filing of taxes, payment transactions for government services, downloading of passport forms, accessing websites for key information and obtaining licenses are just some of the thousands of examples in which the public seek information from government. The demands for different types of information range from simple to complex.

Stovensky, in the book Body of knowledge review: Information Management says that Information Management encompasses the processes and resources required to collect, manipulate, maintain, protect and retrieve information used in a business enterprise. Many governments are increasingly recognizing the importance of Information Management.
In Canada, the central agency, the Treasury Board Secretariat of Canada has developed a specific policy on how to approach the subject. There is a dedicated information division within the government online branch, also located in Treasury Board which deals solely with the subject. The Treasury Board is responsible for accountability and ethics, financial, personnel and administrative management, comptrollership, approving regulations and most Orders-in-Council. As the administrative arm of the Treasury Board, the Secretariat has a dual mandate: to support the Treasury Board as a committee of ministers and to fulfill the statutory responsibilities of a central government agency. It is headed by a Secretary, who reports to the President of the Treasury Board. The Secretariat is tasked with providing advice and support to Treasury Board ministers in their role of ensuring value-for-money as well as providing oversight of the financial management functions in departments and agencies.

The Secretariat makes recommendations and provides advice to the Treasury Board on policies, directives, regulations, and program expenditure proposals with respect to the management of the government's resources. Its responsibilities for the general management of the government affect initiatives, issues, and activities that cut across all policy sectors managed by federal departments and organizational entities. The Secretariat is also responsible for the comptrollership function of government. Under the broad authority of sections 5 to 13 of the Financial Administration Act, the Secretariat supports the Treasury Board in its role as the general manager and employer of the public service.

Much of government work has always involved information in the form of legislation, regulation, adjudication etc. Today as Government embraces modern technology in form
of computers and other formats. Managing information has to do with the transition from paper based record systems to electronic record keeping systems. Product and services depend on how information can be collected, maintained and exchanged. The greatest benefit of e-Governance is in its ability to reduce the operating costs, thus accelerating the processes between the government, its institutions and the citizens.

Electronic governance (E-Governance) offers an opportunity for governments to re-invent themselves, get closer to the citizenry and forge closer alliances and partnerships with diverse communities of interest, practice, expertise, conviction and interdependence within the context of national development agendas. The route to e-Governance is only now emerging as governments and citizens around the world experiment with and learn to exploit, new media and new information technologies. As a concept, e-Governance can be perceived to be contextually inclusive of Electronic Democracy (E-Democracy), Electronic Government (E-Government) Electronic Business (E-Business) and Electronic Services (E-Services) among others.

In Kenya Government information is mainly generated by ministries and departments, local authorities, judiciary, parastatal organizations, government institutions and commissions. This information is generated in a variety of formats such as paper, audio, video and other electronic formats and is subject to different levels of security classification depending on the institution involved. This means the information is not necessarily handled in the same way from ministry to ministry or department to department thus enabling the dissemination of information to be faster and efficient using more user friendly formats. All these developments have made information more useful
In supporting government programs, projects and services all of which have impact on the life of Kenyan citizens.

In the context of e-Governance, ICT plays a big role in enabling governance to take place. In March 2004, the Government of Kenya launched an ambitious three year (2003-2007) e-Government strategy in line with the national development and strategy for wealth employment creation. This initiative was a step in the right direction given the rapid changes taking place worldwide with the tremendous growth in computing power and networking technology which is transforming the way governments operate and do business. Government agencies such as Kenya National Bureau of Statistics, ministries such as The Ministry of Finance, Ministry of Planning, National and Development and Vision 2030 have the responsibility of not only compiling valuable information sources but also documenting these as reports that can be retrieved and used any time by both the government and citizens.

The Ministry of Finance since the year 2004 following the implementation of e-Government has tried through its management to embrace different methods and ideas in which Information Management can be handled efficiently and effectively. The introduction of management information systems, creation of an in-house database and also training of staff are some of the measures that have been initiated on with ideas such as establishment of e-Registries being floated.

Since the public relies a lot on information in the form of government reports and publications, it is important that this information and materials are well managed.
The current launch of the public service week 2008 from August 20\textsuperscript{th} to 22\textsuperscript{nd} is a case in point whereby Information Management and e-Governance within different ministries is given prominence with the intention of making the general public aware and in turn enabling efficient service delivery.

1.4 BACKGROUND INFORMATION ON THE MINISTRY OF FINANCE.

The Ministry of Finance derives its mandate from the Constitution of Kenya,( Cap VII, Sections 99-103) which provides for proper budgetary and expenditure management of government financial resources. In addition, Parliament has over the years enacted 49 Acts to which the Ministry of Finance is a custodian thereby adding more responsibilities to the Ministry.

The functions of the Ministry of Finance are strategic in several ways. As a main function, the Ministry is charged with the responsibility of formulating financial and economic policies. It is also responsible for developing and maintaining sound fiscal and monetary policies that facilitate socio-economic development. This responsibility makes the Ministry strategic and central to the country's economic management, as all sectors of the economy look upon the Ministry to create an enabling environment in which they can operate effectively and efficiently. The Ministry regulates the financial sector which is central to the development of the country and on which all other sectors depend for investment resources.

Another strategic responsibility of the Ministry is the management of revenues, expenditures and borrowing by the government. The Ministry must ensure that it mobilises adequate resources to support government programmes and activities.
Consequently, the Ministry has the task of developing sound fiscal policies that ensure sustainable budget deficits. In addition the Ministry must ensure that government expenditure is within the revenue collected to reduce domestic borrowing, which tends to cause negative ripples in economic management.

The Ministry is also strategic as far as bilateral and multilateral development financing and technical assistance is concerned. Given the need for support from development partners to enhance the country's economic recovery and poverty reduction efforts, the performance of the Ministry in effectively coordinating this support cannot be underscored. The Ministry must therefore, provide direction in the identification, planning and management of donor support to ensure that it is targeted to those areas of the economy that need it most.

The Ministry coordinates government ministries/departments in the preparation of the annual national budget. It is the responsibility of the Ministry to initiate and guide all ministries/departments to prepare their ministerial budgets. The Ministry also provides Accounting, Auditing, IT, Insurance, Pensions, Procurement, Clearing and Forwarding services, and Divestiture services among others to other government ministries/departments.

The Ministry has established an elaborate network through its established departments, and sector institutions, to effectively deliver on its mandate.

1.5 STATEMENT OF THE PROBLEM

The world evolved through various phases of development, starting with the Stone Age era where most of the tools human beings used were curved out of stone. Then came the
Agrarian era where the development was mainly centered on agriculture, followed by the Industrialization and currently Information Knowledge age. Amongst these eras, it is the Information Knowledge age that has spread so fast across the world.

Information Management is vital in ensuring smooth operation and service delivery in any organization. Globally, especially within the developing countries, the respective governments have made strides in embracing Information Management skills within their organizations, although much remains to be done.

In so doing, these organizations are in the process of embracing e-Governance that is revolutionizing the face of governments today by helping create transparency in processes, facilitating easier interaction between governments and citizens, increasing the speed and convenience of transactions and enhancing government revenues. As far as e-Governance is concerned, especially for most African countries including Kenya, this is a very new concept that is not yet fully developed or even appreciated. In Africa, it is only countries like South Africa, Botswana, and Tunisia that have made great strides in embracing e-Governance.

The Kenya Government generates a lot of information from different ministries, parastatal and other bodies. This information varies in format and is disseminated from different operational areas such as accounts, procurement, payroll, human resource, and hospital data and so on. The management of this information entails various activities including creating awareness on its availability and utilization. This calls for ease of accessibility in both the paper form (hardcopy) as well as the digital form by creating databases that can be interlinked to enable access of the needed information centrally.
With the introduction of e-Governance, Information Management largely entails the efficient and effective creation, capture, processing, maintenance and dissemination of information using ICTs.

Although The Ministry of Finance generates, utilizes and maintains a lot of information critical to Kenya’s economy, it’s yet to develop a clear Information Management Framework and strategy to enhance Information Management. This situation is likely to be complicated even further with the adoption of e-Governance besides other challenges listed below.

(i) Lack of adequate infrastructure.

(ii) Lack of adequate skills.

(iii) Lack of sufficient resources to procure the necessary facilities.

(iv) Absence of a policy framework and legislation on ICT – based operations.

The challenges enumerated above will inevitably impact on the implementation of e-Governance as the ministry grapples with these issues besides channeling a lot of resources in capacity building and modernization of the facilities.

Though the ministry has a number of professional staff such as Information Technology Professionals, Accountants, Librarians, Economists and many more, management systems such as IFMIS have in certain cases failed, paralyzing the whole government financial management system which largely depends on IFMIS when making payments. This is a problem and a challenge that normally takes place especially when staff that are
conversant with the system are not available. Similar problems occur when dealing with other in-house systems such as Vote book System and Pension Management system.

Registry staff within the Ministry of Finance, who are directly responsible for filing and management of information, lack the necessary skills and competencies in Information Management and ICT skills which are key to proper maintenance of the information they receive. The unwillingness on their part and also negative attitude towards change has proved a big challenge and a hindrance to upgrading their skills.

The ministry’s website which ought to provide the most current information for both members of the public and the staff is not regularly updated. This has in many cases rendered the information on the website out of date and hence of no importance or assistance to the customer. The information needed by users is often not available and certain departments only have their names indicated with no details entailing what they do and the type of information they have.

The backbone of e-governance is the availability of an efficient and reliable infrastructure that will be accessible 24hours, 7 days a week. This coupled with skilled workforce and necessary business continuity measures ensure effective e-Governance. But as already pointed out, infrastructure issues remain a problem in the Ministry of Finance.

This study therefore set out to examine the role that Information Management and e-Governance play in delivering government programmes and services both within the Ministry of Finance and the Government as a whole.
1.6 AIM OF THE STUDY

The aim of this study was to examine the role that Information Management in general and e-Governance in particular play in supporting delivery of government programmes and services in the Ministry of Finance and to propose an Information Management and e-Governance framework for the enhancement of Information Management in the Ministry.

1.7 OBJECTIVES

To achieve the above aim the study had the following objectives:

1. To examine the extent to which the e-Governance strategy been adapted in the Ministry of Finance.

2. To examine the status of e-Readiness within the Ministry of Finance and its contribution to the e-Governance strategy.

3. To find out what constitutes Information Management within the Ministry of Finance and the extent to which this is appreciated and supported by top management and staff in general.

4. To find out the extent to which Information Management is incorporated in the Ministry of Finance’s e-Governance strategy.

5. To examine the benefits and challenges of implementing both e-Governance and Information Management within the Ministry of Finance.

6. To propose an Information Management and e-Governance framework for the government.
1.8 RESEARCH QUESTIONS

1. What does the Kenya government e-Governance strategy entail?

2. To what extent are the staff within the Ministry of Finance able to use Information and Communication Technologies?

3. What constitutes Information Management within the Ministry of Finance?

4. Do the top management and staff appreciate and support Information Management?

5. To what extent has Information Management been incorporated in the Ministry of Finance’s e-Governance strategy?

6. What are the benefits and challenges of implementing e-Governance and Information Management as a government strategy?

7. What should an Information Management and e-Governance framework entail?

1.9 RESEARCH ASSUMPTIONS.

1. Failure by the Ministry of Finance to realize its economic objectives could be attributed to lack of a proper Information Management Strategy and e-Governance framework.

2. Implementation of an Information Management Strategy by the Ministry of Finance may be key to the development of an e-Governance strategy in the Ministry of Finance.
1.10 SIGNIFICANCE OF THE STUDY

A review of literature reveals that there exists very little information concerning Information Management and e-governance in the Government of Kenya and more especially in government ministries. E-Governance as an emerging concept and practice worldwide seeks to put in place processes and structures for harnessing the potentialities of ICTs. Therefore, this study will be a significant endeavour in promoting Information Management and e-Governance in the Ministry of Finance. The study will be beneficial to the staff within the Ministry of Finance and the Information Communication Technology staff in E-Government, Cabinet Office when using ICT. It will also serve as a future reference for researchers on the subject of Information Management and e-Governance.

1.11 SCOPE OF THE STUDY

The study focused on the Ministry of Finance using selected departments such as Government Information Technology Services Department, Human Resource Management Department, Accounts Department, Budgetary Department, Registry Department and Library Department. E-Government, Cabinet Office was also part of the study.

1.12 LIMITATIONS OF THE STUDY.

The researcher observed that a lot of literature has been written on Information Management and e-Governance globally. However, much of the literature was very broad, with little focus on Kenya. The few individuals who have written on this subject had restrictions placed on their documents making it difficult to access these articles.
The scope of the study also limited the researcher to five departments within the Ministry of Finance and Information Communication Technology Officers working in E-Government, Cabinet Office.

Time constraints was also another limitation that the researcher experienced when conducting this study.

DEFINITION OF TERMS.

Information Management:

Procedures, which may be technical, analytical or strategic, for optimizing the use of information.

Electronic Governance (E-Governance)

Giving citizens the choice of when and where they can access government information and services through the use of information and communication technologies.

Electronic Business (E-Business)

This refers to a broader definition of Electronic commerce, not just the buying and selling but also servicing customers and collaborating with business partners, and conducting electronic transactions within an organizational entity.

Electronic Democracy (E-Democracy)
This refers to the processes and structures that encompass all forms of electronic communication between Government and the citizen. It is one of the most difficult feature of e-Governance to generate and sustain.

**Electronic Government (E-Government)**

It refers to the processes and structures pertinent to the electronic delivery of government services to the public. It is the use of information and communication technology to support government operations, provide investments that are needed in people, tools, policies, processes, engage citizens and provide government services.

**Electronic Procurement (E-Procurement)**

E-Procurement is the business to business (B2B) purchasing of goods and services through the Internet.

**Electronic Readiness (E- Readiness).**

This is the ability to use Information and Communication Technologies (ICT) to develop one's economy and to foster one's welfare.

**Electronic Services (E-Services).**

An umbrella term for services on the Internet. E-services include e-commerce transaction services for application service providers (ASPs) and any processing capability that is attainable on the web.
Information and communications Technology (ICT)

ICT (information and communications technology - or technologies) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. ICTs are often spoken of in a particular context, such as ICTs in education, health care, or libraries.
CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter has provided a theoretical framework upon which the study was based. Literature relevant to the study was reviewed and an analysis of these studies provided.

2.1 DEFINITION AND PURPOSE OF LITERATURE REVIEW.

A literature review is a “critical analysis of a segment of a published body of knowledge through summary, classification and comparison of prior research studies, reviews of literature and theoretical articles.” (Wisconsin)

A literature review surveys scholarly articles, books and other sources (e.g. dissertations, conference proceedings) relevant to a particular issue, area of research, or theory, providing a description, summary and critical evaluation of each work.

The purpose of literature review is to convey to the reader what knowledge and ideas have been established on a topic and what are the strengths and weaknesses. The literature review allows the reader to be brought up to date regarding the state of research in the field and familiarizes the reader with any contrasting perspectives and viewpoints on the topic. Literature review helps a researcher to:

- Place each work in the context of its contribution to the understanding of the subject under review.
- Describe the relationship of each work to the others under consideration.
• Identify new ways to interpret and shed light on any gaps in, previous research.
• Resolve conflicts amongst seemingly contradictory previous studies.
• Identify areas of prior scholarship to prevent duplication of effort.
• Point the way forward for further research.
• Place one’s original work (in case of theses or dissertations) in context of existing literature.

This chapter reviews the necessary literature touching on Information Management and e-Governance globally but paying particular attention to developments in the Ministry of Finance, Government of Kenya. Theories and models critical to both Information Management and e-Governance are presented and analyzed in this chapter.

2.2 THEORETICAL FRAMEWORK

“Having a theory” is today the mark of research seriousness and respectability. A “good” theory is one that matches well our perception of whatever the theory is about. The closer the match, the better the theory is. (Buckland, 1991).

A model can be defined as a representation containing the essential structure of some object or event in the real world. Meanwhile, theoretical framework can be defined as structure of concepts which exist in the literature, a road-map for the study.

Some of the theories and models examined/discussed in this study besides the e-Governance Maturity model were:
Theory of Motivated Information Management (TMIM)

This theory was developed by Afifi W.A. and Weiner J.L (2004). The theory proposes a three phase process of Information Management in interpersonal encounters, emphasizes role of efficacy, and brings attention to interactive nature of Information Management. It aims at making sense of the ways in which individuals manage information. This theory has a Social-Psychological framework that has had success predicting information seeking decisions.

Whereas some of the components of the model could be of relevance, this theory did not cover aspects such as computers and communications networks which are key components of the present study. Because of this, this model was found in adequate for the study.

Zwahr and finger e-Governance model

This model was developed by Thomas Zwahr and Mathias Finger (2005). This model was built under three major concepts namely:

- Information and Technology as key drivers of state transformation
- Emerging pressures on government and public administration and
- The magnitude of e-Governance.

This model takes into account four major dimensions of e-Governance i.e. the level at which the transformation is taking or has taken place; the actors in e-Governance and e-Government (i.e. the public and private sector); the functions performed in e-Governance (i.e. service delivery, policy making and regulation) and technology that is used in enabling e-Governance.
Although this model dealt with e-Governance issues, it involved broader issues when it came to use and regulation of ICTs. This would prove difficult for a country like Kenya which is still in its nascent stages of development, currently Kenya is ranked at level two of the e-Governance development stages i.e. interaction stage.

2.3 e-GOVERNANCE MATURITY MODEL (GARTNER)

The e-Governance maturity model was formulated by an international e-business research consultancy firm in the year 2000. It is a four phased model that is an appropriate reference tool that governments can use to determine where a project fits in the overall evolution of an e-Governance strategy.

In most cases, governments start with the delivery of online information but soon public demand and internal efficiency ask for more complex services. Some services will be online earlier than other services. In some cases the public demand is the driving force; in other cases cost saving aspects for the government are the priority.

Governments are increasingly looking to cutting down on operating costs and improve delivery of services to citizens and employees. The focus is slowly shifting towards giving self service process improvements through online web based applications. The three main target groups that can be distinguished in e-Governance concepts are government, citizens and businesses/interest groups. These are represented as:

- Government to Government (G2G)
- Government to Citizens (G2C)
- Government to Business (G2B)
G2G interactions and dealings are required for planning, decision support and implementation of its action plans. It requires single interface to government offices and staff, to effectively carry out functions like human resource management and financial resource planning in an integrated environment.

G2C is basically serving customers on the web. The customers need not to visit the government departments with photocopied documents.

G2B is whereby the business community services come in handy so as to assist and help the government implement various plans and projects. Services like e-procurement, e-payment and project monitoring and implementation form part of this model.

**Figure 2.1: An e-Governance model:**
**G2C, G2B, G2G interactions.**

The above model is a general model illustrating the interactions involving the government, citizen and businesses. It does not capture issues related to information in an in depth manner but mainly deals with the technological and Communications infrastructure.

However, according to e-Governance maturity model, e-Governance matures in four phases which are as follows:

- **Early 90s**  
  Information → Presence

- **Mid 90s**  
  Interaction → Intake process

- **Present**  
  Transaction → Complete transaction

- **Future**  
  Transformation → Integration and organizational changes

In each of the four phases, the delivery of online services and use of ICTs in government operations serves one of the core aspects of e-Governance.
FIGURE 2.2: e-GOVERNANCE MATURITY MODEL (GARTNER, 2000)

Increasing value to Citizen/Business

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 4</th>
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<tr>
<td>Information</td>
<td>Interaction</td>
<td>Transaction</td>
<td>Transformation</td>
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Using the above model does not mean that all institutions will have to go through all phases at the same time. In other words, The Ministry of Finance may be in Phase three while another Ministry is in phase two.

In the first phase, e-Governance means being present on the web, providing the external public (G2C and G2B) with relevant information e.g. the public may want to know what is in the budget speech for a particular financial year. The value to the public is that government information is made publicly accessible; processes are described and become more transparent, which improves democracy and service delivery. Internally (G2G) the government can also disseminate static information through electronic means, such as the internet.
In the second phase, interaction between government and the public (G2C and G2B) is stimulated through various applications. Citizens can ask questions via e-mail and can also download all sorts of forms and documents. These functionalities save time.

The third phase highlights increased complexity of the technology, thus pushing customer (G2C and G2B) value also higher. Complete transactions in this phase can be done without going to an office. Examples of online services are filling income tax forms, filling property tax, extending/renewal of licenses, visa and passports applications as well as online voting. This phase is made complex because of security and personalization issues e.g. digital (electronic) signatures which are necessary in legal transfer of services.

The fourth is the transformation phase in which all information systems are integrated and the public can get G2C and G2B services at one (virtual) counter. One single point of contact for all services is the ultimate goal.

2.4 RELEVANCE OF e-GOVERNANCE MATURITY MODEL.

As pointed out earlier, Information Management is all about policies and procedures, which may be technical, analytical or strategic, for optimizing the use of information. E-governance on the other hand is about giving citizens the choice of when and where they can access government information and services. In both cases, information plays a big role.

The e-Governance maturity model is therefore deemed to be of relevance to the study because information is a key factor in all the four phases of the maturity model.

By adapting the Gartner Model, the Ministry of Finance, it will not only maximize access to information but will also greatly reduce the massive paper trail often associated with
various government ministries. This will help the ministry provide direct and the right information to the right people at the right time.

This model will also enable the Ministry retain information not only as an asset of the institution but also the entire population. This will help departments within the Ministry of Finance in decision making, since they will be able to tell which phase they are in and what steps they need to take to improve on service delivery.

The use of this model will enable the Ministry of Finance come up with solutions on how to deliver its services on a 24/7 day basis. This will enable citizens and employees to receive immediate response of any application sent electronically. At the same time, users will be able to download forms or documents online.

The information provided on the Ministry’s website will be transformed to dynamic content, providing the latest news, announcements and services offered by the Ministry. Web managers will be responsible and answerable for the information available on the site whether internal (G2G) or external (G2C, G2B).

In future, this model will also serve as a reference for other government ministries to determine where their projects fit in the overall e-Governance strategy.

This study has also been informed by various sources/studies such as:


The challenges of e-Governance in Africa: the overall context and the role of e-Government in the New partnership for Africa’s Development (NEPAD) initiative.

2.5 RELATIONSHIP BETWEEN INFORMATION MANAGEMENT AND e-GOVERNANCE.

Information is increasingly being created, stored, distributed or published in a variety of electronic media and formats such as floppy disks, network drives, CDs, DVDs, online on the internet and intranets and in electronic mail. All of these formats contain important information that may be essential for e-Governance.

E-Governance is the public sector’s use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision making process and making government more accountable, transparent and effective (UNESCO).

It therefore would be right to state that well managed information well managed, assists in the achievement of e-Governance goals such as improvement of organizational processes of governments, better information and service delivery, increased government transparency in order to reduce corruption, reinforce political credibility and accountability and promote democratic practices through public participation and consultation.
2.6 INFORMATION MANAGEMENT AND E-GOVERNANCE: THE GLOBAL CONTEXT.

Information Management addresses issues of information flow within an organization and what information users require to conduct their daily work. The use of ICT as an aid to Information Management is nothing more than a sign of the times, as information technology is not a perquisite for Information Management. However, in this age of competition where most organizations use technology, one cannot afford to ignore technology advances. Technology is also used to provide the user with fast and easy access to information. This is a further indication of the continent’s growth of e-Governance.

The transformation in the developed (first) world from an industrial to an information society has been in progress for the last twenty-five years. The majority of employed individuals now work with information rather than in production of goods. We are now in an era where the global economy is built on information rather than on industry.

Aiyepoku (1991) perceives information as mankind’s accumulated knowledge, derived from all subjects that could help its users reduce their levels of uncertainty. This being the case, e-Governance plays a big role in ensuring that users access whatever information they need promptly.

Information is at present believed to be a fifth factor of production which is by no means equal to land, labor and capita disagreeing with this view, Brandin and Harrison (1987) observe that “information wealth in now a new type of capital described as knowledge capital”. In the same vein, Drucker (1969) noted that the systematic and purposeful
acquisition of information rather than science and technology was emerging as the new foundation for work, productivity and effort throughout the world.

Bergdahl (1989) further says that information has become such a precious resource that the fate of modern nations in all essentials is connected with their capacity to develop and exploit it. He further predicts that in future, countries that do not develop this capacity will be left behind in the cultural, scientific and economic development. Apart from suffering from dependence on others such countries will neither be partners in the global production of information nor will they contribute meaningfully to the common future of civilization.

Technology was introduced to try to resolve some of the difficulties inherent in corporate environments where 80% of corporate information was to be found in documents and email rather than structured database records (Megill, 1997) and thus was difficult to retrieve. This was termed ‘Information Management’ or ‘document management’ as it drew together people from wide professional backgrounds including Librarians, Record Managers, Archivists and Computer Scientists.

Today web based information technologies continue to proliferate and strongly influence the information environment e.g. Extensible Markup Language or XML (world wide web consortium) makes it possible to convert information among many different display format without losing coherence, structure and meaning (Gil – Garcia et al.2007) and thus assisting information sharing across both systems and organizations.

Throughout the world, there has been the rapid growth of Information and Communication Technologies (ICT) which are transforming the generation and delivery
of public services, thereby reconfiguring relationships between government and citizens (G2C), governments and business (G2B) as well as within governments (G2G).

The concept of e-Governance describes the convergence between trends resulting in new ways of governing via new information and communication channels. E-Governance is rapidly finding favor with governments across the world. By using internet and modern communication technology, governments can hope to reach out to the populace in large numbers.

E-Governance models are built around objectives that include better use of information, quicker dissemination of information, transparency in government-people transactions and creating services that cover a broad spectrum of society as possible.

As the situation is today, the leading e-Governance issues for state and local officials are more complex and deeply embedded in social and organizational context. Networks continue to connect vast amounts of data from an increasing number of sources, with impacts on social, political and economic geographies of governance. Security has taken a renewed importance associated with increasing dependence on massive databases and networks and a related need to protect individuals, organizations, systems and infrastructure from fraud, errors, hackers and attacks. Concern for service delivery has also grown and issues such as effective management, information technology investment and public access are deeply considered.

Given the nature and pace of technological change worldwide, ICT strategies, tools and innovations will continue to shape the information environment of governance,
technology development, social trends, policy responses and public management adaptation will continue to provide a dynamic field for learning and action.

2.7 INFORMATION MANAGEMENT AND e-GOVERNANCE IN AFRICA

According to a research study undertaken in 2001 by the UN Division for Public Economics and Public Administration (UNDPEPA) and the American Society for Public Administration (ASPA), several global and regional trends have been mentioned. The developing countries in which Africa falls, have been slow in accepting a coordinated approach to e-Government implementation. This is particularly true for countries in Sub-Saharan Africa.

Africa’s experience with ICTs has unfortunately taken a different path from most of the world, making the management of information ineffective. However, the contexts and institutional framework within African countries are changing rapidly, reflecting their commitment to the information society. Many reforms have been introduced and measures taken by policy makers and telecommunications operators. A good example is the recent trend and developments of mobile technologies.

The fact that ICTs are increasingly integrated into development programmes of African countries is confirmed by their prominent position in the New Partnership for Africa’s Development (NEPAD). Recent developments in ICTs have opened up Africa to exciting possibilities for public administration, in particular, and governance in general. The appropriate use of ICTs in managing public services and governing state affairs has therefore become a necessity. This is well recognized by the New Partnership for Africa’s Development (NEPAD) and in particular African ministers with responsibility for the
public services. The establishment of e-Africa commission of NEPAD, focusing on a range of areas pertinent to ICTs implementation, from policy to e-applications, as well as the identification of good governance as a focus for capacity building within NEPAD, reflect the importance given to building the capacity of African states to function more effectively through the use of ICTs.

In the early years, managing information was solely done by Librarians and Archivists. In doing this, both the Librarian and Archivist had to contend with both internal and external difficulties. In the past decade, African economies have nose-dived to very pitiable levels owing to bad governments, military dictatorship, armed conflicts and general restlessness of the population and natural calamities including desertification, flooding, epidemics and global inflation.

“Good information according to Kaye (1995)”, improves decision making, enhances efficiency, and provides a competitive edge to the organization which knows more than the competitor”. The situation in Africa is not very encouraging since both the public and private sector are experiencing difficulties with Information Management.

Governments and their agencies hardly rely on hard information for their development activities, the available information mostly lie and gather dust on shelves of the originators of this information.

Modern Information Management requires a fairly well developed information infrastructure especially electricity and the telephone. These basic infrastructures which are already taken as of importance in the developed world are unfortunately poorly provided for in African states. However, the people who are emerging in the new ICT
culture live and think in networks, where everyone has access to every other node, and persuasion is the new currency of cooperation. For them, all the old techniques and truisms are open to question. The following quote epitomizes their outlook.

One of the most pervasive discussions in the literature of computerization is the notion that information is something to be stored and forwarded, as though it were just another packaged good. It is not. Information is a property of a situation, not to be understood other than in the context of one’s own and someone else’s purposeful activity. Beyond the utilitarian value, there is a transaction, and since transactions are the fabric of organization, it is out of information flows that organization is created (Taylor & Van Every).

At the root of the changes in relation to ICTs, is a dramatic fall in cost of handling and transmitting information. Almost every business process involves information in some form: An instruction, a plan, an advertisement, a blueprint, a set of accounts. All this information can be handled and shared far more cheaply than before when using ICTs.

In Africa, many countries are now developing national ICTs strategies that in some cases are already producing positive results and are leading (or can lead) to success in the future. Some examples of these countries are; Egypt, Ghana, Kenya, Mauritius, South Africa and many more. Projects are also coming up, often supported by international donors and agencies.

Successful e-Governance projects in Africa can be found in countries such as:

- Ethiopia where they established distance learning for civil servants, training them in the use of ICT. This project is based in Addis Ababa.
• The online Zambian legal information portal (Zamlili) is another example of a successful project. It is an online collection that relates to Zambian legal and constitutional issues.

• Uganda has a parliamentary technical assistance project which was introduced to assist the parliament of Uganda.

• In South Africa, the cape gateway portal provides web based information about government services and departments structured according to users’ life events. They also have the independent electoral commission voter registration system. This is a satellite enabled network which enables the commission to register voters, relay, collect and verify ballots and relay election results across the country.

• Cameroon has successfully developed a tax portal. This site contains tax related data and guidance.

• In Ghana, the environmental information network aims to strengthen effective networking between various environmental agencies and Non –Governmental Organizations (NGOs)

Many other countries in Africa though not mentioned above are also embarking on ICT strategies and programmes e.g. Burkina Faso, a country with very low ICT penetration, already has some government services online.

2.8 INFORMATION MANAGEMENT AND e-GOVERNANCE IN KENYA.

Government information in Kenya is used in many ways including decision making, budgetary, government policies, poverty eradication and scientific research to mention
but a few. This information needs to be managed well and in the most effective and efficient manner so that the citizen can be able to satisfactorily access it.

As earlier mentioned e-Governance is the use of ICTs, and especially the internet, to adopt a new conception and attitude of governing and managing where participation and efficiency are required of all the partners linked in a network.

One is therefore left with questions on how the government offices and organizations handle their information and more so in this time and age whereby e-Governance has been introduced to reduce the digital divide and corruption in the country.

Heeks deconstructs e-Governance into three aspects: improving government processes (e-administration), connecting citizens (e-citizens and e-services) and building external interactions (e-society).

With the above mentioned, one would assess if the government services have improved and administration has become efficient.

To bridge the digital divide, we have to make government agencies and their customers – who include other government agencies, businesses and individuals get Information Technology comfortably through e-Governance.

Countries that have harnessed the potential of Information and Communications Technologies (ICTs) have attained significant social and economic development. The Government of Kenya therefore, recognizes the role of ICTs in the social and economic development of the nation and has promulgated a national ICT policy based on the
Economic Recovery Strategy for wealth and employment creation (2003-2007). The policy is based on four guiding principles:

- Infrastructure development
- Human resource development
- Stakeholder participation
- Appropriate policy and regulatory framework.

In the recent years, Kenya has witnessed significant growth in ICT sector. A lot of developments have taken place as demonstrated by the number of telephone lines, Internet Service Providers (ISPs), the number of internet users, broadcasting stations and the most recent is the fiber optic cables. All this has helped in the management and transfer of information from the urban to rural areas of the country. The government has liberalized the mobile cellular market and currently there are four mobile cellular operators in the country.

The Kenya e-Government strategy was approved in January 2004 and in March of the same year it was published. It is linked to the mandate and pledge made by the government to change the lives and livelihoods of citizens for the better. Some of the services include the ability of citizens and businesses to file tax returns and make claims online, download housing loan forms, public service forms for job applications and for government to undertake police operations online.

The Organization of Economic Co-operation and Development (OECD, 2003) regards the use of ICTs and particularly the internet, as a tool for achieving better government
and observes that the impact of e-Government at the broadest level is simply better
government.

Currently, almost all government ministries and parastatals have websites. These
websites provide largely static information on thematic functions of government and
some provide downloadable forms. One does not need to physically go the Public Service
Commission to get an application form since it is now possible to download the form and
apply online.

Many of the ministries have clearly spelt out their functions and duties on the websites
and downloadable policy papers are also now available online. This initially was not
possible since very few ministries had the necessary infrastructure and human resource
capacity to assist in this. Now jobs are also advertised online unlike before when this was
either done internally or in the Daily newspapers.

The government has indeed tried in its own way to improve on the service provision to
citizens and thus the creation of an institutional structure for coordinating and overseeing
the implementation of e-Government. This office is based at the Cabinet Office and is
headed by the ICT Secretary. The ICT Secretary directly supervises the work undertaken
by other ICT Heads in different ministries. The ICT Heads in ministries, review ICT
projects in the ministries they represent, undertake audits of Information Technology
Capacity, establish support to the ministries’, policy mandate, identify technical and
institutional gaps and inadequacies and make appropriate recommendations.

Examples of some of the ministries with important information online that can be
accessed are:
• Ministry of Finance (Treasury, Kenya)
  From this website information relating to the budget, Economic reviews and Finance bill can be downloaded.

  Both the abridged English and Swahili version of Vision 2030 can be downloaded from the ministry’s website. Other downloads such as Economic Survey are also available.

• Ministry of immigration (Immigration, Kenya).
  Guidelines on the requirements needed to get a passport and visas are indicated. It is now possible to download forms PP1 for persons over 16 years and form PP2 for children under 16 years.

• Ministry of Housing, Kenya.
  It is now possible to download mortgage loan forms and also get information relating to housing within the country.

• Ministry of Foreign Affairs, Kenya.
  This website has information relating to foreign missions in Kenya and Kenya missions abroad.

• Ministry of Youth Affairs, Kenya.
  This website has information related to youth affairs in Kenya. One is now able to download information in relation to youth programme week and youth fund reports.

• Ministry of education, Kenya.
This website has information related to educational issues across the country. Some information you can get online are online results, list and functions of semi-autonomous government agencies, free primary education and free secondary education.

Entrenched graft is one of the biggest impediments to delivery of government services since information cannot be accessed in a convenient and open manner. Corruption reduces the efficiency of service delivery, slows down the economy and discourages foreign investments. Kenya through the Kenya Anticorruption Authority (KACA) was established to fight corruption. Information Technology Standards Association (ITSA) of Kenya launched an electronic graft management pilot project which has been used to increase public awareness and encourage public participation in fighting corrupt practices. This pilot project uses the internet and email as the channel for communication by the public for reporting. This is a development that is slowly picking up within the country although results cannot be said to be very evident.

2.9 INFORMATION MANAGEMENT AND e-GOVERNANCE IN THE MINISTRY OF FINANCE.

There is no dispute that “Electronic Governance” is gradually being accepted and entrenched in the civil service and public administration. This has affected the way in which information is managed within the ministries since ICT now plays a big role in the management of information. The Ministry of Finance has not been left behind in this development and is thus striving very much to improve on its Information Management through e-Governance.
The functions of the Ministry of Finance are strategic in several ways. As a main function, the Ministry is charged with the responsibility of formulating financial and economic policies. It is also responsible for developing and maintaining sound fiscal and monetary policies that facilitate socio-economic development. This responsibility makes the Ministry strategic and central to the country’s economic management, as all sectors of the economy look upon the Ministry to create an enabling environment in which they can operate effectively and efficiently and thus the importance of proper Information Management and e-Governance. The Ministry regulates the financial sector which is central to the development of the country and on which all other sectors depend for investment resources. ICT currently being a major issue in government operations especially with the growing focus on creating an electronic based transaction government (e-Government) has not only forced the Ministry of Finance to embark on many changes especially in the ICT area but to effect improvements to the Ministry’s ICT infrastructure. The ICT docket in spite of it being run from MOF is not a single sector issue but a multi-sector concern throughout the government. Whenever Information Management and e-Governance are mentioned, it is important to note that ICT plays a very important role for anything to be achievable. Government Information Technology Services (GITS) Department which is based in the Ministry of Finance deals with ICT functions which entail ensuring and maintaining ICT standards within Government organizations. It further involves facilitating rapid national economic growth and development through appropriate application of Information Communication Technology for sustainable performance improvement and as well as increasing productivity/communications and provision of quality public services.
For effective management of information and improvements in e-Governance, the Ministry of Finance has adopted systems that are of assistance to both the staff and the public at large. These systems mainly deal with important information on financial and economic matters and assist the employees to retrieve information in an efficient and effective manner. They are:

2.9.1 INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEM (IFMIS)

This is a financial management information system application based within Treasury with a server in Herufi house (building next to treasury). It supports all the forty (40) ministries in the Government of Kenya in relation to financial issues such as:

- Support of vote book and Ledger Management System
- Data uploads & update of translation tables
- IFMIS upgrades
- Support of vote book management system in Ministries
- Development and Support of District vote book management systems
- Development and Support of Budget system in Budget
- Support of Reimbursement system in Pay Master General (PMG)
- Preparation of data for loading into IFMIS
- Monitoring and maintaining existing systems and General computer support
- Support of Ledger data capture system and RCS

The staffs who are mainly Information Communication Technology (ICT) Officers and Accountants also assist different ministries in aspects such as:
• Configuration of machines for IFMIS in Ministries
• Training of end-users in computer skills
• Wireless LAN Support
• System Administration
• Disaster Recovery Plan
• Network support/Trouble shooting
• Training of Clerks and Accountants who are still not conversant on the vote book management system(Headquarters and Districts)

2.9.2 GOVERNMENT COMMON CORE NETWORK (GCCN)

GCCN is a government cable network that connects all Government of Kenya buildings in Nairobi through fiber connectivity using fiber optic cables. The network transparently connects the identified government offices to each other with high quality e-services that enable the respective offices share resources.

GCCN supports critical government functions and thus is immune from malicious service and/or functional disruptions to which shared public networks are vulnerable (i.e. cyber attacks). This network offers bandwidth on demand services at user locations and is scalable to meet growth in overall network demand and/or peak requirements. It also has a high level of reliability and availability including trunk and access diversity and rapid response times for customer outages.

It also facilitates ICT business planning, shared infrastructure and skills and leverage for new technology opportunities.
The GCCN encompasses more than twenty-nine (29) buildings consisting of a total of thirty-four (34) links in seven (7) rings. Some of the Government buildings covered are:

- **Treasury** - Ministry of Finance, Ministry of Planning, National development and Vision 2030
- **Jogoo B** - Ministry of Education, Science and Technology
- **Afya** - Ministry of Medical Services, Ministry of Public Health
- **Nyayo Hse** - Ministry of Energy, Ministry of Immigration.
- **Ardhi** - Ministry of Lands, Ministry of Housing
- **Harambee House** - Office of the President, Directorate of Personnel Management.
- **Vigilance House** - Police Headquarters
- **State house**

All these buildings have Local Area Network (LAN), and both email services and internet that helps them share information.

The Pensions Department, for example, has its primary site in Herufi house and the secondary site in Treasury. These both connect to one hundred and fifty (150) Personal computers which are based in Bima House where the Pensions department is located. From these PCs, resources such as printers and also human resources can be shared to maximize resource by simply having one or two individuals charged with a specific duty.

Through the main networking unit which is based in The Ministry of Finance, GITS department and Government ministries are able to share resources especially when
dealing with matters such as design of LAN and WAN, provision of connectivity within the ministries and various Government departments as well as surveying of sites, preparing drawings for the sites and also preparing design documents used for bidding. This is especially important because it is a professional and technical area that requires a lot of expertise. The staff within the same unit also supervise the installations up to the point of testing and commissioning of the networks. Similar services are also provided to government bodies that wish to undertake similar projects

2.9.3 PENSION SYSTEM

This is a system that deals with the processing and payment of pensions, death gratuities and other benefits to retired, deceased or terminated officers in the Public Service as well as their dependants and legal representatives. This includes former East African Community personnel and those in the other state corporations.

Once claims are submitted to the Pensions Department they go through a process of verification, sealing and serialization to ensure that only valid claims enter the Pensions IT system. At this stage a claim may be queried and returned back to the parent Ministry/Department for correction (Treasury, Kenya).

2.9.4 VOTE BOOK MANAGEMENT SYSTEM

The Vote book System was designed to keep a comprehensive record of all the financial transactions leading to the expenditure of Governments Funds as allocated by the Head of Accounting Unit. The System resembles the manual Vote book system which is a kind of manual

Ledger. The Vote book Ledger is kept by every Authority to Incur Expenditure (AIE) holder, to
record all commitments and payments for each and every item of expenditure. The Data so entered
will become the basis of expenditure monitoring and control by the Heads of Accounting Units.

The System has been made simple in order to facilitate the speeding up the data entry of the transactions. The following Screens are used to start and run the system:

- The Payments Data Entry Screen
- The Commitments Data Entry Screen
- The Allocations Data Entry Screen
- The Reallocations Data Entry Screen
- The District Return Data Entry Screen.

(Vote book Management System User Guide: Developed by Government Information Technology Services)

2.9.5 **E-REGISTRY**

The electronic regulatory registry for business licenses (e-Registry) is one of the several integrated and mutually supportive measures endorsed by the Government of Kenya to establish a better regulatory business environment in Kenya.

This system was developed and is maintained by Economic Affairs department within the Ministry of Finance. The purpose of the e-Registry is to provide easy access to exhaustive information about business licenses and the formalities businesses must comply with to obtain the licenses. As an accessible, comprehensive and central registry of business regulation, contributes significantly to improving regulatory transparency and to reducing regulatory risk and uncertainty for businesses.
Here Kenyan businesses, large and small, can access detailed information on relevant business licenses and permits, including requirements, costs, application forms and contact details for the relevant regulatory agency. This web site is operated by the Business Regulatory Reform Unit of the Kenyan Ministry of Finance as part of the Government's ongoing efforts to improve the investment climate (Treasury, Government of Kenya).

2.9.6 **TREASURY E-MAIL AND WEB SERVICES**

Information Communication is the cornerstone of any successful business, and that goes double for e-mail and website services. Today Institutions and Organizations cannot afford to do without email services and web services. This is because when the website is down an organization loses business and customers. These services enable organisations deliver information and services to customers and partners round the clock. It is for this reason that the Ministry of Finance developed and hosted its Website to enable its clients update themselves on the current news within the ministry. Different departments have also posted important information on the Websites which can be downloaded freely from the website.

2.9.7 **ONLINE DIRECTORY**

This is a directory that contains all the names of the employees of the Ministry of Finance, and also those in the Prime ministers office and Ministry of Planning and Vision 2030. Their telephone numbers and extensions are indicated, departments within which they work and their email addresses are indicated in this directory making it possible for the officers to communicate with one another easily since the details are available online. The system has a number of advantages which include:
- Reduced cost: The system cuts the cost of paper, printing and binding as in the manual system since it is online.

- Ease of access: Since the Treasury, Bima, Herufi house and other Government buildings are connected to the internet, users are only required to log in and access the system.

- Faster retrieval of information: The system has a search tool, where users can query the database of officers, using their names or department.

- Constant and on-time updates: The administrator i.e. the telephone unit can update, remove or add new officers, department as soon as they receive an alert. He/ She will not have to wait until the scheduled time as in the manual system, which is done twice a year.

- More information about officers: The system provides additional information on the designation of the officers, their e-mail addresses and buildings where they are situated.

- Statistics collection: If accurate and constantly updated, the system is able to give statistics on the number and composition of officers in a given building or discipline.

2.9.8 COMMONWEALTH SECRETARIAT DEBT RECORDING AND MANAGEMENT SYSTEM (CS-DRMS)

Over the years, public debt management in Kenya was characterized by weak institutional arrangements with debt functions spread across departments of Ministry of Finance and the Central Bank of Kenya. In addition, debt management functions within the Ministry of Finance and the Central Bank of Kenya were guided by weak debt policy
framework and adhoc debt management strategies and thus the introduction of CS DRMS.

This is a database management system located within the Ministry of Finance. It covers three Departments namely Debt Management Department, External Resources department and Department of Government Investments and Public Enterprises. This system has drastically improved the quality of debt data, a pre-requisite for effective debt management operations. By June 2007, electronic data was made available online between the Ministry of Finance and Central Bank of Kenya upon the completion of the fiber optic link. (Ministry of Finance, Debt Management Department, Annual Public Debt Management Report).

2.9.9 ELECTRONIC PROJECT MANAGEMENT SYSTEM (E-PROMIS)

This is a system mainly run by the External Resources Department (ERD) within the Ministry of Finance. It ensures full involvement in appraisal of new projects and carries out continuous forecasting and analysis of resources inflows and disbursement to all projects and programmes. Through this system transparency requirements detailed by the Paris Declaration on Aid Effectiveness project management and accountability are achieved. So far, The Ministry of Finance and Treasury in Kenya have implemented training for an Electronic Projects Monitoring System (e-ProMIS) across the 42 government ministries. E-ProMIS is a system which allows all departments to monitor and evaluate government and donor funded development programs and projects.

This system has enabled the promotion of accountability and transparency by making all information on aid flows accessible online to all. It also provides the government with
essential, timely information on the progress and success of projects happening. Thus allowing the evaluation, policy making, and the compiling of reports for future project funding.

So far this technology has been implemented in 25 governments, each time customized to meet specific needs. This will enable transparency of information like never before; donors and governments will be informed and can jointly monitor developmental efforts in the country, which will inevitably lead to increased effectiveness of aid.

2.10 CONCLUSION

An attempt has been made to show the significance of the studies reviewed to the current research study. Information Management and e-Governance is of great significance to our institutions and the country at large.

Different countries and institutions view Information Management and e-Governance differently. The developed countries when compared to the developing countries are more advanced and have been in progress for the last twenty–five years. Information Management and e-Governance needs a fairly well developed information infrastructure such as electricity and telephone. The developing countries are unfortunately still lagging behind though there are signs of improvement in countries such as Malaysia, Ghana, Mauritius, Egypt, Kenya and South Africa.

An Information Management and e-Governance policy will enable efficient and effective service delivery within the Ministry of Finance and in future the most successful ministries will be those that meet the standards needed for good Information Management and e-Governance if they are to be considered an information society.
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter discusses the methodology used in conducting the study. It specifically examines the research design, study population and sample size, data collection procedures and data analysis methods.

Busha and Harter (1980) defines research methodology as the means, techniques and frames of reference by which researchers approach and carry out an inquiry while Kothari (2004) refers to it as “a way to systematically solve the research problem”. Kothari (2004) states that research methodology includes methods or techniques, the logic behind the use of the chosen methods or techniques, and why a certain method is preferred and not the other.

This chapter outlines the general methodology or design of the study. Specifically it examines the research design, the target population, sample design, data collection methods and data analysis techniques.

3.1 RESEARCH DESIGN

The research used both qualitative and quantitative approaches. This assisted the researcher in describing the situation as it is currently, and why it is the way it is.

Jacob (1998) states that qualitative research design emphasizes the importance of looking at variables in the natural setting in which they are found. Interaction between variables in this case is very important. Detailed data is gathered through open ended questions that provide direct quotations. The interviewer is an integral part of the investigation.
This differs from quantitative research which attempts to gather by objective methods, information about relations, comparisons and predictions and attempts to remove the investigator from the investigation (Smith, 1983). Tools such as questionnaires or equipment to collect numerical data are used.

Both qualitative and quantitative research design were of importance in this study. They enabled the researcher obtain information from the target population which was critical in the analysis of their views and responses.

This study also adapted the case study method. Moore (1983) reinforces advantages of case studies by stating that case studies provide a means of covering the problem in detail at acceptable cost.

Mugenda and Mugenda (1999) assert that, a case study is an in depth investigation of an individual group, institution of phenomenon. This study was an in-depth study because it dealt mainly with the Ministry of Finance in the area of Information Management and e-Governance and carried out thorough investigations.

3.2 TARGET POPULATION

This is the population to which the researcher ideally would like to generalize his/her results. This study mainly targeted employees working within The Ministry of Finance in selected departments such as Information Technology, Human resource, Accounts, Budgetary, Registry and Library. However, it also targeted some respondents from among ICT Officers working within the Directorate of e-Government, Cabinet Office which oversees all e-Government processes in all ministries in the government.
Due to the varying differences in numbers of the employees in the above mentioned departments, 10% of the target population from all the departments mentioned was used except for budgetary and the library departments in which the researcher targeted 20% from budget department and all Librarians working within the library because they were few in number as compared to the other departments. In addition the researcher interviewed the Permanent Secretary, Ministry of Finance, ICT Secretary, E-Government and other key informants. Interviews with these Senior officials concentrated on policy-related issues pertaining to Information Management and e-Governance among many others.

3.3 SAMPLE DESIGN

A sample design is a definite plan for obtaining a sample from a given population. The researcher used stratified random sampling which is a probability sampling method. Stratified random sampling is a modification of a simple random sample. However, in a stratified sample, the population is divided into layers or strata. It is useful when a population is characterized as heterogeneous but consists of a number of homogeneous sub populations or strata.

In order to select the respective departments and respondents of the study, the researcher looked into the role played by various departments within the Ministry of Finance in relation to Information Management and e-Governance. With a stratified random sample, the researcher was assured of representativeness. The sample consisted of employees from the Ministry of Finance and few respondents from e-Government, Cabinet Office. They were divided according to their professions and departments in which they worked. The strata therefore consisted of Information Communication
Technology Officers, Accountants, Records Officers, Human Resource Officers and Librarians as shown in the table below.

Table 3.1: The Ministry of Finance

<table>
<thead>
<tr>
<th>NO</th>
<th>DEPARTMENT</th>
<th>TOTAL EMPLOYEES</th>
<th>TARGET POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Government Information Technology Services</td>
<td>356</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>Human Resource Management</td>
<td>437</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>Accounts</td>
<td>236</td>
<td>24</td>
</tr>
<tr>
<td>4</td>
<td>Budgetary</td>
<td>68</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Registry</td>
<td>137</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>Library</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>1237</td>
<td>135</td>
</tr>
</tbody>
</table>

3.4 DATA COLLECTION

The researcher used both primary and secondary sources to collect data for this study. Primary sources are data collected for the first time through various data collection techniques including field and site reconnaissance, surveys and interviews, participant observation and participatory techniques. They are original, raw facts which must be analyzed and presented in appropriate form (Conyers and Hills, 1984).
Secondary sources provide second-hand information about events. This is data previously collected by others, which is available from published and unpublished sources such as government statistics, unpublished university manuscripts, published literature, local records and registries to mention but a few.

Data collection instruments included both questionnaires and interview schedules. Since majority of the respondents worked within The Ministry of Finance and The Directorate of e-Government, Cabinet Office, it was anticipated that they will be willing and ready to answer the questions with sincerity and without delay.

Secondary data in the form of reports, journals, other empirical researches and other relevant documents were used to supplement primary data.

3.5 ETHICAL CONSIDERATIONS
As this study required the participation of human respondents, certain ethical issues were addressed. This was necessary for the purpose of ensuring privacy as well as safety of the participants. Among the significant ethical issues that were considered in the research process included consent and confidentiality. The researcher relayed all important details to the respondents in order to secure their consent. With this, the participants were not forced to participate in the research. The confidentiality of the participants was also ensured by not disclosing their names or personal information in the research.

3.6 DATA PRESENTATION, ANALYSIS AND INTERPRETATION.
Data Analysis helps us to investigate variables (characteristic or attribute of study object). The data after collection has to be processed and analyzed in accordance with the outline laid down at the time of developing the research plan. Data interpretation involves stating
what the results show, their meaning and significance in relation to the problem under study.

The data after collection was thoroughly examined and checked for completeness and comprehensibility and finally summarized.

3.7 VALIDITY AND RELIABILITY OF RESEARCH INSTRUMENTS.

The need to taste the content validity of research instruments was inevitable. A valid instrument is one, which can measure what it is supposed to measure, in this case to ascertain that the items produced are relevant to the study. The research instruments were piloted within the Ministry of Finance and The Directorate of e-Government, Cabinet Office to evaluate the validity and adequacy of the instruments.

The pilot was intended to test the validity of the instruments and their suitability to collect data, identify shortcomings and if necessary make adjustments accordingly before the actual data collection process begun.

Reliability refers to the extent to which a measuring instrument contains variables errors that appear inconsistently from observation to observation during any one measurement attempt or that vary each time a given unit is measured by the same instrument (Nachmias and Nachmias, 1996).

Reliability can be defined as the degree to which an instrument accurately and consistently measures whatever it measures (Powell, 1997).

To ensure that the instruments designed yielded relevant information to answer the research questions, Both interview schedules and questionnaires were pilot tested by use
of test retest method on five respondents. Three from the Ministry of Finance and two from The Directorate of e-Government, Cabinet Office.

3.8 CONCLUSION

This chapter dealt with the methodology of the study mainly touching on areas such as the research design, the target population of the study, sample design, data collection method, data analysis and interpretation and validity and reliability of the research instruments.

Data was collected through interviews and questionnaires. This was done through stratified random sampling in which the researcher was assured of representativeness.
CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 INTRODUCTION

The presentation, analysis and interpretation of research studies vary according to the context of use. This chapter presents, analyses, and interprets the research findings of the study based on the study objectives and research questions. The findings have been analyzed and tabulated.

This study was carried out to examine the extent to which e-Governance strategy has been adapted in the Ministry of Finance, to examine the status of e-Readiness within the Ministry of Finance and its contribution to the e-Governance strategy, to find out what constitutes Information Management within the Ministry of Finance and the extent to which this is appreciated and supported by top management and staff in general, to find out the extent to which Information Management is incorporated in the Ministry of Finance’s e-Governance strategy, to examine the benefits and challenges of implementing both e-Governance and Information Management within the Ministry of Finance and lastly to propose an Information Management and e-Governance framework that can be adapted and customized for implementing both Information Management and e-Governance in the Ministry of Finance.

4.1 DISTRIBUTION OF RESPONDENTS BY DESIGNATION

Data was collected from various categories of employees within the Ministry of Finance using both interview schedules and questionnaires. In total one hundred and thirty five (135) subjects were selected including top management in the Ministry of Finance, top
management in Government Information Technology Services (GITS); the Directorate of E-Government, Cabinet office; Heads of departments, ICT officers, Accountants, Budgetary officers, Human resource officers, Records officers and Librarians.

Out of these, one hundred and twenty-one (121) questionnaires were distributed as follows:

Records staff (14); Library staff (3); Budgetary staff (10); Accountants (20); Human resource officers and forty-two (42) and ICT Officers (32).

The top management in the Ministry of Finance, Directors in Government Information Technology Services (GITS) department and e-Government, Cabinet Office; and Heads of departments were interviewed using interview schedules.

Out of the fourteen (14) respondents targeted to participate in this interviews, nine (9) were able to create time and respond to the questions asked.

A total of ninety – two respondents (76%) returned the questionnaires. These included ten Record officers (8.3%), three Librarians (2.5%), eight budgetary officers (6.6%), sixteen Accountants( 13.2%), twenty-seven Human resource officers(22.3%) and twenty – eight ICT Officers (23.1%).
Table 4.1: Distribution of Respondents by Designation.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Number of Respondents</th>
<th>Percentage(n=92)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Librarians</td>
<td>Three (3)</td>
<td>2.5%</td>
</tr>
<tr>
<td>Budgetary Officers</td>
<td>Eight (8)</td>
<td>6.6%</td>
</tr>
<tr>
<td>Accountants</td>
<td>Sixteen (16)</td>
<td>13.2%</td>
</tr>
<tr>
<td>Records officers</td>
<td>Ten (10)</td>
<td>8.3%</td>
</tr>
<tr>
<td>Human Resource Officers</td>
<td>Twenty-seven (27)</td>
<td>22.3%</td>
</tr>
<tr>
<td>ICT Officers</td>
<td>Twenty-eight (28)</td>
<td>23.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>Ninety-two (92)</td>
<td><strong>76%</strong></td>
</tr>
</tbody>
</table>

4.2 ADAPTATION OF e-GOVERNANCE IN THE MINISTRY OF FINANCE

One of the objectives of this study was to examine the extent to which e-Governance strategy has been adapted in the Ministry of Finance and in the public service as a whole. Respondents were asked, “How they would evaluate or rate the level of adaption of e-Governance in the Ministry of Finance”.
Table 4.2: Level of Adaption of e-Governance in the Ministry of Finance

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>1</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Very Good</td>
<td>22</td>
<td>23.9</td>
<td>23.9</td>
<td>25.0</td>
</tr>
<tr>
<td>Good</td>
<td>60</td>
<td>65.2</td>
<td>65.2</td>
<td>90.2</td>
</tr>
<tr>
<td>Poor</td>
<td>9</td>
<td>9.8</td>
<td>9.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Figure 4.1: Percentage representation of Level of Adaption of e-Governance in the Ministry of Finance
According to the responses by the respondents, 1.1% rated the adaption of e-Governance within the Ministry of Finance as excellent, 23.9% as very good, 65.2% as good and 9.8% as poor.

The results therefore show that the level of adaption of e-Governance in the Ministry of Finance is good. From the results we can therefore conclude that the adaption of e-Governance within the Ministry of Finance is good.

4.3 E-READINESS WITHIN THE MINISTRY OF FINANCE

One of the other major objectives of this study was to examine e-readiness within the Ministry of Finance. Respondents were asked to state the specific actions that have been taken to enhance ICT infrastructure within the Ministry of Finance. About 81 respondents (88%) answered this question. Their responses are represented below in the following frequency table and pie chart.

<table>
<thead>
<tr>
<th>Table 4.3: E-readiness within the Ministry of Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>Bandwidth</td>
</tr>
<tr>
<td>Fiber Optic</td>
</tr>
<tr>
<td>Rollout of GCCN</td>
</tr>
<tr>
<td>IFMIS Development</td>
</tr>
<tr>
<td>Acquisition of Hardware</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Figure 4.2: Percentage representation of E-Readiness within the Ministry of Finance.

Objective number two on e-readiness asked respondents to state what they would like the Ministry to further do so as to enhance ICT infrastructure. Some of the key answers given by the respondents were as follows:

- Update the ICT infrastructure frequently so as to match the ICT environment worldwide i.e. every time there is new software and hardware in the market.
- The ICT infrastructure security should be improved on to avoid hacking and also damages.
- Organize for seminars, conferences, retreats and training for the staff so as to equip them with the changes taking place in the ICT world.
- Segment the Local Area Network into domains.
- Implement Electronic Messaging and Collaboration System (EMACS)
- Enhance the management of the ICT resources e.g. servers, networks and systems.
- Network all the registries within the Ministry so that there can be proper coordination.
- Consider digitization of the existing records and information within the ministry
- Regular upgrades of hardware and software
- Reduce bureaucracy in operations to enable full embrace of ICT and its benefit
- Integrate all departments hence do away with stand alone systems
- Continuous training of ministry staff/personnel
- Adoption of management information systems and also security based management information systems.

4.4 ICT LITERACY IN THE MINISTRY OF FINANCE.

Respondents were further asked whether the staff within the Ministry of Finance were ICT literate. The presentation below gives the views of those who responded to the question
Table 4.4: ICT Literacy in the Ministry of Finance

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>75</td>
<td>81.5</td>
<td>81.5</td>
<td>81.5</td>
</tr>
<tr>
<td>No</td>
<td>17</td>
<td>18.5</td>
<td>18.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

According to the views expressed by the respondents, 81.5% felt that the staff within the Ministry of Finance were ICT literate and 18.5% felt that the staff were not ICT literate.
From the above results we can therefore conclude that ICT Literacy within the Ministry of Finance is high.

Objective number two required top management within the Ministry of Finance and Heads of Departments who were interviewed to state how adequate infrastructure for ICT applications was used. The interviewees felt that the infrastructure was fairly adequate. However there was need for integration. They further stated that there have been a lot of improvements in the last five years considering that previously the whole government had less than 4000 computers and very few servers if any. Currently, there are more than 15,000 computers, ministries having LANs and there is optic fiber linking the different ministries.

Objective number three of this study was to find out what constitutes Information Management within the Ministry of Finance and the extent to which this is appreciated and supported by top management and staff in general.

The general view given was that Information Management is highly appreciated by the management and staff in general. They further said that utilization of information for decision making generally and reporting is of great importance within the ministry. They added that Registries were being automated and soon Records Officers will be expected to deal with information in electronic format.
4.5 **EXTENT TO WHICH INFORMATION MANAGEMENT IS INCORPORATED IN THE GOVERNMENT’S e-GOVERNANCE STRATEGY.**

Another objective of this study was to find out the extent to which Information Management is incorporated in the government’s e-Governance strategy. Respondents were asked to give details on what role Information Management plays in the implementation of e-Governance strategy. The respondents had varying views to this question. Some of the answers given were as follows:

- Information Management is the main cornerstone of e-Governance strategy. This strategy cannot survive without properly managed information.
- Information Management enhances communication channels, easy retrieval and access of information which is very vital for the implementation of e-Governance strategy.
- Proper Information Management reduces paperwork which requires large spaces to maintain. It can as well improve public image as clients will be served faster thus reducing uncertainty which is important for the growth of e-Governance.
- Information Management ensures security of information and data. It also helps in the coordination of data and information and also ensures information is stored and retrieved in an orderly manner.
- Information Management has a key role to play in the implementation of e-Governance strategy because all decisions that are made have to be based on credible, accurate information. This can only be possible if the information is well
managed. We can therefore say that Information Management supports decision making especially on issues related to infrastructure and software application.

- Improved efficiency in service delivery is experienced when Information Management takes place. The Public Service Commission of Kenya (PSCK) uses an integrated online recruitment and selection service for job applicants.

- Information Management plays a key role in the provision of relevant information to e-Governance initiatives to aid in research of emerging technologies.

- With information electronically stored and managed, systems and applications can be created or adapted within the Ministry. This will ensure the availability and accessibility of data for staff within and outside the Ministry as well as citizens. It will also be possible to provide a number of services electronically e.g. payment of cheques, online applications and downloading of information among others. Overall, a shorter time will be taken on Service Delivery.

- Various users have different information needs. Information has to have different levels of access by stakeholders. Whatever is placed on the website for viewing through the internet needs to be controlled and safeguarded from alterations. Thus, Information Management ensures accuracy, reliability, completeness, trustworthiness as well as integrity of information.

The top management in the Ministry of Finance; and staff in the Government Information Technology Services department; E-Government; Cabinet Office and Heads of Departments were interviewed and asked to state “what the specific roles their offices played in the implementation of e-governance strategy”. Some of the answers given were as follows.
- Provision of the proper appropriate ICT infrastructure and application to enable e-services to the public.
- Policy (e-Governance) formulation and coordination.
- Coordination of application development.
- Infrastructure development and capacity development.
- Monitoring and evaluation.
- Putting these applications online to be used by the concerned parties.
- Financing the infrastructure, hardware, software and human resource thereto.
- Ensuring appropriate partnership and role out.

4.6 BENEFITS OF IMPLEMENTING INFORMATION MANAGEMENT AND e-GOVERNANCE.

Information Management and e-Governance has its benefits and challenges. Objective number five of the study sought to examine the benefits of implementing both Information Management and e-Governance. The presentation below gives the views of those who responded to the question.
Table 4.5 Benefits of implementing both Information Management and e-Governance

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased efficiency</td>
<td>22</td>
<td>26.2</td>
<td>26.2</td>
<td>26.2</td>
</tr>
<tr>
<td>Easy communication</td>
<td>20</td>
<td>23.8</td>
<td>23.8</td>
<td>50.0</td>
</tr>
<tr>
<td>Transparency and Accountability</td>
<td>18</td>
<td>21.4</td>
<td>21.4</td>
<td>71.4</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>7</td>
<td>8.3</td>
<td>8.3</td>
<td>79.8</td>
</tr>
<tr>
<td>Value for money</td>
<td>6</td>
<td>7.1</td>
<td>7.1</td>
<td>86.9</td>
</tr>
<tr>
<td>Low transaction cost</td>
<td>8</td>
<td>9.5</td>
<td>9.5</td>
<td>96.4</td>
</tr>
<tr>
<td>High productivity</td>
<td>3</td>
<td>3.6</td>
<td>3.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Figure 4.4: Benefits of implementing both Information Management and e-Governance

Table 4.5 and Figure 4.4 show the respondent’s views on the benefits of implementing Information Management and e-Governance. According to the respondents, implementation of both Information Management and e-Governance will increase efficiency, enable easy communication, transparency and accountability will be experienced, customer satisfaction, citizens will experience value for their money, low transaction cost and high productivity.
4.7 CHALLENGES OF IMPLEMENTING e-GOVERNANCE AND INFORMATION MANAGEMENT.

Further respondents were asked to state/indicate the challenges of implementing e-Governance and Information Management in the Ministry of Finance. The following answers were given.

- Lack of coordination amongst the different departments within the ministry.
- ICT Staff and other staff within the ministry have different levels of understanding of both e-Governance and Information Management leading to variations.
- Though the ministry is trying as much as possible to improve on its services and to enhance e-governance, most of the information is still managed manually, the consequence being that information is not easily shared and service delivery is yet to achieve a threshold level.
- The Ministry of Finance tends to focus more on the infrastructure while ignoring the information systems that can be used to enhance services in the ministry e.g. Electronic Messaging and Collaboration Systems (EMACS).
- The ministry lacked total control of Information Management as it relied on some technology firm to provide this expertise.
- Staff in other departments other than the information technology department were resistant to change and convincing them takes time.
- Leadership, funding, ownership and political will are not there.
- Use of unreliable server system has been a major challenge within the ministry.
• Training of the staff is not managed properly and in certain cases irrelevant courses are conducted which do not enhance skills capacity.

• Manual registries that still operate bulky files and cumbersome procedures are a challenge to information sharing and access.

• Reluctance of staff to embrace good governance as this is likely to demand more accountability, transparency and integrity in service delivery.

• Provision of tools such as computers and training the staff on their use across the board may prove to be very costly and hence cause delays in implementation.

• Most of the information in government is classified confidential and very little can find its way on the website, yet this is what is needed to come up with a proper Information Management and e-governance system.

• The total commitment of employees towards safeguarding sensitive matters cannot be totally trusted because there are cases of leakage.

• The back office systems are still not robust and therefore e-governance has not taken off well.

• Silo mentality – no one knows what the other is doing. This sometimes results in duplication of effort.

4.8 Objective six required the researcher to come up with an Information and e-Governance Framework that could be customized to meet the needs of the Ministry of Finance. Based on the information gathered by researcher a framework was developed consisting of the following components: Leadership, Institutional Structure, Accessibility of Information, Transaction, Business
Process Re-Engineering, Authority, Accountability and Risk Management, Transformation and Integrated Approach. Further details are available in Chapter five figure 5.1.

4.9 CONCLUSION.

This chapter presented, analyzed and provided interpretation of the research findings of this study. Different respondents gave varying views regarding Information Management and e-Governance within the Ministry of Finance.

It can therefore be concluded that, though Information Management and e-Governance has already been introduced in the Ministry of Finance, a lot of issues such as proper infrastructure, training, upgrades of hardware and software still need to be considered and put in place.
CHAPTER FIVE

SUMMARY OF RESEARCH FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

The aim of this study was to examine the role that Information Management in general and e-Governance in particular play in supporting delivery of government programmes and services in the Ministry of Finance and propose an Information Management and e-Governance Framework that can be customized to suit the needs of the Ministry.

To achieve this, the study focused on six specific objectives:

1. To examine the extent to which the e-Governance strategy had been adapted in the Ministry of Finance.

2. To examine e-Readiness in the Ministry of Finance.

3. To find out what constituted Information Management within the Ministry of Finance and the extent to which this was appreciated and supported by top management and staff in general.

4. To find out the extent to which Information Management was incorporated in the Ministry’s e-Governance strategy.

5. To examine the benefits and challenges of implementing both e-Governance and Information Management in the Ministry of Finance.
6. To come up with an Information Management and e-Governance Framework that could be customized to meet the needs of the Ministry of Finance.

To achieve the above objectives, data was collected from various categories of employees within the Ministry of Finance using both interviews and questionnaires. The respondents included the Ministry’s top management, Senior Officers in the Government Information Technology Services (GITS) department and E-Government, Cabinet Office, Heads of Departments, ICT Officers, Human Resource Officers, Accountants, Librarians, Budgetary officers and Records Officers. In total one hundred and thirty five (135) subjects were selected to participate in this study. Stratified random sampling was used to select respondents from different departments and by designation.

Interview schedules were used to interview top management within the Ministry, Senior Officers in Government Information Technology Services (GITS) department and E-Government, Cabinet Office and Heads of Departments. Out of the fourteen (14) respondents approached for interview, nine (9) were able to create time and respond to the questions asked.

The questionnaires received a highly positive response by all categories of respondents. One hundred and twenty one (121) were distributed and out of these, a total of ninety two (92) i.e. 76% respondents returned the questionnaires.

The findings are presented in Chapter four. This chapter therefore presents a summary of the study findings, the conclusion and recommendations on the subject under study.
5.1 SUMMARY OF FINDINGS

Question one sought to find out what e-Governance strategy entailed.

These were the findings.

A) Improvement in service delivery
B) Empowering citizens through access to information
C) Engaging citizens in the power of governance
D) Making information readily available for transparency and accountability
E) Development of an enabling ICT infrastructure
F) Integration of back office services
G) Integration of front office services through various Information Technology devices and the internet
H) Developing human capacity for support and sustainability of the Ministry’s programmes.

Question two sought to find out the extent to which staff in the Ministry of Finance were able to use Information and communication technologies.

This question was answered by most of the respondents in all the categories who had varying answers, touching on adequacy of the ICT infrastructure to how well the staff were able to use ICT. According to the findings, staffs within the ministry were able to use ICT technologies adequately and the findings also indicated that the level of ICT literacy within the Ministry of Finance was high at a percentage of 81.5%.
Question three sought to determine what constituted Information Management in the Ministry of Finance. It further sought to find out if top management and staff in the ministry appreciated and supported Information Management.

The following were some of the answers of what constituted Information Management within the Ministry of Finance.

A) Data capture and processing  
B) Retrieval of information for decision making  
C) Data storage including backups  
D) Information regarding hardware and software  
F) Installation of Local Area Networks (LANs)

According to the findings, the top management and staff in the ministry supported and appreciated Information Management. This had led to the introduction of computerized information systems in the Ministry to enhance efficiency.

Question four sought to establish the extent to which Information Management had been incorporated in the government’s e-Governance strategy

According to the findings Information Management has in the last five years been incorporated in a big way in the e-Governance strategy including linking the Integrated Financial Management Information Systems (IFMIS) to the central information system. Also in place was the Government Common Core Network (GCCN) linking all buildings
housing Government of Kenya (GOK) offices within Nairobi City. Others were the Integrated Payroll and Personnel Database and the Pension system.

**Question five sought to find out the benefits and challenges of implementing e-Governance and Information Management as a government strategy.**

The question was answered through a number of items contained in both the questionnaire and interview schedule administered to different categories of employees’ i.e. top management, top management in Government Information Technology Services (GITS) department and e-Government, Cabinet Office and Heads of Departments, ICT Officers, Human Resource Officers, Budgetary Officers, Librarians, Records Officers and Accountants.

The findings of the study are summarized below.

Among the benefits mentioned were:

A) Low transaction cost both to government and citizens

B) Increase in transparency and accountability

C) Efficiency and effectiveness

D) Value for money

E) Customer satisfaction

The challenges mentioned included:-

A) Paper records occupy a lot of space and also to peruse through the records is time consuming.

B) Slow internet connectivity and virus attacks.
C) Obsolescence of information technology within a short period of time. This can be expensive to most organizations including the Ministry of Finance.

D) The back office systems are still not robust enough. Therefore e-Governance has not taken off well.

E) Information Communication Technology Leadership is still regarded as low priority.

F) Funding for Information Management and e-governance projects is not adequate enough.

G) Ownership and political will is still lacking.

**Question six sought to come up with a customized Information Management and e-Governance framework for the Ministry of Finance.**

One of the major achievements of this study was coming up with this model which was derived from both the e-Governance maturity model and the Information Management Model which both had various components such as Leadership, Institutional structure, Accessibility of information, Transaction, Business Process Re-Engineering and Transformation and integrated approach which are all essential for effective service delivery.

**5.2 CONCLUSION**

The research study was based on Information Management and e-Governance and the role it played in service delivery in the Ministry of Finance. The significance of this study was to assess the extent to which the Ministry of Finance had embraced Information Management and e-Governance and to determine how far it was being utilized to support government programmes.
Information is increasingly being created, stored and distributed in a variety of electronic media and formats. All these formats such as floppy diskettes, network drives, compact disks, DVDs, internet and intranet all contain important information that is essential for Information Management and e-Governance. Information distribution internally and to the public is important as more and more government départements and agencies go online with service delivery programs in areas such as downloading of relevant government application forms, accessing websites for key information and job applications to mention but a few. It is important as an institution or organization, to embrace the current trends in relation to management of information and e-Governance which is all about giving citizens the choice of when and where they can access Government information and services. This being the case, change must come from all levels i.e. from the top management within the Ministry of Finance to lowest level staff in the Ministry. With this, the public will have greater access to information electronically.

The findings in this study such as improvement of infrastructure, more training on ICT, increase in transparency and accountability to mention but a few were relatively general and relevant to other government institutions and organizations. However, in this case they proved to be particularly relevant to the Ministry of Finance situation where the research study was conducted. These findings are supported by UNESCO which states that e-Governance is the public sector’s use of Information and Communication Technologies with the aim of improving information and service delivery, encouraging citizen participation in decision making process and making Government more accountable, transparent and effective.
Government information is not only crucial in development of a particular institution or nation but a basic right for each citizen. Bergdahl (1989) supports this by stating that, information has become such a precious resource that the fate of modern nations in all essentials is connected with their capacity to develop and exploit it. He further predicts that in future countries that do not develop this capacity will be left behind in the cultural, scientific and economic development. It is therefore the duty of governments and their respective institutions to avail relevant and timely information to its citizens for timely decision making.

Information Management is needed to address e-Governance within the Ministry of Finance and therefore a need for the Ministry to establish a department to deal solely with this. Although currently Government Information Technology Services Department plays a big role in this, it does not have expertise of Information Management and Record Management since most of the officers working in this department are Information Technology specialist. As Taylor and Van every (1993) argue, Information Management is a human endeavor rather than a technical task and therefore when Government institutions come to fully accept that premise, their services will be become better.

Leaving the responsibility for Information Management to information specialists or Information Technology (IT) stag may give temporary peace of mind. However, it’s a problem if people in all departments are not motivated to treat their “information responsibilities”. In short, information responsibility should mean information accountability for everybody. (Marchand, Davenport and Dickson, 2000)
The Ministry of Finance as a Government Institution in Kenya plays a major role in the economic development of the country and therefore to achieve its goals, proper implementation of an Information Management and e-Governance framework will serve as a guideline for effective and efficient service delivery to its citizens.

5.3 RECOMMENDATIONS OF THE STUDY

Based on the findings of the study, the following, are proposed for consideration by the Ministry of Finance.

1. Migration to Domain Systems.

Migration of information that is used on a daily basis to a domain system for all computer users, electronically capture data, organize and store the information for easy access and integrate the systems already in place to avoid lose of important information. This will be done by both the Records Officers and ICT Officers within the Ministry of Finance.

2. Increase Web based Applications

Increase the use of web based applications that would enable the clients to access information without necessarily having to come physically to the Ministry of Finance. With these applications in place, ease of access, increased availability of information and increased productivity and operational efficiencies will be experienced. With these applications also in place, the hacker will find it difficult to gain access to the system because the password is only available to the administrator of the system. This will be the responsibility of the ICT Officer who will be responsible for systems and web administration. At the most they should not be more than three ICT Officers.
3. Sensitization of staff

One very vital recommendation given was the sensitization of staff in the important areas of Information Management and e-governance such as information security, ICT strategy and governance and also ICT procurement. This could be done through more training of ministry staff and also creation of public awareness towards the new e-governance policies. Both the ministry and public have to be fully aware of the steps taken to enhance Information Management and e-Governance. This will be the responsibility of Human Resource Management, ICT Officers and Librarians. Management will also be involved in this especially in the area of funds.

4. Creation of one unit for Information Management and e-Governance

The Ministry of Finance should create a department or unit that will control issues relating to Information Management and e-Governance within the Ministry and with this in place a lot of duplication will be avoided. Currently, information within the Ministry of Finance is managed from different departments who in certain cases duplicate work thus a lot of time is wasted. This is a responsibility that will left to the top management who can agree on when and how to come create one unit for Information Management and e-Governance.

5. Storage Area Network

Introduction of a central Storage Area Network (SAN) which will be the main storage area for all information and also increase and improve network infrastructure of wireless access. The Ministry will need this because it would provide solutions for:
• Fast backup speeds that match the allotted backup window without adversely affecting network bandwidth.

• Flexibility to connect and share remote devices and servers.

• Improved scalability to expand the storage infrastructure without rebuilding.

• Interoperability between systems will enable the exchange and use of information within all the departments in the Ministry of Finance who are connected to one Local Area Network.

All the staff members with time will play a big role in the area. However in the initial stages, the ICT Officers will be responsible for the network.

6. Bureaucracy

Bureaucracy within the Ministry has been a major drawback since most of the Ministry’s procedures take long before they are enacted on. An example is the purchase of hardware and software can overstay because of the procurement procedures that have to be followed be the purchase takes place. Dissemination of information to staff members and eventually to the citizens is also delayed because of these bureaucratic measures that are practiced in the Ministry.

For bureaucracy to end, the top management will have to play a big role since all this starts from the management level downwards.

7. Improved Security

Security should be improved by using firewalls. This can be done by properly configuring the Ministry’s computers so as to help shield them from outside hacker
attacks. Firewalls can also monitor incoming and outgoing security alerts and the firewall company will record and track down an intrusion attempt depending on the severity and also detection of computer viruses will be much easier e.g. Trojan Horses or data collectors. This will mainly the responsibility of the ICT Officers assisted by the other staff members within the Ministry.

8. Electronic Library Services

Introduction of electronic library services which can allow for transmission of information to a larger group and thus a more informed, knowledgeable and empowered citizenry. This is because Electronic library services are devoted to the applications and implications of new technology, automation, digitization, the internet, user interfaces and networks thus, of great assistance in Information Management and e-Governance. This will be the responsibility of Librarians within the Ministry.

9. Increase of equipments

Increase number of computers, fax machines and modern software facilities so as to encourage online systems in the registries and libraries. A case in point is the e-Registry that has been introduced in the Ministry of Finance though it is picking up well; the required equipments are not adequate enough.

10. Reduction of Paper based records

Reduction of paper based records by scanning them and storing or saving them in CD-ROMs or Flash Disks. This will create space and also the Ministry will be able to avoid the loss of its information on a regular basis. This will in turn make it easier to retrieve the information. This will be a responsibility of the Records Officers.
11. Involving all stakeholders.
This being a vital and important implementation in the Ministry, it would be of great importance to involve all the stakeholders from top management to lower cadres because they all have a role to play and if this is done, a lot of hurdles can be avoided. Information Management and e-Governance both stress on the use and access of information and thus one party cannot afford to ignore the other. The Management in conjunction with all the stakeholders can make this happen.

12. Implementation strategy
As an institution, it would be important to come up with an implementation strategy that will enable the institution achieve its goals and act as a guideline on how responsibilities should be assigned to specific individuals, Human resource factors such as the ICT needs of the staff, annual budget plan so as to be able to fund intended strategies and also through this, different departments within the Ministry of Finance may be able to coordinate well.

5.4 INFORMATION MANAGEMENT AND e-GOVERNANCE FRAMEWORK.

Objective number six of the study required the researcher to propose an Information Management and e-Governance framework that can be adapted or customized for implementing both Information Management and e-Governance in the Ministry of Finance. Staff working within the Ministry of Finance work and handle information on a daily basis irrespective of their departments. This information is both in electronic and paper format. This being the case, the Ministry of Finance needs to have an Information
Management and e-Governance framework that will provide guidelines and also the vision, goals and principles of the framework.

The researcher has proposed a framework that will provide strategic direction and guidance which is currently lacking within the Ministry of Finance. The proposed framework is represented below.

**Figure 5.1: PROPOSED INFORMATION MANAGEMENT AND e-GOVERNANCE FRAMEWORK FOR MINISTRY OF FINANCE AND OTHER GOVERNMENT AGENCIES**
The above figure summarizes a proposed Information Management and e-Governance framework customized to suit the Ministry of Finance and other Government agencies. It consists of a number of components which are discussed below.

- **Leadership**

  This describes the roles and responsibilities of top government officials and politicians who have responsibility to shape the Government’s strategic vision for ICT development. As the leaders in the Ministry of Finance, they will need to interact with staff whose support they will need in order to accomplish the ministry’s objectives.

- **Institutional structure**

  This defines the institutional relationships and mechanisms to support decision making, foster appropriate culture and build skills in order to marshal resources to make things happen. It defines the roles and responsibilities of the various entities involved in designing, developing and deploying.

  Institutions are the means by which policy decisions are made effective. Policies without organizations capable and willing to implement them are not credible. Suppose, for example, that a leader comes up with an important policy on Information Management and e-Governance and does not set up institutions that will deal with these issues, the policy on Information Management and e-Governance becomes less credible and thus cannot make things happen.
• **Accessibility of Information**

According to this component, the Ministry of Finance and indeed other government ministries need to ensure that information is easily accessible to those who need it and are authorized to access it. They therefore must ensure that systems are designed and implemented to easily locate and retrieve information, implement standards for access to information and establish plans for electronic delivery of information services to stakeholders and the public.

The public may want to know what is in the budget speech for a particular financial year. The value to the public is that government information is publicly accessible; processes are described and become more transparent, which improves democracy and service. Internally (G2G) the government can also disseminate static information with electronic means, such as the internet.

• **Transaction**

This is where the complexity of the technology is increasing, thus making customer (G2C and G2B) value also higher. Complete transactions in can be done without going to an office. Examples of online services are filling income tax forms, filling property tax, extending/renewal of licenses, visa and passports and online voting. This phase is made complex because of security and personalization issues e.g. digital (electronic) signatures will be necessary to enable legal transfer of services. This is whereby information meets the needs of employees, clients, partners and stakeholders and is timely, relevant, accurate and easy to use.
This being the case The Ministry of Finance must establish and apply quality control procedures to ensure the information they produce is based on demonstrated needs of users and cross ministry sharing of information should also be encouraged.

- **Business Process Re-Engineering**

This component in the framework looks at how institutions serve their customers. For example, how does the Ministry of Finance serve its customers and how does it measure success or failure, including leadership and decision making processes.

The analysis and design of workflows and processes within the Ministry of Finance would be done through this component. Re-engineering is the basis for many recent developments in management of organizations and therefore would be of great assistance to the Ministry.

- **Authority, Accountability and Risk management**

As shown in the framework, authority is needed so as to account for the effective management/control of the Information Management and e-Governance sector. The Ministry of Finance must designate responsible individuals to be in charge of Information Management within the ministry and implement accountability structures related to Information Management practices and in turn incorporate them in e-Governance. They must also conduct comprehensive risk assessment to ensure appropriate levels of security and protection for information assets. Assessment processes must also be implemented so as to be able to evaluate progress in implementing Information Management and e-Governance.
• **Transformation and Integrated Approach**

In this stage all information systems are integrated and the public can get G2C and G2B services at one (virtual) counter. One single point of contact for all services is the ultimate goal. Information assets should be managed throughout entire life cycle regardless of the medium in which they are held. In spite of the incorporation of electronic formats in Information Management, The Ministry of Finance must ensure that information, regardless of type of medium in which it is stored, is managed under the same principles and is captured in inappropriate systems so that information can be organized and described to facilitate access and ensure its continued management.

When asked to comment on the benefits of a framework for Information Management and e-Governance in the Ministry of Finance, the top management in the Ministry of Finance; Government Information Services Department; E-Government, Cabinet Office and Heads of Departments in the Ministry had the following views.

1. Streamlined and focused implementation of Information Management and e-Governance within all the ministry’s departments to enable smooth flow of information.

2. Efficiency and effectiveness of service delivery when using information systems.

3. Transparency and accountability is of importance since it will help improve on service delivery. Transparency ensures that information is available that can be used to measure the Ministry of Finance’s performance and to guard against any possible misuse of powers. In that sense, transparency serves to achieve accountability, which means that
authorities can be held responsible for their actions. Without transparency and accountability, trust will be lacking between the ministry and those whom it governs.

4. Accountability in this case constitutes of the process, it is the degree to which the Ministry of Finance explains or justifies what they have done or failed to do.

5. The e-Governance and Information Management framework should encourage decentralization of services in the Ministry of Finance. Decentralization of services is a case where authority and responsibility for specific decisions has been delegated to broader base executives who are at a lower level hierarchy. With decentralization, lesser time will be taken to solve problems.

6. The framework should be one which will be cost effective and not too expensive to implement thus economical to the Ministry in terms of goods and services to be spent.

7. Quick decision making and proper leadership channels. Decision made by top management should be clearly defined and leadership within the ministry should be well informed.

They were further asked how this could be achieved. The following are some of their responses.

1. Leadership/champion is required to achieve this since it involves huge financial allocation which needs to be considered when coming up with a budget for the Ministry of Finance.
2. Legal implications need to be looked into so as to avoid any problems in the future. The laws regarding Information Management and e-Governance within the country should be followed to avoid any misinterpretations.

3. Structured change and change management that the status quo may not embrace easily needs also to be considered.

4. Development of the implementation strategy. How many stages will take for it to be fully achieved and for how long?

5. Involving all the stakeholders to come up with a solid Information Management and e-Governance framework. This will involve all the top management within the Ministry of Finance, Heads of Departments and staff in these departments.

6. Formulation of mainstream Information Management strategies in e-governance policies.

5.4 SUGGESTIONS FOR FURTHER RESEARCH.

This study examined the role of Information Management in supporting e-Governance in the Ministry of Finance, Kenya. From the findings of this study, it is evident that both Information Management and e-Governance are critical to the success of Government to Business, Government to Citizens and Government to Government. Other pertinent issues related to Information Management and e-Governance, such as e-Governance and
service delivery and e-Governance and Public Sector Reform were not fully within the scope of this study and were therefore not investigated. The researcher therefore suggests that these topics be taken up by other researchers for investigation.
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42. Taylor, J.R et al., The Vulnerable Fortress, University of Toronto press, Toronto, Canada, 1993.


WEBSITES VISITED:

APPENDICES:

APPENDIX I

INTERVIEW SCHEDULE FOR THE MINISTRY OF FINANCE TOP MANAGEMENT.

BACKGROUND INFORMATION

DATE____________________ TIME____________________

DESIGNATION OF RESPONDENT__________________________________________

---

E-GOVERNANCE STRATEGY:

1) What is the ministry’s specific role in implementing e-Governance?

2) What is the level/extent of preparedness in the ministry to implement e-Governance strategy?

INFORMATION MANAGEMENT AND E-GOVERNANCE:

3) To what extent is Information Management appreciated in the Ministry of Finance and what support is provided by top management to Information Management?

4) How adequate is the ministry’s infrastructure to support both Information Management and e-Governance (Policies, systems, standards, skills etc).

CHALLENGES AND BENEFITS:

5) What challenges does the ministry face on a day to day basis in relation to both Information Management and e-Governance?

E-READINESS:

6) In what specific areas can Information Management and e-Governance contribute to the attainment of this ministry’s goals and objectives?
APPENDIX II

INTERVIEW SCHEDULE FOR SELECTED HEADS OF DEPARTMENTS WITHIN THE MINISTRY OF FINANCE.

BACKGROUND INFORMATION:

DATE:_______________________ TIME:_____________________________

DEPARTMENT:________________________________________________________

DESIGNATION OF RESPONDENT:________________________________________

1. e-GOVERNANCE STRATEGY:
   - What is the specific role the ministry in the implementation of the Government’s e-Governance strategy?
   - What is the role of your department in the implementation of e-Governance?

2. E-READINESS:
   - What is the level/extent of preparedness in your department to implement e-Governance?
   - What specifically does e-Governance entail/invoke in relation to your department’s mandate?

3. INFORMATION MANAGEMENT:
   - To what extent is Information Management appreciated within your department?
   - What does Information Management entail in your department?
   - What support is provided to Information Management in your department?
4. INFORMATION MANAGEMENT AND e-GOVERNANCE:

- What is the contribution of Information Management in the implementation of e-Governance strategy?
- How satisfied are you with Information Management in your department?

5. CHALLENGES AND BENEFITS

- How adequate is infrastructure for Information Management in the department and ministry?
- What challenges do you face in relation to Information Management and e-Governance in your department?
APPENDIX III

INTERVIEW SCHEDULE FOR TOP MANAGEMENT STAFF WITHIN E-GOVERNMENT, CABINET OFFICE AND GOVERNMENT INFORMATION TECHNOLOGY SERVICES, MINISTRY OF FINANCE.

BACKGROUND INFORMATION:

DATE:_______________________ TIME:_____________________________

STATION/MINISTRY____________________________________________________

DESIGNATION OF RESPONDENT:________________________________________

E-GOVERNANCE STRATEGY:

- What does e-Governance strategy entail?
- What are the specific roles of your office in the implementation of the e-Governance strategy?

E-READINESS:

- How adequate is the infrastructure for ICT application and utilization within the Government ministries and departments?
- What is the level of preparedness/readiness to implement e-Governance?
- How adequate are staff skills and capacity to implement e-Governance?

INFORMATION MANAGEMENT AND E-GOVERNANCE:

- What role is Information Management likely to play in the implementation of the e-Governance strategy?
• To what extent is Information Management appreciated within the government?

• How adequate is the infrastructure for Information Management in the government?

**CHALLENGES AND BENEFITS:**

• What challenges are experienced in relation to Information Management and e-Governance?

• What are the perceived benefits of effective Information Management and e-Governance?

**INFORMATION MANAGEMENT AND E-GOVERNANCE FRAMEWORK:**

• What are the likely benefits if the government adapts an Information Management and e-Governance framework?

• How can this be achieved?
APPENDIX IV

SELF COMPLETION QUESTIONNAIRE.

(For selected employees working within the Ministry of Finance)

My name is Helen Ogongo Opiyo, and I am currently a post-graduate student pursuing Master of Philosophy degree in Library and information Sciences at Moi University. As part of the requirement for this degree course, I am required to undertake research. I therefore kindly request you to complete the questionnaire that follows to enable me complete this course as required. Any information provided for this research will be treated with high confidentiality. Thank you in advance and May God bless you.

BACKGROUND INFORMATION

DATE____________________ TIME____________________

DEPARTMENT:__________________________________________________________

DESIGNATION OF RESPONDENT___________________________________________

1. Please explain what you understand by the terms:
   
   a) Information Management
   
   b) e-Governance.

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________
2. How would you evaluate or rate the adaption of e-Governance in the Ministry of Finance?

 a) Excellent  
 b) Very Good  
 c) Good  
 d) Poor  

3. How would you rate the adequacy of Ministry of Finance’s infrastructure?

 a) Excellent  
 b) Very Good  
 c) Good  
 d) Poor  

4. What specific actions have been taken to enhance ICT infrastructure within Ministry of Finance?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
5. What more would you like the Ministry to further enhance?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

6. Are the staff within the ministry ICT literate?

   i) Yes □   ii) No □

   a) What specific skills and competencies have they acquired that are essential in supporting e-Governance initiative?

      ______________________________________________________________________

      ______________________________________________________________________

      ______________________________________________________________________

      ______________________________________________________________________

7. How much of your day to day work is aimed at supporting e-Governance initiatives in the Ministry? Please elaborate.

   ______________________________________________________________________

   ______________________________________________________________________
8. What types of information do you require in order to carry out your work?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

a) How is this information obtained?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

b) What challenges are associated with obtaining this information?
c) How is this information managed within the ministry?

____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________ 

9. Explain the specific actions the Ministry of Finance has taken to enhance Information Management.

____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________ 

10. What role is Information Management likely to play in the implementation of e-Governance Strategy? Please give details.

____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________ 

11. What challenges does the Ministry of Finance face in relation to Information Management and e-Governance?

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

12. What recommendations would you like to make towards improvement of Information Management and e-Governance within the ministry?
APPENDIX V

SELF COMPLETION QUESTIONNAIRE.

(For Registry staff and Librarians)

My name is Helen Ogongo Opiyo, and I am currently a post-graduate student pursuing Master of Philosophy degree in Library and information Sciences at Moi University. As part of the requirements for this degree course, I am required to undertake research. I therefore kindly request you to complete the questionnaire that follows to enable me complete this course as required. Any information provided for this research will be treated with high confidentiality. Thank you in advance and May God bless you.

BACKGROUND INFORMATION

DATE____________________ TIME____________________

DEPARTMENT: __________________________________________________

DESIGNATION OF RESPONDENT___________________________________________

1. Please explain what you understand by the terms

a) Information Management

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________
2. How would you evaluate or rate the adoption of e-Governance within the Registries and Library departments of the Ministry of Finance?

   a) Excellent □
   b) Very Good □
   c) Good □
   d) Poor □

3. How would you rate the adequacy of ICT infrastructure within the Ministry’s Registries?

   a) Excellent □
   b) Very Good □
   c) Good □
   d) Poor □
4. What specific actions have been taken to enhance ICT infrastructure within:
   a) Registries
      __________________________________________________________
      __________________________________________________________
      __________________________________________________________
      __________________________________________________________
      __________________________________________________________
   b) Library

5. What improvements would you like the ministry to make within the Registries/Library?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

6. Are the staff working within the Ministry’s Registries and Library ICT literate?
   a) Yes □
   b) No □

7. What specific skills and competencies have they acquired that are essential in supporting e-Governance initiatives within the registries and libraries?
   __________________________________________________________
   __________________________________________________________
8. How much of your day to day work is aimed at supporting e-Governance initiatives within the:

a) Library

b) Registry

9. How is information managed within the Ministry’s Registries?
10. Explain the specific actions the Ministry of Finance has taken to enhance Information Management within the Library?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

11. What role is Information Management likely to play in implementation of e-Governance strategy?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

12. What challenges does the Ministry of Finance face in relation to implementation of Information Management and e-Governance in Registries and Libraries?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
13. What recommendations would you like to make to enable the improvement of Information Management and e-Governance within the Ministry’s Libraries and Registries?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________