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SCHOOL OF COMPUTING AND INFORMATICS

E-READINESS ASSESSMENT OF A CONSTITUTIONAL OFFICE

BY

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(P54/6351/2017)

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A project report submitted as part fulfillment of the requirements for the award of the Master of Science in Information Technology Management of the University of Nairobi

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DECLARATION

I, the undersigned, declare that this report is my original work and that it has not been presented in any other university or institution for academic credit.

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SUPERVISOR

This report has been submitted for examination with my approval as university supervisor.

CHRISTOPHER A. MOTURI

SIGNATURE_____ DATE_____

DEDICATION

This project is dedicated to my husband **REV. DANIEL IRUNGU**, to my siblings **ABIGAEL WAMBUI** and **STEVERAYAN WANJIE** and finally to my parents **Mr.** and **Mrs NAFTALY MWANGI** who were always there for me, inspired and supported me in this journey.

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ABSTRACT

Most of ICT projects that fail are partly as a result of poor planning that emanates from poor e-readiness assessments to detained specific requirements of the project before any steps of adopting the same. It is against this that the study aimed to assess e-readiness of a constitutional office guided by the following research objectives: to identify the key drivers that need to be addressed in order to achieve the highest level of e-readiness, assess perceptions of the management and staff on the use of ICT in the organization, to propose an integrated e- readiness assessment model and use it to assess e-readiness in the organization. The study used descriptive research design. The target and population of interest were the organizational management, staff at the headquarters and at the county offices in all 47 counties. The study population was small and census was appropriate. The research instrument used for gathering information from the respondent was questionnaire; it had both open and closed questions. The data was analyzed by checking the completeness and consistency of data from the questionnaire. Quantitative data was obtained by means of questionnaires guided by the items contained in proposed e-readiness model. Multiple regression analysis was carried out to examine whether employees experience would predict perception towards e-readiness. Correlation analysis was also conducted to examine the correlation relationship between computer competence and perception. Data collected was checked for errors, coded and analyzed with the aid of the statistical procedure and service solution. The study findings concluded that the perception of the employees was that use of technology allow faster processing of data, overall leadership is crucial in the effective implementation of ICT in an organization, for e-readiness to take place, the organization must have the necessary infrastructure, then there is need for effective support and that use of technology is based on seminars and trainings attended. The study made the following recommendations; that all public institutions develop an E-readiness policy where they will be required to ensure that they are e-ready and that they can adopt future technologies easily. The policy will stipulate the actions that these organizations need to undertake if they are to be ready for technology use, regular surveys need to be conducted to rate the organizations in terms of how ready they are to adopt e-technologies. Each organization needs to ensure that it scores better than its previous score. This will ensure preparedness of the organization at all times

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ACRONYMS

ICT:	Information Communication and Technology
GOK:	Government of Kenya
GEA:	Government Enterprise Architecture
NRI:	Network Readiness Index
PERM:	Perceived E-readiness Model

CHAPTER ONE
INTRODUCTION

1.0 Background

ICT has proved to be the key economic development pillar worldwide and made access to knowledge easier and importantly, much more readily available to the wider population and around the world. For the effective performance of ICT there are the basis that needs to be well established like ICT infrastructure, software, hardware and people. The ICT strategic plan should be well aligned with vision and mission of the organization and use ICT as a tool to run organizations to Support work, and to serve clients, which must work inside their procedures and strategies. In order to harmonize with any necessary factor to achieve sustainable development of ICT in an organization, e-readiness assessment tools have been developed and used in many organizations.

E-readiness is a measure of the preparedness of an institution or organization to use ICT to enhance the quality of services. A high level of e-readiness also contributes positively towards the realizations of an institutional goal (Kashorda & Waema, 2014). E-Readiness evaluation is intended to control advancement endeavors by giving benchmarks to comparison and gauging progress. (Abdel& Khairalla, 2007) E-Readiness is described as how much an organization or network is set up to take an interest in the information age. It is estimated by surveying an organizations relative headway in the territories that are most important for ICT use and the most significant uses of ICT.

ICT readiness assessment model is an evaluation tool that measures the current state of ICT utilization level of an organization. The model gives systems and critical indicators, which had been gotten from large scale point of view models. It proposes essential indicators, which can be associated with critical ICT development of an organization. The indicators are used to declare the ICT readiness of an organization (Chanyagorn & Kungwannarongkun, 2011). E-readiness is a crucial instrument for passing judgment on the effect of ICT, to replace wild cases and narrative proof about the job of ICT being developed with solid information for comparison (Chanyagorn & Kungwannarongkun, 2011).

The World Economic Forum positions nations using the networked readiness index which was initially gotten from an assessment tool created by the Center for International Development, Information Technology Group, at Harvard University (Dutta, 2008). According to the global

report 2018, numerous organizations are expanding IT spending plans to replace obsolete framework, address the new reality in digital security, and bolster computerized change activities (https://www.spiceworks.com). Use of technology is a way of spreading memory and a very important tool communication engaging user for active interaction with cultural heritage collections. In public institutions a study established that 76,66 percent did not have, adequate infrastructure, 15.00 percent of the organizations had adequate infrastructure, and 8.33 percent could not estimate whether they had adequate infrastructure for information technology (Manzuchs 2009) .

The key inspiration for channeling e-availability reviews is to furnish the senior administration of organizations with solid approaches to quantify advance in the utilization of ICT to improve to enhance service delivery. The primary goal of this research is to create e-readiness appraisal model that is appropriate for assessing ICT readiness for an organization in public sector. This research will evaluate the electronic readiness in a big public organization a constitutional office which is the biggest employer in Kenya. It will investigate the perception of users towards the Technology in service to the customers. Perception is the main influence towards the adoption of technology in any organization

The Kenyan government is investing very much on technology to an extent of establishing ICT authority; ICT authority was entrusted with legitimizing and streamlining the administration of all Government of Kenya ICT capacities, advances ICT education, limit, and development in the line with the Kenya National ICT master plan 2017.

This constitutional office has not adopted fully the use of ICT. Most of the services are done manually thus leading to poor service delivery and therefore an e-readiness assessment model will be proposed and used as a catalyst to know the extent of e-readiness in the organization

1.1 Problem Statement

According to Gichoya (2007), most of ICT projects that fail are partly as a result of poor Planning that emanates from poor e-readiness assessments to detained specific requirements of the project before any steps of adopting the same. It's further noted that, it is important that all Stakeholders of any project understand the importance of the e-readiness assessments. "The benefits of ICTs are recognized everywhere as an important source of efficiency gains for companies that optimize their production function and liberalize resources toward other

productive investments. ICT is recognized as a key source of innovation that can generate increased economic growth and new sources of high-value-added jobs. This ability to innovate is essential in the current information revolution that is transforming economic and social transactions in our societies" (Dutta & Banat, 2013), however some projects fail because they are driven by ICT department without considering the perception of users before implementation. This research carries out a critical review on the concept of e-readiness, with a special focus in a case study of a constitutional office in Kenya. The organization initiates ICT projects and they fail along the way.

1.2 Research Objectives

1. To identify the key drivers that need to be addressed in order to achieve the highest level of e-readiness
2. To assess perceptions of the management and staff on the use of ICT in the organization
3. To identify an integrated e-readiness assessment model for the constitutional office
4. To use the identified model to measure the level of e-readiness in the organization

1.4 Research Questions

1. Which are the critical issues that need to be addressed in order to achieve the highest level of e-readiness
2. How do the senior management and the staff perceive the use of ICT in their organization?
3. Which is the best assessment model that can be used for the constitutional office
4. How can the identified model used to measure the level of preparedness

1.5 Significance

A high level of e-preparation contributes essentially towards the realizations of an institutional goal. The e-readiness assessment helped to ascertain the true picture of preparedness, it answered why the organization was in a particular state of preparedness, minimized cost over runs and budget creep, reduced project delays and improved communication. The research findings will be used by the senior management and staff to know the level of preparedness on ICT adoption.

CHAPTER TWO
LITERATURE REVIEW

2.0 E-Readiness Fundamentals

E-readiness is a measure of the preparedness of an institution or organization to use ICT to enhance the quality of services (Kashorda & Waema, 2014). A high level of e-preparation contributes essentially towards the realizations of an institutional goal (Kashorda & Waema, 2014). In order to gain from the Information technology, e-readiness should be legitimate governing models compatible with ICT (Hassan, 2017). E-Readiness appraisal is intended to guide advancement endeavors by giving benchmarks for comparison and measuring progress. (Abdel& Khairalla, 2007). According to Danish (2006), for many developing countries, absence of a solid IT infrastructure or range of abilities among the populace is clear and e-availability markers may basically be expressing the self-evident. Completing an e-preparation evaluation takes a lot of assets like time, cash and exertion.

2.1 E-Readiness for Developing Countries

E-readiness is a gauge of the degree to which a country is ready or prepared to obtain benefits which arise from ICT. E-readiness is often used to show how ready a country is to partake in electronic activities such as e-commerce, e-services and e-government. The accomplishment of elevated amounts of e-readiness is by and large progressively heralded as one of the top needs for developing countries. A considerable measure of time, cash and exertion is being put resources into computing the dimension of a nation's e-readiness (Danish ,2006).

After reviewing the literature of e-readiness in developing countries, it was found that there were both opportunity and challenges aspects of such measures. It was found that in spite of the fact that e-readiness estimates gave a valuable review of the ecological circumstance, they don't totally mirror the likelihood of accomplishing advancement from ICTs in developing countries. So as to get an increasingly precise measure, it seems that looking at the level of the individuals within the organization using the technology is useful. (Danish, 2006). E-Readiness is not only a problem with the junior level employees, but even the to top management also (Durrani et al., 2012).

2.2 Senior Management and E-Readiness

Effective organizations require both strategic and key reasoning just as culture working by its pioneers. Key reasoning makes and fabricates the vision of an association's future. The vision is the way to pushing ahead as the leader builds a culture that is committed to supporting that vision. The culture is the setting within which the vision takes hold (bruce, 1993)

A leadership which was ready to comprehend the genuine expenses and advantages of the task, to rouse, impact, incorporate and bolster different organizations and institutions, was required (ndou, 2004). For e-readiness to be successful the organization should be prepared enough and prepare the whole team involved through training and leading by example. In Developing countries leaders are urged to use e-readiness as a measure of ICT integration focus efforts on within and identify areas where external efforts were required (Naidoo & Edwin (2005).). Policy makers,, especially in creating nations, face a perpetual lack of assets however they should work having in mind Strategy producers, especially in creating nations, face a ceaseless lack of assets

2.3 E-readiness Assessment Tools

Government of Kenya (GOK) e-Readiness Assessment Tool: this tool was used to guide ministries, Counties and agencies to develop their Enterprise Architecture Plan in line with the Government Enterprise Architecture (GEA) Framework. The GEA framework was used in all levels of government. The framework was very important to produce ICT roadmap that is aligned with MCA business plan at the same time observing the objectives and principles of e-Government (ICT authority, 2018)

2.4 Opportunities and challenges of e-readiness

ICT is accepted to be an empowering tool to address a portion of the key barriers and difficulties for entering the worldwide economy and for future development potential. It changed old difficulties and create opportunities for sustainable economic development, similarly as it accomplished for organizations in the modern world (Ndou, 2004), (An OECD (2002) research project, based on national studies about the impact of ICT has shown that ICT investments accounted for between 0.5% and 1.3% in GDP growth per capita per annum over a number of economies in the 1995–2000 period.

2.4.1 Opportunities of e-readiness on ICT adoption

Cost Reduction and Efficiency Gains: according to Nabaz T. Khayyat(2010) ICT can help to improve the transparency and efficiency of the public sector, create network links across service delivery agencies, reduce bureaucracy and realize vast savings in the public budget which can be used in productive activities. ICT in the public sector can engage citizens as participants in the overall development for the future

Quality of Service Delivery to Customers: Most of the public services are provided in a traditional way, they are manual causing a lot of havoc in the public sector. But in the wake of use of ICT, services will be given efficiently. A public organization that offer services online, offers round the clock accessibility, fast and convenient transactions, and obviously enhances the quality of services, in terms of time, content and accessibility (Ndou v.,2004). Therefore e-readiness assessment will be a virtue to the organization for it will be in a position to know its preparedness

Transparency, Anticorruption and Accountability: Corruption is often caused by lack of transparency and accountability. it is a complex matter due to the interconnectedness of actors involved in its commission. Technology can ensure that there are appropriate mechanisms in place for accountability in automated transactions, hence discouraging corrupt behaviors ((Matiyabu & Maharaj 2017)

Improve the Quality of Decision Making: Decision making is regarded as a key feature of managerial activity, if there is a complex nature of decision making within an organization, computer systems may provide effective managerial support in the face of increasing organizational complexity (Francis & John 2010)

The appropriate use of shared data and information by the management and all other departments in an organization offers the possibility to make quick decisions thus to serve the customers better. However improvements in the speed and quality of decision making depend greatly on the willingness of governments to be empowered with new information, the capability of staff to process the large amount of information, the prevailing cultural values as well as the motivation of management to shift from bureaucratic modem to a flexible centralized model (Ndou, 2004)

2.4.2 C**hallenges of e-readiness**

ICT infrastructure: computer hard ware, operating system platforms, data management and storage, Networking and telecommunications platforms and Internet platforms were the main components that form an ICT infrastructure, for a transition to electronic organization, architecture that is, a guiding set of principles, models and standards were needed. However, an ICT infrastructure does not consist simply of telecommunications and computer equipment. E-readiness and ICT literacy were also necessary in order for people to be able to use and benefit from technological applications (Ndou, 2004). These public organizations don't take their time to lay the appropriate infrastructure leading to poor connectivity.

Lack of knowledge and resistance: many public employees are not very much prepared inside to help and sustain the compelling misuse of ICT to profit advancement. They don't have the learning, ability, or hierarchical limit required. The utilization of information technology was frequently observed as a prickly, tricky issue identifying with back office frameworks. ICT regularly had a questionable reputation because of past ineffective or expensive activities (Fehling & Venkatapuram 2013).). Employee resistance to change was still the biggest barrier to successful change. Employees fear changes in general and ICT applications in because they believe that ICT would replace them and so cause job losses

Change Management: the traditional cultural values of hierarchy in public organizations bureaucracy, in many ways its defining feature. In particular, intranets and the sharing of information throughout organizations can challenge hierarchies and can only really benefit an organization that develops a more networked approach; ICT was distinguished by its network character (Ndou, 2004)

Poor leadership in an organization: Leadership was one of the main driving forces of every new and innovative project or initiative. A leadership which was able to understand the real costs and benefits of the project, to motivate, influence, include and support other organizations and institutions, was required (ndou, 2004). However due to lack of understanding of what it means by benefits of adopting ICT the management don't put the full efforts required.

2.5 Theoretical frameworks

There are various user acceptance models that exist to explain user intention to use Information Technology. These models represent a mature research area in academic technology research

focusing mainly on information technology (IT). Some of the models are derived from older models.

The adoption of technology by public organizations to facilitate service was expected to have a great impact on the quality of services. Rangaswamy & Gupta, (2000) define adoption as the decisions that people make before they consider taking up an innovation. Likewise, Rogers (2003) defines adoption as the choice of a person to put into utilization a development as the best game-plan accessible. Will explore literature on frameworks and theories that exist to explain how and why people adopt technology. The delivered models are

2.5.1 Assessment Model for E-Government Readiness

The assessment model for e-Government Readiness (Dzhusupova & Janowski, T. 2010). E-Government planning involves assessing the electronic Government preparedness from different ways, elaborating a long-term vision, formulating strategic goals and objectives, aligning them with national development strategies and public administration reforms, and defining priorities and concrete implementation programs. The following assessment model for e-Government Readiness Assessment has been designed by applying the component based framework with some assessment components partly obtained from the UN e-Government Readiness Assessment Survey, brown University Global e-Government Survey, and Accenture e-Government Leadership Survey.

The model has eight attributes as shown:

a) International Context – to determine the relationships of a given country with its international development partners.
b) National Context – to capture the main development features of the country at the national level.
c) Enabling Environment - to assess environmental conditions for the development of e-Government in the country.
d) E-Government Demand – to estimate the needs and interests, attitudes and perceptions, preferences of delivery channels, and ICT skills of different users in the country.
e) E-Government Capability – to acquire information on the practices of using ICT by government for administrative and service delivery purposes; human, technical and

financial recourses available for ICT; and on-going projects initiated by different stakeholders.

f) Stakeholders - to understand and engage the stakeholders in e-Government planning for successful implementation.

g) Technology – to assess ICT penetration in the country, availability of public access to information and services, and ICT applications.

h) Perceptions and Challenges - to identify the perceptions with respect to e-Government in the country and the challenges faced by different stakeholders

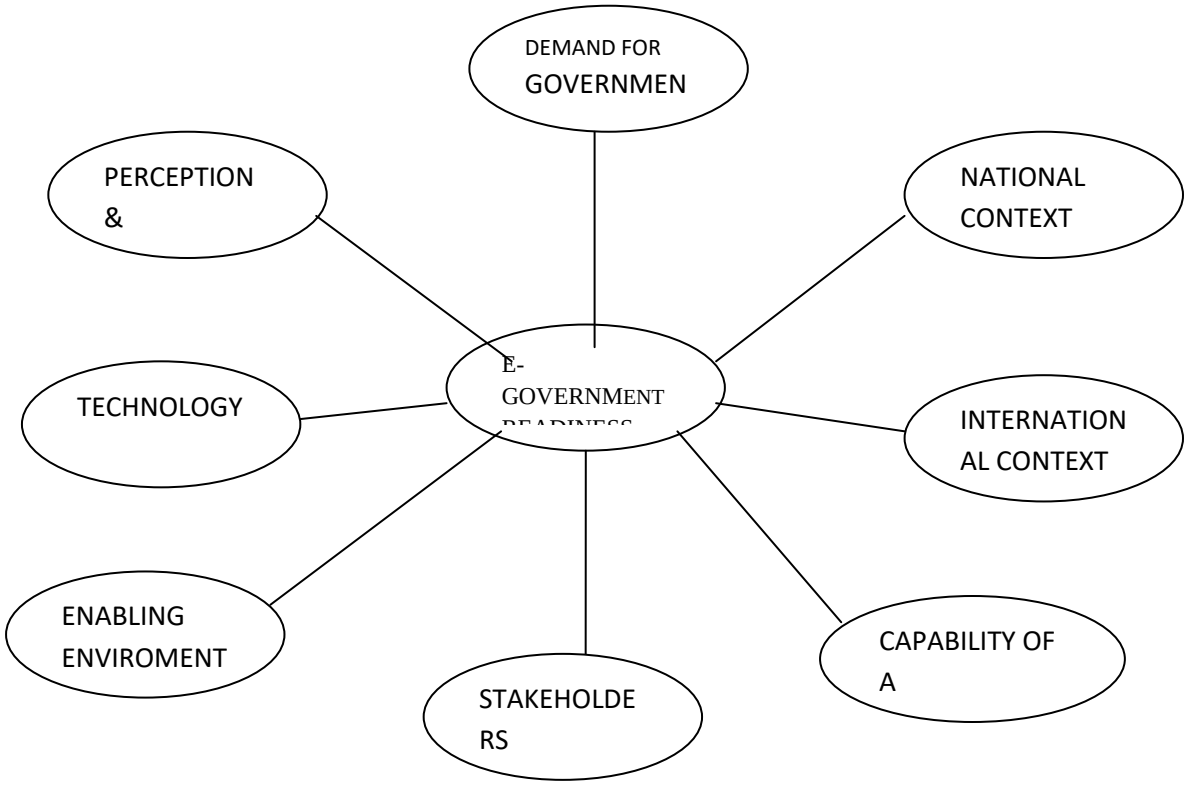

Fig 1: E-Readiness Assessment Model (Dzhusupova and Shareef 2010)

2.5.2 KENET Assessment Framework

The KENET framework (Kashorda & Waema(2014). was used to survey the level of preparedness on the utilization of ICT in the Kenyan universities. The survey was carried out in 30 universities. The assessment framework was derived from an e-readiness assessment tool

originally developed by the Center for International Development at Harvard University. The framework contained 17 indicators but grouped in five categories. These are:

a) Network access (4 indicators–information infrastructure, Internet availability, Internet affordability, network speed and quality)
b) Networked campus (2 indicators–network environment, e-campus)
c) Networked learning (4 indicators–enhancing education with ICTs, developing the ICT workforce, ICT research and innovation, ICTs in libraries)
d) Networked society (4 indicators–people and organizations online, locally relevant content, ICTs in everyday life, ICTs in the workplace)
e) Institutional ICT strategy (3 indicators–ICT strategy, ICT financing, ICT human capacity)

2.5.3 Perceived E-readiness Model (PERM)

The model is based on a research conducted by Molla and Licker (2005) in the United States of America to measure the level of preparedness of adopting e-commerce in the developing countries. PERM has two constructs namely perceived organizational e-readiness (POER) which contains six factors relaying within the organization and that will affect the initial adoption of ICT and perceived external e-readiness (PEER) which consists of three factors that represent external factors. In perceived organization E-Readiness, the model estimates factors inside the organization such as commitment, governance, awareness, human resource, business resource and technology resource that will contribute to initial adoption of ICT, while perceived external E-Readiness consists of three factors which are: market forces, government and supporting industries. The two builds will influence adoption of ICT

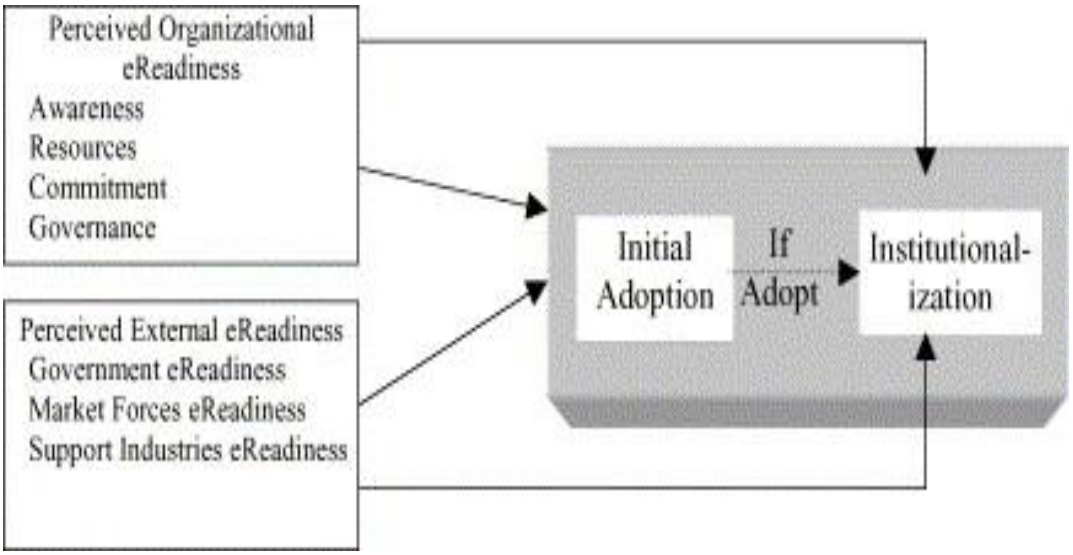

Fig 2: Conceptual Representation of the PERM (Molla and Licker 2005)

2.6 Network Readiness Index

The Networked Readiness Index (NRI) aims to measure the ability of countries to leverage information and communication technologies (ICTs) for improved competitiveness and wellbeing (Dutta, S. & Banat, 2013). The World Economic Forum ranks countries using NRI it was initially derived from an assessment tool developed by the Center for International development, Information Technology Group, at Harvard University [Dutta, 2008]. The NRI has helped decision makers with a useful conceptual framework to assess the effect of information and communication technologies at a global level, organizational level and to benchmark the ICT readiness and the usage of their economies. The NRI of a country is measured in the following three sub-indexes the Environment for ICTs; the readiness of a society to use ICTs; the actual usage of all main stakeholders

For each indicator is mapped to one of 4 stages, with stage 1 being unprepared and stage 4 the full-readiness (prepared) to exploit the full benefits of ICT. The Network Readiness was used for mapping

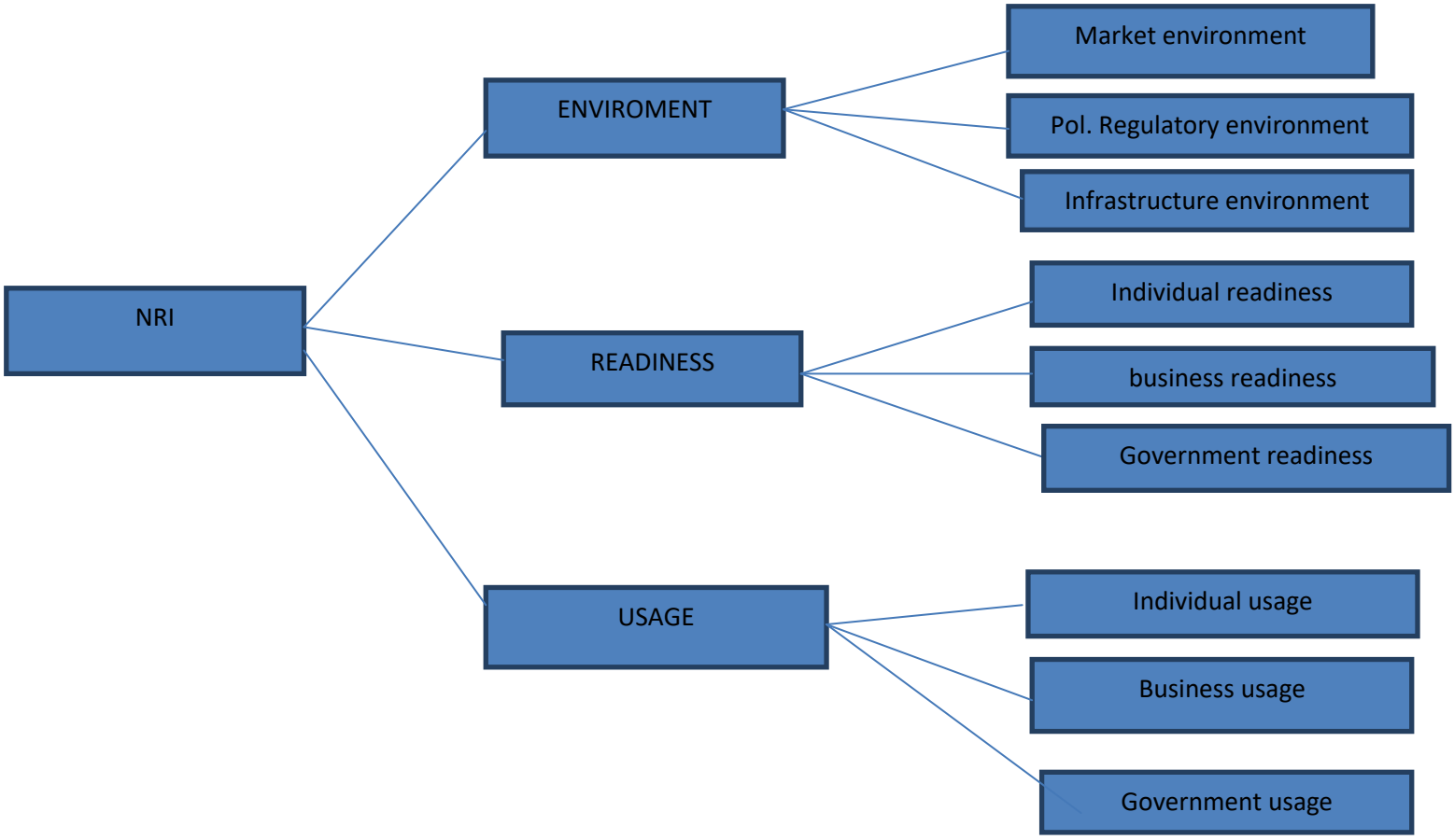

Figure 3: Networked readiness index sub-indexes (Source: GIT report 2003-2004)

2.7 E-Readiness Assessment Frameworks

The government e- readiness has become a vital policy tool for all countries because it builds the trust of the citizens through applying the principles of good governance, e-readiness has turned to be the goal of the international socio-economic development due to its ability to transform the society from the traditional way to more modern ways of thinking or dealing with health, education and production. (alaaraj & Ibrahim, 2014).

The proposed framework is composed of indicators for the four main ICT factors where these four factors contain a total of 16 ICT sub-factors, These indicators are ict infrastructure, people and human resource , ICT hardware and Software and information system. ICT infrastructure: the sub factors –information infrastructure, Internet availability, Internet affordability, network speed and quality, for any organization to be successful on the use of ICT it should allocate enough budget on the (kashorda and waema, 2011). People and human resource: ICT human capacity is an area that needs attention. The actual technical capacity of the ICT staff should be well articulated. A staff development program would then be developed and funded to develop the advanced technical capacity required; this should be through continuous training and

upgrading of technology. The sub-factors are innovation, knowledge base, investment in people and education (Chanyagorn & Kungwannarongkun, 2011).

ICT hardware: the client machines and server machine should be updated and with enough space to accommodate all the staff and the scanned work, the following are the sub-factors for indicators server, client, storage, office hardware. (Chanyagorn & Kungwannarongkun, 2011). 2011).Software and information system: sub-factors are general and support, services and issues, documentation, information security and core- business. Software is the programs that are needed to accomplish the input, processing, output, storage, and control activities of information systems.

Computer software is typically classified into two major types of programs: system software and application software. The system can be hacked if security is not looked into. Hacking refers to the practice of modifying or altering computer software and hardware to accomplish a goal that is considered to be outside of the creator's original objective. (Cyber laws 2017).

After thorough analysis of research framework, we found that the best model for assessing the preparedness of an organization is the e-readiness model For Chanyagorn & Kungwannarongkun For each indicator is mapped to one of 4 stages, with stage 1 being unprepared and stage 4 the full-readiness to exploit the full benefits of ICT. The Network Readiness was used for mapping.

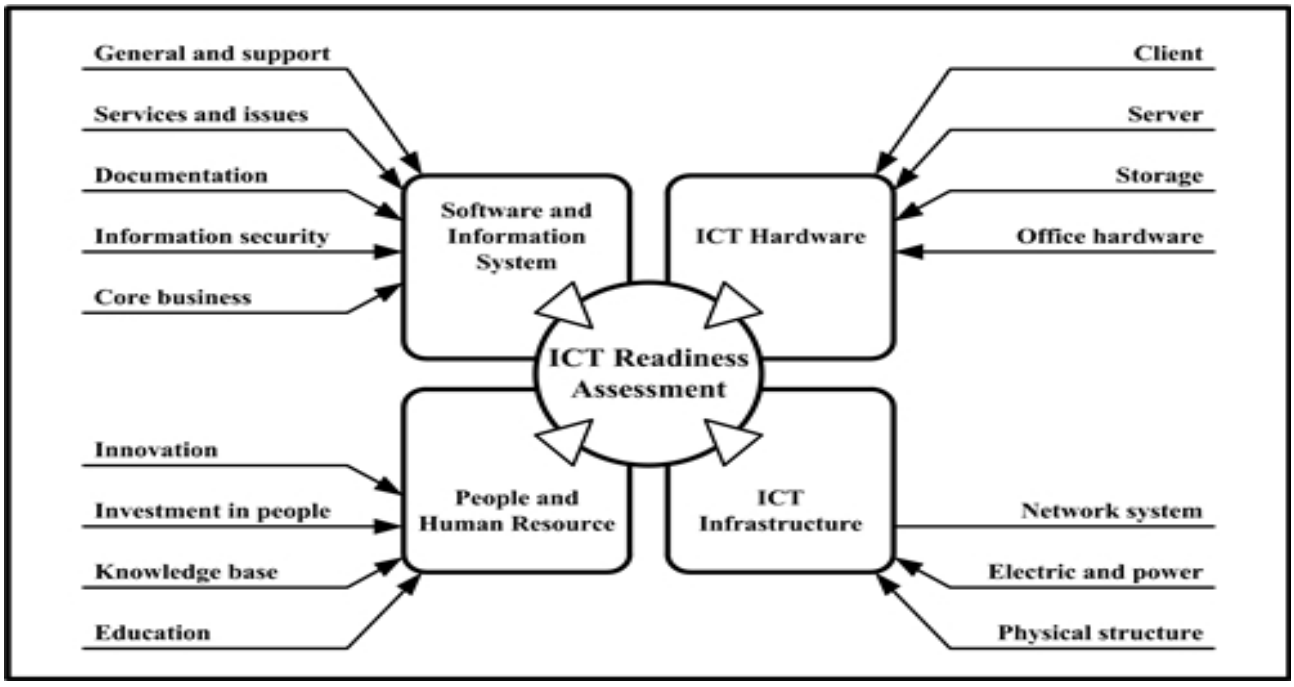

Fig 4: e-readiness assessment model

Table 2.1 Operationalization of conceptual framework

VARIABLES	INDICATORS	METRICS
Software and information system	• General and support • Services and issues • Documentation • Information security	The degree of operation on software and information system Excellent/poor
ICT Hardware	• Client • Server • Storage • Office hardware	The availability of ICT hardware's in the organization Excellent/ poor
People and human resource	• Innovation • Investment in people • Knowledge • Education	The level of training in the organization and availability of short-term wins. The level of motivation, excellent/ fail
ICT infrastructure	• Network system • Electric and power • Physical structure	The degree of accessing the ICT infrastructure in the organization. Excellent/ poor
Software and information system	• General and support • Services and issues • Documentation • Information security • Core business	The degree of operation on software and information system Excellent/poor
ICT Hardware	• Client • Server • Storage	The availability of ICT hardware's in the organization Excellent/ poor
People and human resource	• Innovation • Investment in people • Knowledge • Education	The level of training in the organization and availability of short-term wins. The level of motivation, excellent/ fail

ICT infrastructure	• Network system • Electric and power • Physical structure	The degree of accessing the ICT infrastructure in the organization. Excellent/ poor

CHAPTER THREE

METHODOLOGY

This part depicts the plan, sources of data, how the data was collected, analyzed, and presented. The methodology answers two main questions, how was the data generated and how was it analyzed it also describes research design, population, data collection and sampling. The study was carried out in Teachers service commission as a case study of one of the ten constitutional offices.

3.0 Research Design

Research design refers to the manner in which that you coordinate the diverse components of the research in an intelligible and coherent way, accordingly, guaranteeing you will successfully address the exploration issue. The research design is to test the hypothesis and answer questions posed (Cooper & Schindler, 2006) the study used descriptive research design. Spellbinding exploration was intended to give an image of a circumstance as it normally occurs. The design was used to describe the characteristics and behavior of the target population. The descriptive research aimed to get the facts and a good explanation of the challenges of e-readiness in adoption of ICT in the organization from the users and management. It also allowed the researcher to get wide and deep information about the population expected to use the technology.

According to Saunders (2009), studies that establish casual relationships between variables can be referred to as explanatory research. The researcher thinks about a circumstance or an issue so as to clarify the connections between factors. This research will seek to set up the dimension of readiness to use ICT in the organization. It also seeks to explain the variables of E-readiness assessment model by (Chanyagorn, and Kungwannarongkun 2011) to influence e- readiness. Covering the perception of the management towards e-readiness, People and human resource an ICT hardware, network access and software and information

3.1 Design thinking

design Thinking is an iterative procedure in which we try to comprehend the client, challenge presumptions, and rethink issues trying to recognize elective systems and arrangements that probably won't be right away clear with our underlying dimension of comprehension. The perception of the management and users towards e-readiness was easily identified using this approach. Design thinking has five phases which are Empathize, Define, Ideate, Prototype, and Test. In design thinking, the designers' work processes can help us systematically extract, teach, learn, and apply these human-centered techniques to solve problems in a creative and innovative way

3.2 Population

Population is the full arrangement of cases from which a sample is taken (Saunders, 2009). The target and population of interest are the organizational management, staff of the constitutional office headquarters and at the county offices in all 47 counties. The study population is small and a census was appropriate. Data will be collected, compiled and analyzed

3.3 Data Collection methods

Information accumulation is assembling and estimating data on targeted variables in an established systematic way. The research instrument used for gathering information from the respondent was questionnaire. The Google form method was used where the questionnaires were uploaded on the website then the respondents were invited to fill in the form through their email addresses and others through WhatsApp. Drop and pick method was also used especially to those officers who were not in the ICT and they had a problem to access the network while personal face to face visits boosted and enriched the understanding of the facts at the ground.

3.4 Sampling

Sampling is when the population is stratified; it is the procedure through which the researcher picks outs, from a set of units that make up the population, a limited number of samples. The sample was chosen according to criteria that enabled the results obtained by studying the sample

to be generalized to the whole population (Corbetta, 2003). A perfect representative sample was one that exactly represented the population from which it was taken (Saunders, et al 2009).

3.4.1 Sample size

Sample size=

$$\frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1+\left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

Where-

N = population size • e = Margin of error (percentage in decimal form) • z = z-score

The z-score is the number of standard deviations a given proportion is away from the mean.

N-3000, e=0.1% z-score-1.65, therefore

The sample size is 132

3.5 Data Analysis

The data was analyzed by checking the completeness and consistency of data from the questionnaire. Quantitative data was obtained by means of questionnaires guided by the items contained in proposed e-readiness model. Multiple regression analysis was carried out to examine whether employees experience would predict perception towards e-readiness. Correlation examination was also led to examine the connection between computer competence and perception. Data collected was checked for errors, coded and analyzed with the aid of the statistical procedure and service solution

CHAPTER FOUR

FINDINGS AND STAGING ANALYSIS

This chapter covers the results of the research on e-readiness assessment of a constitutional office.

4.0 Questionnaires Response Rate

The population of the research comprised of the staff and their management at the headquarters. The study questionnaire response return rate was 97.72% where 129 of the 132 officers in the organization returned the questionnaires as shown in table 4.1 below. Therefore, the findings presented in this section were based on the responded instruments.

Table 4.0 – Summary of Responses

Category	No. of Questionnaires	Percentage (%)
Returned questionnaires	129	97.72%
Questionnaires not returned	3	2.28%
Total	**132**	**100%**

4.1 ICT Component and Staff training levels

This research sought to show the level of training skills of the IT personnel within this organization. The study findings indicated that 120(93%) of the respondents agreed that their organizations have ICT departments while 3(7%) gave a contrary opinion that their organizations have no established ICT department within the organization. This implied that organizations selected were the right kind of organizations because they had ICT departments for E-readiness could be assessed.

On the other hand, the study findings showed that 104 (88.4%) of the respondents agreed that their organizations have IT trained staff while 15(11.6%) of the respondents disagreed that their organizations have IT trained staff. Therefore, this is an indication that being a public

organization it had the right kind of staff to implement E-readiness and any related ICT programs.

Table 4.1 - Organizational Information

ICT Department		
IT Trained Staff		
	Frequency	**Percentage (%)**
Yes	74	88.4
No	15	11.6
Total	129	100

4.2 Organizational perception to e-readiness

The study sought to determine the organizational perception to e-readiness. From the findings, there was unanimous agreement that use of ICT improves quality of service delivery in the organization (Mean = 2.2, Std. dev =0.4), and that adoption and use of ICT systems in service delivery have showed efficiency and less time consuming (Mean = 1.8, Std. dev =0.2), more so ICT has reduced cost (Mean = 2.0, Std. dev =0.3). However, the respondents showed uncertainty on some issues, for instance, it was not clear whether use of technology has increased transparency and accountability (Mean = 2.8, Std. dev =0.5), ICT has reduced bureaucracy in the organization (Mean = 2.9, Std. dev =0.6) the following is shown in table 4.3 below.

Table 4.2 - Organizational perception to e-readiness

	SA	**A**	**UD**	**D**	**SD**	**Mean**	**Std Dev**
Use of ICT Improve quality of service delivery	51	33	15	12	18	2.2	0.4
Use of technology Increases transparency & accountability	54	36	15	9	15	2.8	0.5
ICT has reduced bureaucracy in the organization	54	36	12	15	12	2.9	0.6

Use of ICT is efficient and less time consuming	60	36	18	9	6	1.8	0.2
ICT has reduced cost	57	30	15	12	15	2.0	0.3
Average (Mean & Std Dev)						2.3	0.4

The study findings imply that employees perceive that computers and technology allow for faster processing of data, easier retrieval of information, and in some cases automation can reduce or replace physical employees. When the organization's services are done manually, a lot of time is used and so many errors. Use of technology on the same routine operations eliminates the human errors. And less time is used on the same operations. The technology also has a better database easier for retrieval of information and. Instead of searching through a room of file cabinets and trying to guess how information was stored in order to update a customer address, a few clicks of the mouse and can pull up a customer file from a database.

The study findings are also in agreement with Bocij (2015) who notes that technology has already revolutionized the speed at which a wide scope of capacities including business capacities, external environment monitoring, communicating with accomplices and with customers everywhere are directed. Clear key objectives and responsibility are essentials for the improvement of a suitable methodology and the advancement of sites and other innovative arrangements. The emergent mobile technologies and mobile commerce are expected to change drastically a number of industries and to force organization's to reconsider their strategic management (Evans and Wurster, 2007).

4.3 Organizational Leadership to e-readiness

The research sought to determine the organizational leadership to e-readiness. The findings showed that the leadership of the organization believes that e-readiness is important (Mean = 2.1, Std. dev =0.4), and believes that the adoption of information technology in their work will enhance efficiency and effectiveness accountability (Mean = 1.9, Std. dev =0.3), and again, there

was agreement that organization leadership is prepared to take risks of adopting ICT (Mean = 2.3, Std. dev =0.6). On the other hand, there was uncertainty on the fact that there is adequate allocation of budget on preparedness on adopting ICT (Mean = 3.0, Std. dev =0.1) and whether leadership is fully committed to adopt ICT (Mean = 3.3, Std. dev =0.5) presented in table 4.4

Table 4.3 - Organizational leadership on to e-readiness

	SA	A	UD	D	SD	Mean	Std Dev
The leadership of the organization believes e-readiness is important	57	36	15	9	12	2.1	0.4
The leadership believes the adoption of information technology in their work will enhance efficiency and effectiveness accountability.	57	30	15	9	18	1.9	0.3
TSC leadership is prepared to take risks of adopting ICT	60	39	9	12	9	2.3	0.6
Adequate allocation of budget on preparedness on adopting ICT	39	33	12	21	24	3.0	0.1
Leadership committed to adopt ICT	63	39	21	0	6	3.3	0.5
Average (Mean & Std Dev)						**2.5**	**0.4**

The study therefore, implies that the overall leadership is an important factor in the effective implementation of ICT in an organization. ICT integration and implementation will be effective if the leadership or management of the organizations support the ICT staff, learn and use them in their administrative tasks; support the rest of the staff in the process of transformation and provide sufficient development opportunities for themselves and their staff. As the core change facilitators, leaders and managers carry the responsibility of initiating and implementing ICT use and can facilitate complex decisions to integrate it into the activities and processes in the organizations.

These findings are supported by Ghamrawi (2013) who noted that managers play a major role in ICT implementation. He adds that if the managers do not provide adequate support and encouragement to the employees, a good working environment cannot be created to motivate the rest of organizational employees to experiment with ICT in their operations. In addition, Levin and Wadmany (2005) confirm if the management's attitudes and convictions are not helpful concerning ICT execution; all things considered, ICT won't be acknowledged or connected fully.

According to Vlach (2008), strategic and transformational leadership behaviors of leadership and management play an essential role in the implementation of large-scale innovation NGOs. Such form of leadership is one of the best styles of leadership that can significantly determine the extent to which technology becomes integrated in organizations.

Okwiri (2015) noted that it is also important to identify the factors that impact the strategic and transformational leadership role leaders in implementing ICT in their organizations. As leaders of NGOs development, including integrated use of ICT, the management needs to have a personal proficiency in computer use. He summarized that organizational management and leadership are crucial in building the ICT infrastructure through finding necessary resources, determining technological structures, and establishing partnerships with other institutions.

4.4 ICT Infrastructure

The study sought to determine how ICT infrastructure affects e-readiness. The findings showed that there was agreement that the Internet is easily accessible (Mean = 2.2, Std. dev =0.4), and organization has access to WAN (Mean = 2.1, Std. dev =0.1), at same has time access to LAN (Mean = 2.0, Std. dev =0.1). However it was not clear whether there is easy access to the office telephone (Mean = 3.3, Std. dev =0.6) and whether the network service provider is efficient (Mean = 2.8, Std. dev =0.4).

Table 4.4 - ICT Infrastructure

	SA	A	UD	D	SD	Mean	Std Dev
It easy to access the office telephone	42	27	18	15	27	3.3	0.6

The internet is easily accessible	45	42	15	12	15	2.2	0.4
There is high network speed	42	30	15	12	30	3.0	0.3
Organization's access to WAN	45	48	9	18	9	2.1	0.1
Organization's access to LAN	33	36	9	27	24	2.0	0.1
The network service provider is efficient	63	36	24	0	6	2.8	0.4
Average (Mean & Std Dev)						**2.6**	**0.3**

The findings here, imply that there are firms are introducing new ICT products to the increasingly demand are efficient. This gives an organization an upper hand and help in including an incredible incentive in the administration conveyance and to its investors it likewise raises its market level.

This findings are supported by Odongo (2015) who notes that organization endeavor to achieve grandstand organization have or control noteworthy advances in their general region of movement, paying little regard to whether some other individual is using it must be strong. They hope to be the first to take off and act brisk in completing the headways. They furthermore make new things and intend to make them industry standards. They revolve around developing high improvement business strategies, animate vision and stretch their goals and make inventive centered and advancing frameworks. They also placed assets into their organizations structure melding lean techniques and associations that give a forceful edge over the contenders.

Finally the findings are supported by Musamba (2018) who notes that for service providers to be successful in the long term, they need to have good products and services as well as versatile organization structures. These are key elements to the steady creation and conveyance of good items and administrations. A few roads for upper hand are more liquid than others. An organization accomplishing an aggressive methodology through its items might be surpassed by one that puts resources into innovation that enables it to deliver items with cutting edge highlights and at generally lower costs. The conduct of contenders is along these lines a main consideration with regards to aggressive system. Associations planning to continue their upper

hand subsequently should keep up a reasonable perceivability on both existing and new participants in the market.

4.5 ICT hardware e-readiness

The study sought to determine ICT hardware-readiness. The findings indicated staff have T enough computers in their office (Mean = 2.1, Std. dev =0.4), and that TSC have enough external and internal servers (Mean = 2.3, Std. dev =0.1), at same time existence of suitable physical space for computer and IT (Mean = 2.2, Std. dev =0.1). On the other hand there was uncertainty whether there is enough uninterrupted power supply devices in the offices (Mean = 3.8, Std. dev =0.4) and whether there is availability of printers and scanners (Mean = 3.0, Std. dev =0.2) as exhibited in table 4.6

Table 4.5 - ICT hardware e-readiness

	SA	A	UD	D	SD	Mean	Std Dev
There are enough computers in your office	72	39	18	0	0	2.1	0.2
There enough uninterrupted power supply devices in your office	33	27	15	18	36	3.8	0.4
There is availability of printers and scanners	39	33	15	24	18	3.0	0.2
Existence of suitable physical space for computer and IT	42	30	15	12	30	2.2	0.1
There enough external and internal servers	42	30	9	18	30	2.3	0.1
There is adequate storage for personal, server and secondary storage	30	33	9	24	33	2.8	0.4
Average (Mean & Std Dev)						2.8	0.2

In this case, the findings imply that for e-readiness to take place, the organization must have the necessary infrastructure which also refers to the number of computers in the organization.

Technological resources have been reliably distinguished as a significant factor for fruitful data frameworks selection. Technologies have changed and re-imagined the manner in which associations and government enterprises work. Associations embrace new innovations to improve the proficiency and viability of different work forms. Sadly, numerous innovation based items and administrations never achieve their maximum capacity, and some are just rejected.

4.6 ICT Software and Information system e-readiness

The study sought to determine software and information systems e-readiness. The findings indicated software and information system are easy to use (Mean = 2.4, Std. dev =0.1), and that there is a software and information system documentation (Mean = 2.3, Std. dev =0.3), and again, there is software and information system general support (Mean = 2.3, Std. dev =0.1). On the other hand there was disagreement on the fact that staff have enough knowledge of using the system (Mean = 3.8, Std. dev =0.3), the respondents were also uncertain whether there is software and information security (Mean = 3.3, Std. dev =0.4) as exhibited in table 4.7

Table 4.6 - Software and Information system e-readiness

	SA	A	UD	D	SD	Mean	Std Dev
Software and information system are easy to use	33	36	21	15	24	2.4	0.1
We have enough knowledge of using the system	30	33	15	27	24	3.8	0.3
There is a software & information system documentation	36	30	15	12	36	2.3	0.3
There is software & information security	27	33	12	27	30	3.3	0.4
There is software & information system general and support	48	39	18	9	15	2.3	0.1
Average (Mean & Std Dev)						**2.6**	**0.2**

In this context, findings imply that for e-readiness to happen, then there is need for effective support. This can take many forms in such an ecosystem. An ICT ecosystem system envelops the arrangements, techniques, forms, data, innovations, applications and partners that together make up an innovation situation for a nation, government or a venture. In particular, an ICT

environment incorporates individuals various people who make, purchase, sell, direct, oversee and use innovation. Systems support is also very important.

These findings are supported by Bigam (2015) who noted that socio-technical support has been identified as playing a major role in determining adoption and use of ICT in various settings. In environments with constrained ICT resources, past studies show that support infrastructure plays a significant role in decisions of which technology to use and sustained usage; in their analysis of Internet use across two disparate regions, the USA and Central Asia. They discovered contrasts in internet connection and joining into national frameworks influenced the apparent helpfulness of innovations, characterizing the utilization contrasts between the two areas stress the need to take a gander at correspondence frameworks as socio-specialized cooperation systems, taking into account examination of client conduct and settings inside which the advances are utilized. Such sort of investigation is significant in planning and arranging e gatherings that help academic correspondence, which, however affected by innovation, are to a great extent characterized by researchers' social structures and practices.

4.7 ICT People and Human resource e-readiness

The study sought to determine people and human resource e-readiness. The findings showed that staff have relevant certification in the field of ICT (Mean = 2.2, Std. dev =0.1), and that there are often trainings and seminars (Mean = 2.3, Std. dev =0.1), and again, staff have comprehensive knowledge of the work practices, processes and procedures relevant to use of IT tools in the service (Mean = 2.3, Std. dev =0.1). On the other hand there was disagreement on the fact that there are awards innovation encouragement policy (Mean = 3.8, Std. dev =0.4 (table 4.7).

Table 4.7 - People and Human resource

	SA	A	UD	D	SD	Mean	Std Dev
Relevant certification in the field of ICT	39	69	18	0	3	2.2	0.1
Often trainings and seminars	21	51	54	9	0	2.3	0.1
There are awards innovation encouragement policy	6	21	48	45	12	3.8	0.4

Comprehensive knowledge of the work practices, processes and procedures relevant to use of IT tools in the service	42	57	15	15	3	2.0	0.2
Average (Mean & Std Dev)						2.5	0.2

Therefore, this study implies that adoption of technology is based on training and seminars attendance. In most organizations there is insufficient understanding of ICT and the potential advantages of and absence of explicit incentive-structures clients. To other users supervision will be necessary because the concept sounds complicated and the user could not see its benefit. The findings are supported by Grunwald, (2002) who noted that training is important for in adopting technology where he noted that in an audit of the writing on components that influence the reception of instructional innovation recognized factors, for example, potential adopter traits: hazard avoidance, potential adopter utilization style; individual conviction, inspiration, experience, self-adequacy and scholarly control and age. Singular contrast factors included identity as well as socioeconomics (e.g., characteristics or conditions of people, sexual orientation, and age) that can impact people's view of apparent convenience and saw usability.

4.8 Organizational Culture Dimensions e-readiness

The study sought to determine organizational culture dimensions e-readiness. The findings indicated that there is identification of stakeholders involved and their roles well stipulated (Mean = 2.3, Std. dev =0.2). However, there was uncertainty on most of the issues given here, for instance it was not clear whether there is development and communication of IT policies and procedures to all (Mean = 3.1, Std. dev =0.5), and again, not clear whether all departments and employees are involved and responsibilities well stipulated (Mean = 3.1, Std. dev =0.4). On the other hand there was disagreement on the fact that budget allocation on ICT is adequate (Mean = 4.1, Std. dev =0.3), and that there is value to be realized on each stakeholder as a result of implementing ICTs (Mean = 3.8, Std. dev =0.4) (table 4.8).

Table 4.8 - Organizational Culture dimensions e-readiness

	SA	A	UD	D	SD	Mean	Std Dev
Development and communication of IT policies and procedures to all employees	30	36	15	15	33	3.1	0.5
Budget allocation on ICT is adequate	21	36	18	33	21	4.1	0.3
All departments and employees involved and responsibilities well stipulated	27	21	9	33	39	3.1	0.4
Identification of stakeholders involved and their roles well stipulated	48	36	24	12	9	2.3	0.2
Value to be realized on each stakeholder as a result of implementing	30	18	9	21	51	3.8	0.4
IT the core driver of all organizational activities	39	48	21	6	15	2.8	0.1
Average (Mean & Std Dev)						3.0	0.3

The study findings imply that the application of information and correspondence innovation ideas, procedures, approaches and execution systems has turned into a subject of essential significance and essential for neighborhood and worldwide intensity. ICT legitimately influences how administrators choose, how they plan and what items and administrations are offered in the financial business. It has kept on changing the manner in which banks and their corporate connections are sorted out worldwide and the assortment of imaginative gadgets accessible to improve the speed and nature of administration conveyance.

4.9 Inferential Statistics

The study sought to determine the relationship between variables. This was done by computing the correlation and regression models of the study.

4.9.1 Correlation Statistics

This was done to determine relationship between level of training, computer skills and the e-readiness indicators identified in the study. The findings indicated that there was positive

significant relationship between computer skills and organizational perception, (p = 0.027). It was also found that there was positive significant relationship between computer skills and organizational leadership (p = 0.032). There was however no significant relationship between computer skills and ICT infrastructure, ICT hardware, software & information system and people & human resources, all p-values are greater than 0.05 (p value >0.05). This implied that ICT skills slightly influenced E-readiness in the organization.

Additionally, the findings showed that there is positive significant relationship between level of training and organizational perception (p = 0.003), organizational leadership (p = 0.022) and ICT infrastructure (p = 0.012). There was however no significant relationship between training levels and ICT hardware, software and information system and people and human resources, all p-values are greater than 0.05 (p>0.05). This implied that level of training of staff slightly influenced E-readiness in the organization (table 4.9)

Table 4.9: Correlation Results on E-Readiness Indicators

Correlations							
		Organizational perception	Organizational leadership	ICT Infrastructure	ICT hardware	Software and Information system	People and human resource
Computer Skills	Pearson Correlation	0.273*	0.277*	0.177	-0.038	0.112	0.027
	Sig. (2-tailed)	0.027	0.032	0.255	0.809	0.473	0.865
	N	129	129	129	129	129	129
Level of Training	Pearson Correlation	0.64*	0.888*	0.313*	0.051	-0.223	-0.226
	Sig. (2-tailed)	0.003	0.022	0.012	0.744	0.15	0.145
	N	129	129	129	129	129	129
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

4.9.1 Regression Results

It was expected that the sort of relationship that exists among autonomous and subordinate factors is straight. To ascertain this, and to know the extent to which the predictors affect e-readiness, regression test was carried out. The predictors in this case include; organizational perception, organizational leadership, ICT infrastructure, ICT hardware, software and information systems, people and human resources while dependent variable is e-readiness. The findings (Table 4.10) showed that R square is 0.59; this shows that all the predictors accounts for 59% of e-readiness in the organization. The rule of thumb is that, usually an R square of more than 50% is considered as better. The findings here shows R^2 as 0.59, it means that holding all other factors constant, all the predictors in this study, influence e-readiness by 59% (table 4.10)

Table 4.10: Regression model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.943[a]	0.59	0.871	0.28001

On the other hand, the study findings indicated that there was a significant relationship between organizational perception (p = 0.002), ICT infrastructure (p = 0.016), Software and information system (p = 0.000) and people and human resource (p = 0.000) when regressed with organizational culture dimensions on e-readiness. There was however no relationship between organizational leadership and organizational culture dimensions on e-readiness (p = 0.861) (Table 4.11).

Table 4.11 – Regression coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.181	0.29		0.625	0.536
	Organizational perception	-0.291	0.089	-0.315	-3.267	0.002

Organizational leadership	0.244	0.133	0.222	1.84	0.074
ICT Infrastructure	-0.34	0.134	-0.312	-2.525	0.016
ICT hardware	0.006	0.035	0.011	0.176	0.861
Software & Information system	0.423	0.102	0.361	4.153	0.000
People and human resource	0.885	0.086	0.843	10.258	0.000
a. Dependent Variable: Organizational Culture Dimensions e-readiness					

The findings indicate that all the above four factors, that is, organizational perception, ICT infrastructure, Software and information system and people and human resource are likely to influence e-readiness of an organization.

4.11.1 Used e-readiness assessment model (Chanyagorn & Kungwannarongkun, 2011)

E-readiness assessment model by (Chanyagorn & Kungwannarongkun, 2011) developed tested at a constitutional office is composed of the reasons of problems, e readiness scores, and e readiness level. The e readiness assessment model is recommended for use in assessment of the ICT readiness in the constitutional office. The model was as a result of the collected research data that had been acquired in the constitutional office. The ICT readiness level can be used for prioritizing ICT investment and management policies of an organization. The cost of assessment processes is reduced because the numbers of indicators are less than other e-Readiness measurement tools, and the indicators are straightforward which helps reduce complication during data acquisition processes.

The proposed framework is composed of indicators for the four main ICT factors where these four factors contain a total of 7 ICT sub-factors, these indicators are ICT infrastructure, ICT hardware, Information system & software, and People and human resource:

ICT hardware: the server machine should be updated and with enough space to accommodate all the staff and the scanned work, the following are the sub-factors for indicators server, client, storage, office hardware. Computer hardware is not useful without a software application.

Software is the applications needed to accomplish the input, processing, output, storage, and control activities of information systems.

Software and information system: sub-factors are general and support, services and issues, documentation, information security and core- business. Computer software is typically classified into two major types of programs: system software and application software. The system can be hacked if security is not looked into.

People and human resource: ICT human capacity is an area that needs attention. The actual technical capacity of the ICT staff should be well articulated. A staff development program would then be developed and funded to develop the advanced technical capacity required; this should be through continuous training and upgrading of technology.

4.12 State of E-Readiness

The seven factors proposed in the proposed e-readiness assessment model were rated by respondents to determine their importance and also help determine the current state of e-readiness. The scores below were arrived at by calculating the mean of all response.

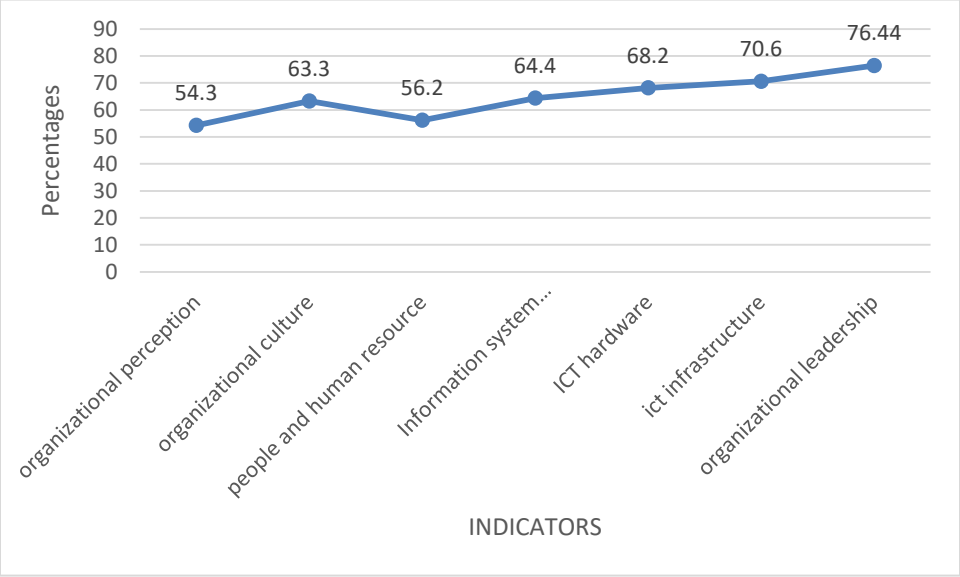

Figure 4.1 State of E-readiness

The study findings on the current state of this constitutional office indicated that in terms of Organizational perception, the institution was at 54.3 % e-ready, Organizational leadership (76.44%), ICT Infrastructure (70.60%), ICT hardware (68.20%), Software and Information

system (64.20%) ,People and human resource (56.2%) while as organizational culture dimension was at (63.3%). The results therefore indicate that despite the fact that this constitutional office has not adopted fully the use of ICT. Most of the services are done manually; there is a high level of preparedness and readiness in terms of organizational leadership, ICT Infrastructure as well as people and human resource, to use ICT to enhance the quality of services. This high degree of e-readiness also contributes significantly towards the realizations of an institutional goal. However, there is need to do more on ICT hardware, Software and Information system and organizational culture dimension in order to be more ICT.

After carrying the interview through design thinking these were some of responses: A senior ICT manager said "The organization needs to have a policy on e-readiness to be able to measure the level of preparedness. Most of the employees have no idea of what is e-readiness. The organizational leadership has not been providing sufficient funds for ICT department though they seem to understand the importance of ICT." ICT staffs commented that "there are few trainings taking place and the few are mostly attended by a certain group of people who are higher positions because it has some financial gains. There is no motivation like short-term wins even if the employee perform beyond expectations"

4.11.1 Mapping the Indicators with State of E-Readiness

For each indicator is mapped to one of 4 stages, with stage 1 being unprepared and stage 4 the Full-readiness (prepared) to exploit the full benefits of ICT. The Network Readiness was used for mapping

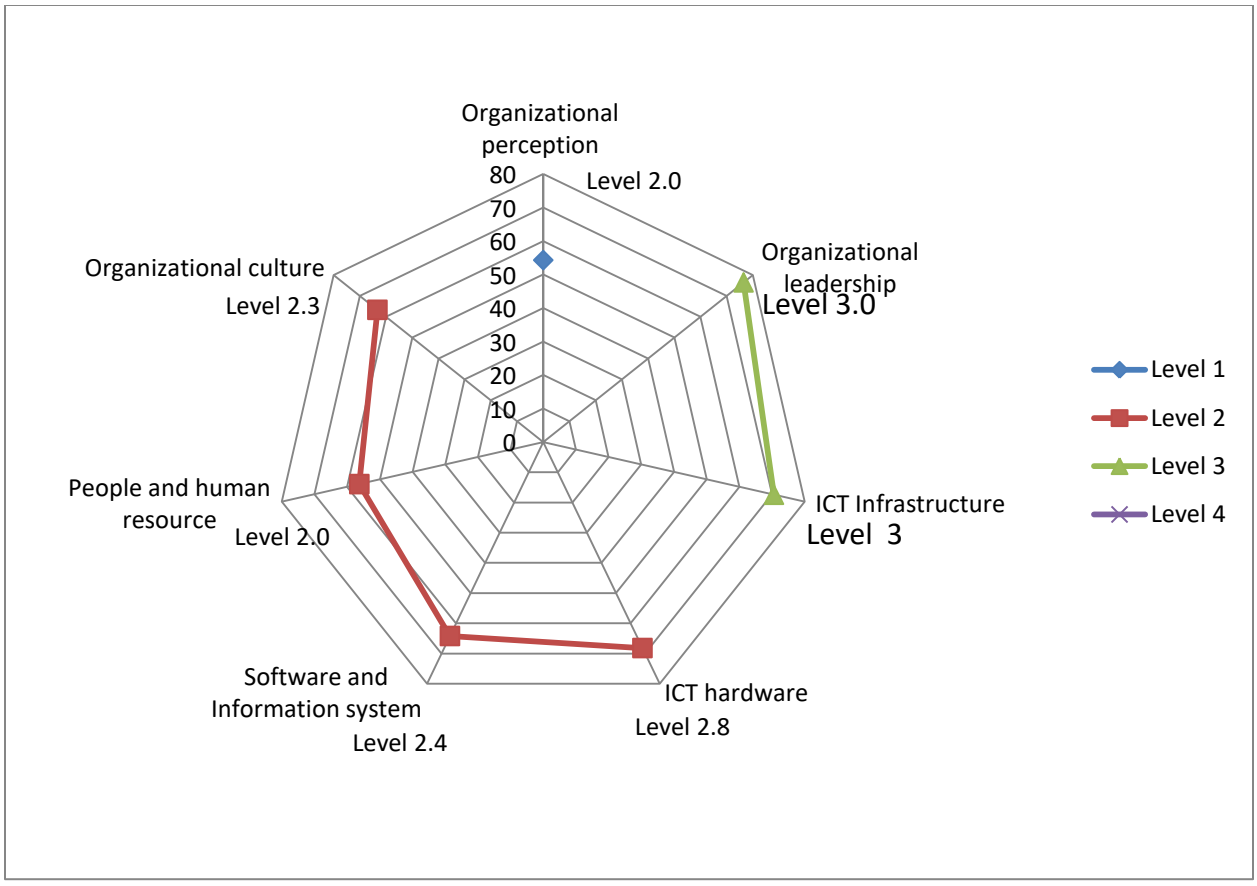

Fig 4.2 staging map analysis

The levels were mapped with indicators whereby level 1 is 25 percent, level two is from 50 , level three 70 and level four 85 and above. Therefore the findings in terms of Organizational perception; the institution was at 54.3 % therefore at level2. Organizational leadership (76.44%) , therefore level at 3, Infrastructure (70.60%),at level 3 ICT hardware (68.20%), at level 2.8Software and Information system (64.20%) at level2.4 ,People and human resource (56.2%)at level2 while as organizational culture dimension was at (63.3%) which was at level 2.3.

CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Achievements

Objective 1: To identify the key drivers that needs to be addressed in order to achieve the highest level of e-readiness.

Through literature review, the key critical attributes for e-readiness were identified as people and human resource, ICT hardware, ICT infrastructure and software and information system

Objective 2: To assess the perception of the management and the staff on the use of ICT in the organization.

From the findings, there was unanimous agreement that use of ICT improves quality of service delivery in the organization

Objective 3: To propose an integrated model that can be used by the organization to measure the level of e-readiness.

The e-readiness assessment model by Chanyagorn & Kungwannarongkun was proposed

Objective 4: To use the integrated proposed model by Chanyagorn & Kungwannarongkun to measure the level of e-readiness in the organization.

The data was analyzed and gave the clear indicator of where the organization is in the level of e-readiness. The key drivers were at different levels as shown in fig 4.2

5.2 Limitation of the Study

This research required substantial financial resources and time in order to administer the Questionnaire throughout the constitutional office. The administering of the questionnaire was through Google form and some respondents were hesitance to responding this is due to the fear of technology. The questionnaires had to be given again through give and take process in order

to get response of those who would not use Google forms this made compiling more difficult and analysis also was a challenge.

5.3 Conclusion

Although research results presented in chapter four Fig 4.2 staging map analysis show that the organizational leadership understood the full value of ICT in achieving the organizational goal, most indicators were below stage 3.0. The organizational perception was at level 2.0, ICT hardware was at level 2.8, software and information system at level 2.4 people and human resource at level 2.0

The organization need to invest in ICT hardware by ensuring that there enough computer, ups, printers and scanners. The survey found that the perception of the staff and people and human resource was below stage 3.0 and being the key to the success of e-readiness the management needed to invest on training the employees, invest on motivational awards. It is evident that ICT officer needed to be trained on relevant certification in field of ICT in order to improve the performance.

The survey found that the organization should invest on Software and Information system security and a good documentation. The staff also should be trained on how to use the system and advance more on technology due to the drastic change and growth in the field of technology

For e-readiness to happen, then there is need for effective support. This can take many forms in such an ecosystem. An ICT ecosystem encompasses the policies, strategies, processes, information, technologies, applications and stakeholders that together make up a technology environment for a country, government or an enterprise. The study findings conclude that use of technology is based on individual factors. This is where some employees can work without supervision. Finally the study concluded that the application of information and communication technology concepts, techniques, policies and implementation strategies has become a subject of fundamental importance and prerequisite for local and global competitiveness.

5.4 Recommendations

i. The organization should carry out e-readiness assessment before starting any major project
ii. Incorporate e-readiness assessment in the ICT policy and have Regular readiness assessment. The organization needs to ensure that it scores better than its previous score. This will ensure preparedness of the organization at all times
iii. Adequate allocation of ICT budget. without enough allocation of finances acquiring of the required resource can be difficult thus no improvement on the preparedness of the organization
iv. Benchmarking should be done from other established organizations with high level of e-readiness
v. External ICT auditors and trainers need to be employed on a consultancy basis and different trainings should be done at different cadres
vi. Some recommendation for further e-readiness research.

5.5 Further Work

There is a need to conduct further research to establish the relationship between the four indicators of the framework. The e-readiness framework also needs to be expanded and simplified to measure the e-readiness of the organizations

REFERENCES

1. Alaaraj, H., & Ibrahim, F. W. (2014). An overview and classification of e-readiness assessment models. International Journal of Scientific and Research Publications, 4(12), 1-5.

2. Bui, T. X., Sankaran, S., & Sebastian, I. M. (2003). A framework for measuring national e-readiness. International Journal of Electronic Business, 1(1), 3-22.

3. Bruce, B. C. (1993). Innovation and social change. Cambridge University Press.

4. Chanyagorn, P., & Kungwannarongkun, B. (2011). ICT readiness assessment model for public and private organizations in developing country. International journal of information and education technology, 1(2), 99.

5. Choucri, N., Maugis, V., Madnick, S., and Siegel, M. (2003). Global e-Readiness- for What?.Cambridge: Massachusetts Institute of technology. Retrieved March 2, 2015, from

6. Corbetta, P. (2003). Social research: Theory, methods and techniques. Sage.
7. Dada, D. (2006). E-Readiness for Developing Countries: Moving the focus from the environment to the users. The Electronic Journal of Information Systems in Developing Countries, 27(1), 1-14.

8. Durrani, H., Khoja, S., Naseem, A., Scott, R. E., Gul, A., & Jan, R. (2012). Health needs and eHealth readiness assessment of health care organizations in Kabul and Bamyan, Afghanistan.

9. Dutta, S. & Banat, (2013). Networked Readiness of Nations", in Global IT Report 2013-2014.Geneva:World Economic Forum, March 2013.

10. Dzhusupova, Z., Shareef, M., Ojo, A., & Janowski, T. (2010, April). Methodology for e-government readiness assessment-models, instruments, implementation. In Proceedings of the International Conference on Society and Information Technologies (ICSIT 2010) (pp. 6-9).
11. Fehling, M., Nelson, B. D., & Venkatapuram, S. (2013). Limitations of the Millennium Development Goals: a literature review. Global public health, 8(10), 1109-1122.

12. Francis A. Wilson & John N. Wilson. (2010) The role of computer systems in organizational decision making

13. Kashorda, M., & Waema, T. (2014). E-Readiness survey of Kenyan Universities (2013) report. Nairobi: Kenya Education Network.

14. Khan, M. A. H. (2017). E-readiness of public administration in developing countries: A case study on Bangladesh public administration.

15. Matiyabu, I. I., Ndayizigamiye, P., & Maharaj, M. (2017, May). The role of ICT in enhancing transparency and accountability in public funds management in DRC. In 2017 IST-Africa Week Conference (IST-Africa) (pp. 1-9). IEEE.

16. Meoli KASHORDA1 and Timothy Mwololo WAEMA (2011) Proceedings and reports of the 4th UbuntuNet Alliance annual conference

17. Molla, A., & Licker, P. S. (2005). eCommerce adoption in developing countries: a model and instrument. Information & management, 42(6), 877-899.

18. Naidoo, R., & Edwin, D. (2005). A framework of factors for determining e-readiness in emerging societies. Alternation, 12(2), 132-158.

19. Ndou, V. (2004). E–Government for developing countries: opportunities and challenges. The electronic journal of information systems in developing countries, 18(1), 1-24.

20. Ndou, V. (2004). E–Government for developing countries: opportunities and challenges. The electronic journal of information systems in developing countries, 18(1), 1-24.

21. Rangaswamy, A., & Gupta, S. (2000). Innovation adoption and diffusion in the digital environment: some research opportunities. New Product Diffusion Models, 75.

22. Rogers, E. M. (2003). Diffusion of innovations. Free Press. New York, 551.

23. Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. Essex. Financial Times/Prentice Hall.

24. Slovin, E. (1960). Slovin's formula for sampling technique. Retrieved on February, 13, 2013.

25. Zaied, A. N. H., Khairalla, F. A., & Al-Rashed, W. (2007). Assessing e-Readiness in the Arab Countries: Perceptions towards ICT Environment in Public Organizations in the State of Kuwait. Electronic Journal of E-government, 5(1).

Website

1. https://www.spiceworks.com
2. http://icta.go.ke/standards/gea-e-readiness-assessment-tool/
3. https://www.interaction-design.org/literature/article/what-is-design-thinking-and-why-is-it-so-popular
4. http://libguides.usc.edu/writingguide/researchdesigns
5. http://ebusiness.mit.edu/research/papers/177_choucri_global_ereadiness.pdf READ
6. https://cyber.laws.com/hacking
7. Https://www.weforum.org/reports/global-information-technology-report-2013

APPENDIXES

QUESTIONNAIRE

The information collected is confidential, nobody should be biased Assessment of a constitutional office on electronic readiness

SECTION A: DEMOGRAOHIC INFORMATION

1. What is your job title _____
2. What is the name of your department _____
3. How long have you been in this department

   1-5yrs …….. .{ }

   6-10 yrs…… { }

   11-20yrs…… { }

   20-30yrs…… { }
4. Do you have any computer skills? Yes { } No { }
5. What is the highest level of training on ICT that you have attained?

   Certificate { }

   Diploma { }

   University Graduate { }

SECTION B: Organizational perception to e-readiness

To what extent do you agree with the following statements regarding e-readiness on impact of ICT? Use a scale of 1 –5 where (1-Strongly Agree and 5-Strongly Disagree)

1-strongly agree 2- agree 3- moderate 4- great extent 4- strongly 5-stongly disagree

S/NO	QUESTIONS	1	2	3	4	5
1.	Use of ICT Improve quality of service delivery					

2.	Use of technology Increases transparency & accountability					
3	ICT has enhanced communication at different levels in the organization					
4	Use of ICT is efficient and less time consuming					
5	ICT has reduced opportunity cost					
4	Identification of stakeholders involved and their roles well stipulated					
5	Value to be realized on each stakeholder as a result of implementing					
7.	All departments and employees are involved and responsibilities well stipulated					
8.	Development and communication of IT policies and procedures to all employees					
9	IT is the core driver of all organizational activities					

SECTION C: People and human resource

How would you rate your abilities in the given metrics below, tick appropriately?

Use the scale of 1 – 5 where: 1-strongly agree 2- agree 3- moderate 4- great extent 5-stongly disagree

S/NO	QUESTIONS	1	2	3	4	5
1.	Often trainings and seminars					
2.	Relevant technical skills required to execute my duties using ICT					
3.	Relevant certification in field of ICT					
4	There are awards innovation encouragement policy					
5	Comprehensive knowledge of the work practices, processes and procedures relevant to use of IT tools in the service					
6	Ability to work independently without supervision on ICT usage					

SECTION D: Organizational leadership on to e-readiness

To what extent do you agree with the following statements regarding e-readiness on impact of ICT? Use a scale of 1 – 5 where 1-strongly agree 2- agree 3- moderate 4- great extent 4- strongly 5-stongly disagree

S/NO	QUESTIONS	1	2	3	4	5
1.	The leadership of the organization believes e-readiness is important					
2.	The leadership of the organization believes adoption of information technology in their work will enhance efficiency and effectiveness accountability					

3	Do you think the leadership is prepared to take risks of adopting ICT					
4	Adequate allocation of ICT budget					
5	Leadership committed to adopt ICT					

SECTION E: ICT Infrastructure

To what extent do you agree with the following statements regarding e-readiness on accessibility of network?

Use a scale of 1 – 5 where 1 -strongly agree 2- agree 3- moderate 4- great extent 4-strongly 5-stongly disagree

S/NO	QUESTIONS	1	2	3	4	5
1.	Is it easy to access the office IP telephone					
2.	The rate of internet bandwidth is high					
3	enhanced organization's backbone and wireless network infrastructures					
4	Easier Internet availability					
5	The network service provider is efficient					

SECTION F: ICT hardware e-readiness

To what extent do you agree with the following statements regarding e-readiness on ICT hardware Use a scale of 1 – 5 where: 1-strongly agree 2- agree 3- moderate 4- great extent 5-stongly disagree

S/NO	QUESTIONS	1	2	3	4	5
1.	There are enough computers in your office					
2.	There enough uninterrupted power supply devices in your office					
3	There is availability of printers and scanners					
4	Existence of suitable physical space for computer and IT section					
5	There is adequate storage for personal, server and secondary storage					

SECTION G: Software and Information system e-readiness

Please rate the organizational e-readiness by assessing whether the following are put into consideration. Scale of 1 – 5 where: 1-strongly agree 2- agree 3- moderate 4- great extent 5- stongly disagree

S/NO	QUESTIONS	1	2	3	4	5
1.	Software and information system are easy to use					
2.	We have enough knowledge of using the system					
3	There is a software & information system documentation					
4	There is software & information security					
5	There is software & information system					

	general support					

SECTION H: Strategies of e-readiness

1. How would you rate the current e-readiness in your department? (Circle only one appropriate option)

a) Excellent
b) Good/can do better
c) Fair/ needs improvement
d) Bad/ non-existent

2. What skills or new IT competencies do you need to keep up with service delivery in future? _____

3. State the appropriate strategies you think should be necessary to make e-readiness a success

a) _____
b) _____
c)

"Thank you for your positive responses to these questions