



**EVALUATING THE IMPLEMENTATION OF
E-GOVERNMENT IN DEVELOPING COUNTRIES:
THE CASE OF NIGERIA**

A thesis submitted for the Degree of Doctor of Philosophy

By

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Abstract

E-Government applications have emerged rapidly in the developing world. This is due to its usefulness as an enabling tool to increase efficiency and enhance transparency. This research focuses on insights into the implementation process of e-Government within the context of developing countries.

Institutional theory was the change theory applied since it explains why organisational structures and values endure. The neo-institutional theory was adopted by using multi-level approach and multi-stakeholder analysis, and these enable environmental forces to be used with other factors such as organisational and role of network actors. Due to its flexibility, institutional theory has been combined it with other theories and models such as: Lewin's 3-stage model (deeply enriches understanding of how change occurs as well as the role of change agent); Driver-Barrier model (to assist in recognising the potential drivers and barriers that might influence successful e-Government implementation); Comprehensive Barrier framework (relevant for study of e-Government and information system barriers that could be used as checklist for project planning and evaluation);and Three-Quarter Moon model (developed for e-Commerce adoption and applied the model to e-Government implementation)

The research questions and proposed framework were tested and validated by carrying out qualitative analysis using multi-methods approach for data collection. Case study research was adopted with focus on government-to-employee (G2E) within public sector organisations in Nigeria, West Africa. The research collection strategy included an in-depth investigation of organisations' information systems using both primary and secondary data collection. The series of techniques adopted are questionnaire responses, interviews, document analysis and observation. The research findings suppose that most of the factors – internal and external, and characteristics – benefits, barriers and risks, identified as influential to e-Government implementation are similar to those discussed in existing literature, although some may be specific to the Nigerian public sector context. Based in the findings, the researcher was able to reconceptualise the developed model for e-Government implementation, which was specific to the case study. The model was then extended for application by other countries. A novel subset model – Rectangular Four-Actor-Activity -

was also developed for identifying e-Government implementation key actors and their main activities, which is a subset of the holistic framework.

The conceptualised model should help managers and academicians to understand the step-by-step guide to e-Government implementing process by ranking and mapping of relevant concepts and factors within the framework, understanding the difference between theory and practice in terms of e-Government implementation.

The researcher therefore accomplishes that this study extends to the knowledge in the aspect of e-Government implementation from organisational perspectives, Government-to-Employee (G2E); thus contributing to the Information System (and e-Government implementation) literature through reviewing the range of studies using a wider multi-level and multi-method approach. This includes combining institutional theory with other models. This enables development of a holistic conceptual model for implementing e-Government, including a subset model for e-Government key actors and their main activities throughout the development life cycle.

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Dedication

To the glory of God, I would like to dedicate the successful completion of my PhD degree to my late father – Engr Michael Abiodun Ashaye, who passed away on 01 August 2013. How I wish he was alive to witness my doctorate graduation, after witnessing my first and second degree celebration. However ‘man disposes whilst God disposes’; for God’s ways are not our ways, nether His thoughts our thoughts.

I would also like to dedicate my thesis to my wife – Olanike and my ministers (children) – Tokunbo Jnr and Moyosola. They are the apple o my eyes.

Declaration, Biography and List of Publications

Declaration

I hereby declare that this dissertation, submitted in partial fulfillment of the requirements for the degree of Doctorate of Philosophy and entitled “Evaluating the Implementation of E-Government in Developing Countries: The Case of Nigeria” does embody my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person.

Signed:..... (Research Student) Date:.....

Supervisors: Prof Zahir Irani (1st Supervisor); Prof Vishanth Weerakkody (2nd Supervisor)

Biography

Olusoyi Olatokunbo Richard Ashaye is a Doctoral Research at Brunel University. He holds an MSc degree in Advanced Information Technology with Multimedia from the London South Bank University, London, UK; and a BSc (Hons) degree in Estate- Management from the Obafemi Awolowo University (formerly, Univeristy of Ife), Ile-Ife – Nigeria.

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Member, The British Computer Society – MBCS;
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List of Publications

This thesis gives an account of the research undertaken by Olusoyi Richard Ashaye. Some of the material contained herein have been accepted and presented in the form of the following publications:

Journal Papers

Published/Accepted (In Press)/ Under Review:

- [J1] Ashaye, O. R. & Irani, Z. (2014). E-Government Implementation Benefits, barriers and Risks: Evidence from Nigeria. *US-China Education Review B*, ISSN 2161-6248, January 2014, 4 (1): 13-25.
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- [C2] Ashaye, O.R. & Irani, Z. (2012). Supporting the use of E-Government in the implementation of Land Administrative Systems: A Conceptual Framework. In T. Amiel & B. Wilson (Eds.), *Proceedings of World Conferencen Educational Multimedia, Hypermedia and Telecommunications 2012*: 19-28. Chesapeake, VA: AACE. [CD-Proceedings].

- [C3] **Ashaye, O. R.** (2012). Factors influencing online one-stop Government in public sector delivery: The case of a West London borough. *Paper presented at the British Academy of Management Conference (BAM 2012)*, Cardiff, Wales, 10 – 13 September 2012 [CD-Proccedings].
- [C4] **Ashaye, O. R.** & Irani, Z. (2012). Evaluating the use of e-Government in the implementation of Land Administration Systems in the developing countries: The case of Nigeria. *Development Paper presented at the British Academy of Management Conference (BAM 2012)*, Cardiff, Wales, 10 – 13 September 2012 [CD-Proccedings].
- [C5] **Ashaye, O. R.** & Irani, Z. (2012). E-Government Implementation Factors: A Conceptual Framework. In T. Bastiaens & G. Marks (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2012* (pp. 480-489). Chesapeake, VA: AACE. [CD-Proccedings].
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List of Abbreviations

ASA	Attraction-Selection-Attrition
AST	Adaptive Structuration Theory
CBA	Cost-Benefit Analysis
CBN	Central Bank of Nigeria
COMESA	The Common Market for Eastern and Southern Africa
Coy	Company
DOI	Diffusion of Innovation
EFQM	European Foundation for Quality Management
E-Biz	Electronic Business
E-Citizen	Electronic Citizen
E-Comm	Electronic Commerce
EGI	E-Government integration
E-Gov	Electronic Government
FAAN	Federal Airport Authority of Nigeria
FBO	Faith-Based Organisation
FELIS	Federal Land Information Systems
FMLHUD	Federal Ministry of Lands, Housing and Urban Development
G-KBP	Government Key Business Processes
Gov	Government
TAC	Technologically-advanced countries
ICT	Information and Communication Technology
NCAA	National Civil Aviation Authority
NESREA	National Environmental Standards and Regulations Enforcement Agency
NGO	Non-Government Organisation
NITDA	National Information Technology Development Agency
NeGSt	Nigerian E-Government Strategy
OeE	Office of e-Envoy
OMB	Office of Management and Budget
SLG	Sagamu Local Government
TAM	Theory of Acceptance Model

Definition of Terms

Adoption

Adoption is often used in e-Government to connote citizen acceptance of the use of ICT for government projects. In most e-Government adoption, the emphasis is on how the customers are able to make decisions whether or not to accept adopt any innovation. Thus the focal determinant for most government to Citizen (G2C) projects failing is due to the low adoption by citizens; this often impact on three factors – financial, technical and human resources (Rogers, 1995; Kanat & Özkan, 2009; Schwester 2009; Al-Rashidi, 2012).

E-Government

E-Government is the use of information & communication technologies to improve the efficiency, effectiveness, transparency & accountability of governance – World Bank

The use of information & communication technologies is essential in order to improve the efficiency, effectiveness, transparency & accountability of governance. As puts Beynon-Davies (2005), e-Government can be regarded as the employment of Information and Communication Technology (ICT) to change the structures and processes of government organizations.

E-Government can also be described as an institutional approach to jurisdictional political operations, by which the government employ and deploy information and communication technology and services to deliver services to the citizens. The aim is to also use the internal running and linkages among various government departments, ministries and agencies. Scholars have mentioned that despite e-government initiatives being in their infancy in many developing countries, their success is dependent on support from both the government in implementation, and citizens' willingness to adopt e-Government services. Thus e-Government is believed to be a subset of the concept of good governance (World Bank, 2004; Al-Awadhi, 2009; SMART, 2008; Otubu, 2009).

E-Governance

Academicians and scholars have attempted to differentiate between e-Government and e-Governance. Whilst the concept of e-Government is described as a bi-polar that combines the key characteristics of technological department and public administration and concentrates on customer service – front office and organisational structure – back office; NeGSt (2005) explains e-Governance as the deployment of ICT tools and processes for efficient administration and enhanced revenue generation for better governance. Whilst e-Government focuses on the output of government in terms of implementation of specific programmes, e-Governance tend to take a generously proportioned view of social objectives involving the coordination of efforts since the bottom line for governance is outcomes.

According to UNESCO, governance refers to the exercise of political, economic and administrative authority in the management of a country's affairs, including citizens' articulation of their interests and exercise of their legal rights and obligations. E-Governance therefore entails “the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities.”

Other scholars define e-Governance as a broader concept that deals with the whole spectrum of the relationship and networks within government regarding the usage and application of information and communication technologies holistically. Hence it is a way of describing the links between government and its broader environment – political, social and administrative – within the context of use of information and communication technologies in government. E-Governance expressed to be broad, general and more complex use of the digital revolution

E-Governance is however sometimes used interchangeably with e-Governance in the context of its adoption or implementation in information systems. It defines and assesses the impacts that technologies are having on the practice and administration of government and the relationships between public servants and the wider society. E-Governance

encompasses a series of necessary steps for government agencies to develop and administer to ensure successful implementation of e-Government services to the public at large.

In the aspect of service delivery, e-Governance is widely believed to depict the impact of information and communication technologies in government beyond the scope of provision of e-Services by the government to the citizen and other members of the public, whilst the citizens adopt the ICT to influence government actions and inactions. E-Governance includes new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organising and delivering information and services.

Implementation

Basically, implementation is defined as the realisation of an application, or execution of a plan, idea, model, design, specification, standard, algorithm, or policy. Implementation is the process where development, installation and maintenance of e-Government projects take place. This is the second phase after initiation where planning and execution occur with the benefit of information sharing and alleviating or eliminating silos in the project. The main issues are co-ordination, technology, user friendliness, availability, scalability, ownership and pricing of services (Kwon and Zmud, 1987; Baum and Di Maio, 2000; Heeks, 2006; Sharif and Manian, 2010; Al-Rashid, 2012).

COMESA (2007) produced e-Government toolkit, which act as guidelines for the formulation of e-Government strategies. The requisite for the implementation of e-Government are suggested as follows:

- Transforming Vision, Mission and Objectives to real actions
- Developing a plan of action
- Specification of expected achievements of e-Government strategy
- Specifying timeframe for the implementation of e-Government strategy
- Define initiatives and projects
- National dialogue on the Plan of Action
- Adoption of the Plan of Action

Life Cycle

Kasimi *et al* (2009), e-government life cycle is divided into three phases – pre-implementation, development and post-implementation. The pre-implementation is described by scholars as the design stage or initiation and planning stage. The implementation stage is the planning and development stage where as the final stage is post-implementation stage, which is the deployment stage for operations and monitoring of the project. Decision making along the life cycle as well as support for single-loop and double-loop learning are usually determined by e-Government evaluation (Heeks, 2006; Al-Rashid, 2012; Sharif & Manian, 2010; Baum & Di Maio, 2000; Auditing E-Government, 2010).

Chapter 1 Introduction

1.1 Brief background to research context

E-Government applications have emerged rapidly in the developing world. This is due to its usefulness as an enabling tool to increase efficiency and enhance transparency. Whilst various theories, processes and models have been developed over time, there exists no structured methodology to the development of an e-Government environment.

E-Government is a concept that is increasingly accepted by practitioners and academicians in the information and communication technology environment. Government around the world are embracing e-Government from local, state and federal level, which explains its importance and fast spreading nature. Some of its benefits include enhancing transparency and increasing efficiency. E-Government is also essential for increasing revenue, promoting competitiveness and enhancing marketing in the public sector. As a result, numerous processes and applications have been developed over time, despite having no structured methodology

This study is within the context of the developing countries where e-Government is growing steadily but rapidly. Government around the world are embracing e-government from local, state and federal level, which explains its importance and fast spreading nature. Some of its benefits include enhancing transparency and increasing efficiency. E-Government is also essential for increasing revenue, promoting competitiveness and enhancing marketing in the public sector. As a result, numerous processes and applications have been developed over time, despite having no structured methodology

1.2 Rationale and motivation for undertaking the study

ICT infrastructure is recognised to be one of the main challenges for e-Government, whilst the developing countries have low IT literacy level compared to the developed countries. Thus the evolving change in the global world and the need for developing countries to meet up with technological advancement calls to transformation.

Academicians have reviewed that some of the reasons projects failure is due to the fact that the role of the key actors and activities are not properly analysed, the same with staff attitude to work – resistance to change (Lam 2005). There is the need to analysis if there is any difference between theory and practice, in the implementation of e-Government systems, in the context of developing countries.

Due to the need for better understanding of organisational actions and behaviour, institutional theory is relevant for dealing with more resilient aspects of social structure and processes in terms of structures, schemas, rules, norms, and routines as part of authoritative guidelines for social behaviour (Richard, 2004; Irani *et al*, 2009). It has also been observed that for e-Government to be effective there is the need to tackle issues of bribery and corruption to allow for transparency. The level of literacy of the citizens in these developing countries appears to be low compared to the industrialised countries with advanced technology and if this literacy level is not alleviated, it would act as barrier to implementing e-Government services.

Apart from corruption, bureaucracy and political barriers as a result of instability of the government from countries to countries would determine the level of support and e-Government applications required. This would also influence the cost of implementing information and communication technology. With most government, businesses and citizens moving towards online transaction, e-Commerce has been their essential focus for socio-economic development. This is an area that needs more emphasis as has been observed where most developing countries still transact businesses on face-to-face basis, have no online payment systems, keep paper filing records of land titles, deeds and application forms, amongst other issues.

Like many other projects or programme, there are always risks in the implementation process that needs to identified and carefully managed, in order to ensure successful application and to promote good practice. These risks stem around service quality, data sharing, security and privacy and misinterpretation or the services. Thus e-Government implementation requires stakeholders' participation at every level of the development lifecycle, from the initiation stage to the monitoring and evaluation stage.

Academicians have argued that e-Government poses some challenges, as effective communication and organisational skills are required in order to maintain the vision, values and aspirations of all parties involves in e-Government implementation. These barriers as observed in the developing countries include socio-cultural problems, economic constraints, infrastructural and technical constraints, and change management issues – resistance to change amongst public servants.

Despite the challenges, there is enormous prospects in e-Government implementation as it seeks to provide governments at all levels and arms world-over, with value for money and finding a balance between costs, revenue and good governance. Thus e-Government practice introduces positive changes into the day-to-day management of government business. (Lam, 2005; Muoka, 2010; Onu & Chiamogu, 2012).

1.3 Historical Perspective: Evolution of E-Government

The emergence of e-Government was as a result of shift from technology to management and the development of scope performance and policy intentions. This was due to the government seeing internet as more than a 'bolt-on' to corporate processes. The concept of e-Government appears to be fairly new in most developing countries. However it is a bipolar phenomenon, which combines the key characteristics of technological department and public administration. Thus it concentrates on customer service – front office and organisational structure – back office. E-Government is based on the integration of

information technology capacity, primarily websites, intranets, databases, to allow self-service through an IT medium (Budd & Harris; 2004; Bigdeli & de Casare, 2011).

The advent of e-Government in the USA started when there was the need for an electronic framework within which the state would interact with citizens. It began with government back office, which was characterised by largely server based, assuming common protocols and centralised access. Thus e-Government was adopted in an attempt to re-invent digital government (use of information technology to enhance government service provision. This led to the establishment of the federal links portal, FirstGov (www.firstgov.gov). Political prioritisation given to the project and the methods were the key to the successful adoption of e-Government, it was tied to the heart of the government reform. The FirstGov is a link page restricted to the bottom level of e-Government for providing information. Each department had websites in place long before the portal was built.

As part of ‘modernising’ government reforms, the Executive office of the Bush administration set up the Office of Management and Budget (OMB). The president’s management agenda contains several items about the procurement and management of federal services and the efficient running of bureaucracy. Thus e-Government was firmly placed as one of the five key areas of focus of the federal government. Budd & Harris (2004) had observed that e-Government in the UK often represented a change in status for government technology. Unlike the USA, the initial burst of reform focused on technology as opposed to business culture of Whitehall. The office of e-Envoy (OeE) acted as co-ordinator for standards rather than as a change agent.

The major landmark was the first modernisation government paper and e-Government strategy, both issued by the Cabinet office in year 2000. The principles of joined-up government and electronic services leads to step-change in service delivery and moved into a more commercialised, dotcom language. The government had set target that all services would be online by 2008, and later brought forward to 2005. The initial way forward was the formation of a FirstGov – inspired portal ([ukonline](http://ukonline.gov.uk)). This is to provide information and links to further, more in-depth sites, which assumes the role of search engine.

1.4 Concept and Characteristics of E-Government

There is no standard definition of e-Government. Various academicians and researchers have attempted to define it based on their notion. For instance, Backus (2001, pp.4) defines e-Government as “a form of e-business in governance and refers to the processes and structures needed to deliver electronic services to the public (citizens and businesses), collaborate with business partners and to conduct electronic transactions within an organisational entity.” It has become an explicit component of public sector reform, as an instrument to increase efficiency, strengthen competitiveness and enhance modernisation.

On the other hand, Van Der Molen & Wubbe (2007) described e-Government as ‘the use of information and communication techniques to improve the activities of public sector organisations, of course impacts on the strategy and operations of our Agency’. They believed that e-Government has become an issue in all fields of public administration.

In his own view, Otubu (2009) defines e-Government as the process whereby the use of information and communication technology and services is deployed and employed by the government in the delivery of services to members of the public and the use of same in the internal running and linkages among different governmental agencies.

For simplicity, e-Government should however be distinguished from e-Governance. Academicians have expressed e-Governance as a broader concept that deals with the whole spectrum of the relationship and networks within government regarding the usage and application of information and communication technology holistically. In a general sense, e-Governance describes the links between government and its broader environment – political, social and administrative – within the context of use of information and communication technologies in government.

Whilst e-Government is narrow, specific, and simplified, e-Governance is broad, general and more complex use of the digital revolution. They have also argued that the efficiency of government, and its impact on the intended beneficiaries of public services, is decisively connected with the presence or absence of public accountability (Bhatnagar 2004; Otubu 2009).

In terms of its characteristics of e-Government, there seems to be no distinctive characteristic of e-Government; however its features are explained based on different understanding. In terms of electronic transactions and interactions between government and other main groups – citizens, businesses, employees and other governments and public bodies, four main blocks of e-government have been classified:

- a) Government to Citizen (G2C): Allows citizens to retrieve information and complete government transaction e.g. licence renewals.
- b) Government to Employee (G2E): Government interacting with employee online.
- c) Government to Government (G2G): Online communication and interaction amongst government agencies.
- d) Government to Business (G2B): Allows businesses to retrieve government information and complete transactions with government agencies e.g. bid submission

(Carter & Belanger, 2004; Ndou, 2004; Reddick, 2004)

Reddick (2004) highlighted the stages of e-Government growth and type of government relationship in tabular form, as in Table 1-1:

Type of government relationship	Stages of e-Government growth	
	Stage I: Cataloguing	Stage II: Transactions
G2C	Online presence of information about government and its activities for citizens. Example: council meeting minutes online.	Services and forms online and databases to support online transactions for citizens. Example: online payment of taxes.
G2G	Online presence of information for other levels of government and its employees. Example: intranet with benefits information.	Services and forms online and databases to support online transaction for other levels and government and employees. Example: provide online training.
G2B	Online presence of information for businesses about government. Example: online product review of office supplies.	Services and forms online and databases to support businesses transactions with government Example: make purchases of office supplies online.

Table 1-1) Stages of e-Government growth and Type of Government Relationship (Source: Reddick, 2004).

In the same vein, Holden *et al* (2003) explain the successful implementation of the phases of progress of e-Government in the US and recommended that e-Government should be adopted and tested by other industrialised and developing countries. The phases are classified into:

- a) Catalogue;
- b) Transaction;
- c) Vertical integration;
- d) Horizontal integration;
- e) Modelling and methodologies.

The introduction of new technologies or working practices within an organisational context are primarily enabled by disciplines or techniques such as project and programme management, change, technology transfer and business re-engineering. The scale of an undertaking may determine the relevance of applying some or all of these techniques in practice, but a pragmatic blend of these is often required in many instances.

Whilst e-Government has been classified as based on web of interrelationships and phases of progress, Bhatnagar (2004) however classified e-Government evolution in four critical stages, namely:

- a) Web presence (Agency websites - for transparency of government processes and rules e.g. Awareness of new models)
- b) Limited interactions (Intranet links – for saving time and travel costs for citizens e.g. standardisation and simplification of rules, forms and information)
- c) Transaction (Electronic delivery of services and automated systems e.g. strong networking infrastructure and highly computerised back end processes)
- d) Transformation (Joined-up government e.g. government portals and NGOs / media as facilitators of widespread access).

Interestingly, no country has fully-implemented the final stage – transformation. There is thus the need to explore further to determine why the transformational stage is yet to be reached, despite the rapid trend in e-Government systems. However, this is beyond the scope of this study.

1.5 Research Aim and Objectives

The aim of this research is to investigate the main issues that impact on e-Government implementation and to suggest good practice guidelines for successful e-Government application within the context of developing countries.

The main objectives of this research that arise as a result of the above aim are:

1. Critically review and analyse the existing literature in the area of e-Government with reference to public sector delivery in developing countries. This would involve elucidating on the core drivers, barriers and risks and gaps in existing literature.
2. Critically review and analyse existing theories, policies and models relating to e-Government implementation. This which would enable the development of conceptual framework for evaluating e-Government implementation and borrow a lead from practices in countries where it is operational.
3. Based on review of literature and addressing the research gaps that exist between e-Government implementation, there is the need to develop and revise the conceptual model that would assist in its application particularly in the developing countries, from pre-implementation to post-implementation stages. This would involve validating the model, analysing, synthesising and reporting on research findings. The ultimate research should therefore draw trajectory conclusions on notion and implementation of e-Government system and managing change in developing countries.
4. Using conceptual framework as the basis, to conduct case study research in order to reconceptualise the model. This involves examining the factors – external and internal - influencing e-Government implementation, and identifying the drivers, constraints and risk inherent in the process of e-Government implementation in an information and communication technology (ICT) environment in developing countries

1.6 Research Questions

The PhD thesis will concentrate on the following main research questions:

1. What are the external and internal factors influencing e-Government implementation in public sector in the context of developing countries in order to

bring about transparent and generally acceptable system?

2. How do these factors and characteristics – benefits, barriers and risks, influence e-Government implementation process and what implications may emerge from this implementation? How are we able to rank and map these factors/characteristics in order of priorities, and whether or not we are able to identify new factors/characteristics that have not been discussed in the review of literature?
3. Who are the key actors involved in e-Government implementation process, and what are their main activities throughout the development life cycle? How are decision-makers able to identify, and address any challenges arising implementation of e-Government systems including change management issues?

1.7 E-Government and context

E-Government applications have emerged rapidly in the developing world. This is due to its usefulness as an enabling tool to increase efficiency and enhance transparency. Whilst various theories, processes and models have been developed over time, there exists no structured methodology to the development of an e-Government environment. E-Government is a concept that is increasingly accepted by practitioners and academicians in the information and communication technology environment.

Academicians have described e-Government as having emerged as an instrument of IT that can bring potential benefits for government organisations, business and citizens such as cost savings, improved communication and co-ordination within and between organisations, expanded citizens' participation, and increased government accountability.

Practitioners have mentioned e-Government is becoming increasingly widespread in both developing and developed countries, because of its usefulness as an enabling tool to increase efficiency and enhance transparency. In addition, it is narrow, specific, and simplified. The implementation of e-Government therefore forms a vital strategic plan of

the government in modernising business processes. It has generally been seen that most government organisations are still in their early stages in terms of e-Government growth (Ebrahim, 2005; Otubu, 2009; Bhatnager, 2004)

Although there is no standard definition of e-Government, academicians and researchers have attempted to explain the concept in various contexts. Whilst Otubu (2009) describes e-Government as narrow, specific, and simplified, Bhatnager (2004) believes its efficiency is decisively connected with the presence or absence of public accountability. Due to its benefits in terms of enhancing transparency and increasing efficiency and enhance transparency, various theories, processes and applications have been developed over time, despite having no structured methodology.

There is the need for transformation in the developing countries to meet up with the technological advancements due to the evolving change in the global world. E-Government could be used as a tool for measuring performance and standards in addition to improving business process of an organisation. Thus e-Government is essential for increasing revenue, promoting competitiveness and enhances marketing in the public sector.

Academicians have reviewed that some of the reasons projects fail is due to the fact that the role of the key actors are not properly analysed as well as the attitude of staff (Lam, 2005); this is the same with the various activities that are vital at different stages of the development life cycle. Nigeria, being a developing country, is known to import various applications and systems from developed countries without carrying out in-depth impact analysis and the roles of the main actors that would be involved during the implementation process. Since appears to be difference between theory and practice, in respect of implementation of projects in information systems, particular e-Government environment; there is the need for a conceptual model to, at least, be the starting point for good practice guidelines.

E-Government implementation process tends to vary from locality to locality and from country to country. However, there has been little study on how the factors influencing e-Government are identified at every stage of the development. This explains why this study

attempts to identify who the main actors should be when implementing e-Government services, as well as what should be the key activities and roles of the actors involved at every phase of the development life cycle – from pre-implementation to post-implementation.

This research looks at the insight of e-government implementation in the institutional context, by attempting to critically review the environmental factors that influences e-Government implementation is in the aspect of government-to- employee (G2E) relationship. In any institution, it is observed there is need for both employer (government in this context), and the employee (public servants) to work collaboratively to embrace the change.

Some of the major success factors of enabling e-Government to be implemented are Stakeholders' willingness and ability to use e-project, technical skills and Stakeholders and government agencies positive contribution. Who are these stakeholders and what are their roles and relevance in e-Government implementation process. Thus there is the need to identify and critically analyse the main actors involved and their roles in ensuring successful in e-Government implementation.

This research aims at enabling the researcher to make preliminary conclusions on the key actors and their roles in e-Government implementation. In doing so, the researcher however intend to apply other theory or model, which have been validated in IS/IT environment since there are little or no research studies carried out, which are specific to determining e-Government implementation actors and their roles. This would encompass proposition of conceptual framework for determining e-Government implementation actors and key activities at every stage of the development life cycle.

1.8 ICT and Evolution of E-Government in Developing Countries

Since the early 1980s, ICT has been observed to have taken part in a world in which school, work, and other activities have been increasingly improved by access to varied and developing technologies. In developing countries, ICT is believed to have always been

inconsistent in its interaction with the international community due to the level of development of these countries with the following characteristics: delayed modernization, poor communication facilities, high illiteracy level, lack of skilled personnel, large population, lack of capital and appropriate technology, and unequal distribution of wealth. The Western countries in Africa including Nigeria compound their problems with the following: religious and ethnic conflicts, militarism, an over-bloated state operating alongside weak institutional structures.

According to Akpan-Obong (2009), 'Nigeria is rather late to the game on the relationship between ICTs and development'. The first known email activity in Nigeria only took place in 1994 compared to many other developing countries. Since then, Nigeria has become the fastest growing and most lucrative telecommunications and ICT market in Africa. This is due to partial deregulation and privatisation of the telecommunication sector, in line with formation of policy documents (Akpan-Obong, 2009; Adeyemo, 2011; Dakwa, 2011).

Other scholars have traced the advent of e-Government in developing countries to the introduction of democratic government in Nigeria in 1999, where government website development was given utmost priority. Despite the government effort in trying to formulate policies and strategies for quickening the launch of online systems, only a few agencies were able to do so. This was largely due to lack of proper planning and coordination. There were other constraints academicians have highlighted as hindering the employment of ICT systems in general, which includes socio-economic inadequacies, poor organizational skills, inadequate infrastructural support and poor or limited human capital resources.

However the use of ICT tools have aided people find, explore, analyse, exchange, and present information—most importantly, without discrimination. ICT can provide quick access to ideas and experiences from a wide range of people, communities, and cultures, especially when used efficiently (Ifinedo, 2006; Ogbomo, 2009; Adeyemo, 2011).

Following the World Bank (*InfoDev*, 2004) provision of a guideline for e-Government initiatives for developing countries, their government had embarked on e-Government project to ensure overall efficiency and effectiveness in government.

The World Bank (2004) recommends the following goals for e-Government initiative to achieve:

- a) Promoting civic engagement by enabling the public to interact with government officials and vice versa
- b) Promoting accountable and transparent governments in which the opportunities for corruption are reduced
- c) Promoting a greater access to government information and activities
- d) Promoting development opportunities, especially the sorts that benefit rural and traditional underserved communities.

As a result of the World Bank guideline, the Nigerian government adopted a national policy on ICT to incorporate to Agriculture, Health, Education, hence endorsing an independent regulatory body known as National Telecommunications Act. This was then followed by the launch of data and research satellite in 2003. After approving the unveiling of communications satellite in 2006, the government in supporting the need for e-Government initiatives and the platform for ICT development, inaugurated NITDA.

Further, the government adopted Private-Public Partnership of a tripartite Joint Venture registered as National eGovernment Strategies Limited, NeGSt – which comprises Government, Consortium of Banks and Private Investors. NeGSt has the mandate is to produce a practical approach and a single architecture to guide the evolution of digital government solutions with consistent standards, operating platforms and applications across agencies and government systems

Mundy and Musa (2010) have argued any government that wishes to remain relevant to its citizen should take an active role in the implementation of e-Government through advances in personalization of service, accessibility and greater use of technology in the private sector. Consideration must however be given to the requirements of all stakeholder groups.

Scholars have also suggested that Nigerians and many African are actually taking different route to bridge the digital divide, which is use of mobile phone. This is because the signals are more diffused and cheaper than the PC; thus smart phone has allowed the access to

internet and to perform similar tasks to that of PC's for delivery of efficient and innovative services. Human beings, who are the users and creators of data, however remain the key critical success factor in terms of overcoming challenges such as human capacity building, change management, harmonization of government information and citizen interaction. The current government has newly established the open government principle to act as ideal means of interaction between government and citizen.

According to Obayelu & Ogunlade (2006), ICTS have been useful tools to enhance the economic livelihood of the poor in developing countries such as Nigeria and Ghana. Traditional media and new ICTS have played a crucial role in diffusing information particularly to the poor living in the rural communities, whilst most poverty alleviation programs in these countries have been through television and radio.

Table 1-2 below describes the dimensions of the digital divide in developing countries in Africa:

Dimensions of the Digital Divide	
Service Availability	Using ICTs to make services to be easily available to all stakeholders (including the users).
Awareness	Raising awareness of all and sundry about the benefits of using ICTs.
Opportunity to learn and use new media	Giving people the prospects of becoming computer through learning.
Mastery of technologies	Enabling everyone to understand the most suitable tools for accomplishing their tasks.
Experience	Ability to acquire adequate knowledge and experience from the use of ICTs in order to fulfil their potential.
Skills	Having the requisite expertise and abilities to execute ICT related activities and assignments.
Support	Having the right access to the aid required to make effective use of ICTs.
Attitudes (Motivation)	Inspiring everyone to have equivalent access to ICTs by encouraging them to partake in the benefits sharing.
Content	Ensuring there is adequate content for everyone to benefit from ICT usage.
Cultural	Cultural issues in terms of norms, value, rituals and routines are essential and should be adapted with other scopes.
Disability	Ensuring equality and diversity in the use and implementation of ICTs and adapting disability with other dimensions.
Linguistic	Language is very important and should be adapted with other scopes, as part of equality and diversity.
Gender	Just like disability and linguistic, gender should be adapted with other dimensions to ensure fair and equal enjoyment of the ICT benefits.
Empowerment of Civil Society	Factors such as structural, political and governance factors do not be hindrance to ensuring similar satisfaction from ICT benefits.

Table 1-2) Dimensions of the Digital Divide in Developing Countries in Africa
 (Source: Roger, 2002. ICT for Poverty Alleviation Framework)

1.9 Stages of E-Government Implementation in Developing Countries

Even though the implementation of e-Government systems is in process in most of the developing countries, academicians and practitioners have suggested there is little evidence or research to indicate a vibrant framework for its use and implementation, as e-Government activity is low. Whilst most government websites are in the publish stage, a few government organisations are at the transact stage, some eluding the interact stage. The absence of interaction implies no prospect is given for citizens' requests and feedback. For instance, previous research has shown only 30% of state websites of the country – Nigeria have got up to the second stage of e-Government implementation, whilst 70% were still in the publish stage, providing services such as online feedback, message boards, and chat forums for interaction with the citizens. (Yusuf, 2005; Mundi & Musa, 2010; Olatokun & Adebayo, 2012;).

Olatokun & Adebayo (2005), in applying the Gartner's four phase of e-Government model in order to analyse the country's stage in implementing e-Government , had highlighted the phases as:

- a) Presence - information website known as brochure ware, which consists of list of cursory information about the agency like the contact details and opening hours.
- b) Interaction – this relates to resources such as instructions for obtaining services, downloadable forms, and so on. It also offers modest interaction such like G2C, G2B, or G2G.
- c) Transaction – More complex information is provide, which include self-service operations like paying taxes and fees online, online registration of titled deeds and records and submission of bids – e-procurement.
- d) Transformation – This is the utmost phase of e-government initiatives that involves full capabilities of technology in transforming the understanding of government functions. At this phase, there is the continuous flow of information and collaborative decision making among all stakeholders – be it federal, state or local.

Based on their finding, Olatokun & Adebayo (2005) suggested that most states of the federation were at the second phase (interaction). However little has been done to show the government is able to move forward to the advanced stages. Suggestions were made for the following: regular updating of the websites, provision of streamlined and uniform online payment systems, provision of Automated Teller Machine (ATM) cards, provision of legal recognition to e-communication and e-transactions, and an effective legal framework for encouraging and implementing e-Government in developing countries such like Nigeria. At the time of this research studies, the researcher has observed some of these recommendations are already being implemented. These include ATM cards, online payments systems and e-transactions in general.

Other scholars have however described the stages of e-Government implementation in the developing countries of Africa based on the adoption of United Nations e-government global survey five stage e-governance model, as follows:

- a) Emerging presence: This is the commitment stage for countries to take active involvement in e-Government player, by introducing a formal but limited webpresence - independent government websites.
- b) Enhanced presence: This stage relates to the expansion of government official websites, with one-way direction, in terms of G2C interaction.
- c) Interactive presence: This includes interactive approach on the internet from a range of government institutions and services.
- d) Transactional presence: Involves two-way interactions between the citizen and the government.
- e) Networked (or fully integrated) presence: This is the most refined level where amalgamation takes place and two-way open dialogue and interactions such as G2G, G2C and C2G (UN Global e-Government readiness Report, 2004; UN e-Government survey, 2004, 2005; 2008; Adeyemo, 2010)

In a similar vein, Yusuf (2006) identified four main phases in e-Government development: publish, interact, transact and integrate. Whilst the first three phases are similar to the three stages described by previous scholars, Dode (2007) have argued that the integrate phase

involves the provision of single point of interaction where the government services are structured as ‘virtual organisation’. This becomes the fundamental means doing business.

1.10 Research Synopsis: Structure of the Thesis

The research outline for this thesis has been based on Phillips and Pugh (2010)’s methodology comparing four stages: (a) background theory; (b) focal theory; (c) data theory and (d) contribution. The background theory is presented in chapter 2 and focuses on identifying the domain of the problem based on a comprehensive literature review. The focal theory is highlighted in chapter 3 to concentrate on the development a conceptual framework, which was proposed based on the propositions to address the research questions from the identified gaps from the existing literature. The next category as discussed in Chapter 4 is the data theory that focuses on issues such as: (a) developing an appropriate research strategy for this research (b) selecting an appropriate research method and (c) developing a research protocol. Further, Chapter 5, the data theory relates to the data collection and analysis process, where research findings are presented. Chapter 6 further discusses data theory by revisiting the conceptual model and data analysis. Finally, the novel contribution which outlines the findings of this research is presented in Chapter 7. Figure 1-1 below illustrates an outline of the research thesis, whilst the paragraphs below explain the structure and content of each of the seven chapters.

Chapter 1: Introduction

This is the first chapter, which provides a background of the research as well as a general introduction to the nature and intent of the research problem. It also discusses the motivation for the study and historical perspectives in terms of e-Government evolution and characteristics. This is followed by stating the aim and objectives and the research questions to be addressed. The researcher also states the stages of e-Government implementation in the developing countries. Finally, the first chapter presents some definition of terms and research synopsis – outline and structure of research study.

Chapter 2: Literature Background (Background Theory)

Chapter two presenting a brief introduction into the context of e-Government and review of relevant literature on e-Government implementation. It provides a theoretical framework, which includes the factors influencing e-Government and its characteristics – in terms of benefits, barriers and risks. This is then followed by e-Government development life cycle – from pre- to post-implementation phases. This chapter also reviews various e-Government and information system theories and models, critically analysis their drivers and criticisms in respect of e-Government implementation. The researcher discusses gaps in application of these theories and presentation of institutional theory, stating the reasons why it is the most appropriate theory to be adopted in proposing the conceptual framework. One of the benefits of the institutional theory is its flexibility in being able to apply it in combination with other theories.

Chapter 3: Conceptual Framework (Focal Theory)

The third chapter presents the proposed conceptual framework that developed from the review of literature, as stated in Chapter 2. It analyses and discusses the factors, main challenges and gaps found in the literature as impacting on e-Government implementation. The conceptual framework for e-Government implementation in the public sector organisations in developing countries was proposed, which outlines the following parts: environmental factors from institutional context – external and internal; e-Government characteristics – perceived benefits, barriers and risks, development life cycle – pre-, during and post-implementation phases; e-Government key actors – government, technologically-advanced countries, companies and users; and e-Government good practice guidelines and main activities throughout the development cycle, from pre- to post-implementation.

This chapter further discusses some change management theories in relation to e-government and was able to present the following change management concepts as indirectly influencing institutional aspect of e-Government: resistance to change, change management approaches and change management requirements in e-Government. Finally, this discusses justification of e-Government implementation conceptual framework, which has been proposed based on combination of theories vis-a-vis Institutional Theory

(Peter, 2000; Björck, 2004; Zucker, 2009); Driver- Barrier Model (Hamed, 2008a), Comprehensive Barrier Framework (Lam, 2005) and Three-Quarter Moon Model (Hamed, 2009).

Chapter 4: Research Methodology (Data Theory)

This chapter relates to the data theory, where focus is on testing and validating the theoretical and proposed conceptual framework presented in chapters 2 and 3. Whilst the last two chapters – 2 & 3 set the background for this research and enabling the researcher to understand and identify the research problems, Chapter 4 presents the practical platform to test the proposed conceptual framework by offering comprehensive research methodology – thus approach of the research, strategies, case study protocol, and units of analysis to investigate the research data. Also discussed are research design process and justification of the chosen research methods, including the research philosophy and the research strategy chosen for the study in order to justify the motive for making the appropriate selection. In addition to the case study overview and protocol, this chapter also explains the testing and validity of the research study in respect of ethical consideration.

Chapter 5: Data Analysis (Data Theory)

The fifth chapter provides a brief background about the case studies and a brief discussion and map of the country where the case studies are conducted in the three public sector organisations. As a result, data analysis and findings were presented from the three case studies on the main issues of this research, which relates to the external and internal factors influencing the e-Government implementation, e-Government characteristics – benefits, barriers and risks, e-Government key actors and their main activities as well as good practice guidelines for implementation throughout the development life cycle – pre-, during- and post-implementation stages. Having discussed and analysed the survey findings in respect of e-Government implementation from the Nigerian public sector organisations (government-to-employee) in the light of the proposed conceptual framework in chapter 3 and theoretical framework in chapter 2, the research outcomes put forward a revision of the proposed conceptual framework to be represented in the next chapter.

Chapter 6: Revisiting the Conceptual Model & Data Analysis (Novel Contribution)

This chapter aims to revisit the conceptual framework and data analysis. It outlines the research findings in line with the research questions that were addressed. This chapter also discusses achievements of the aim and objectives based on the research findings and highlight the lessons learnt from the three case studies. Finally, Chapter 6 outlines the changes made following validation as per the research findings before revisiting and presetting the modified (novel) conceptual model for e-Government implementation in the developing countries. Suggestion was also made to extend the conceptual model to other developing (as well as developed) countries, subject to validation of the extensive usage.

Chapter 7: Research Conclusions (Novel Contribution)

Chapter seven is the final chapter of this thesis, and it outlines the research by presenting the research overview and finding. In addition to discussing the research outcome, this chapter highlights the researcher's contribution to the body of knowledge - both theory and practice of e-Government implementation. Finally research limitations were highlighted whilst recommendations were made for future research as well as decision makers and implementer of changes including the government of the country of case study.

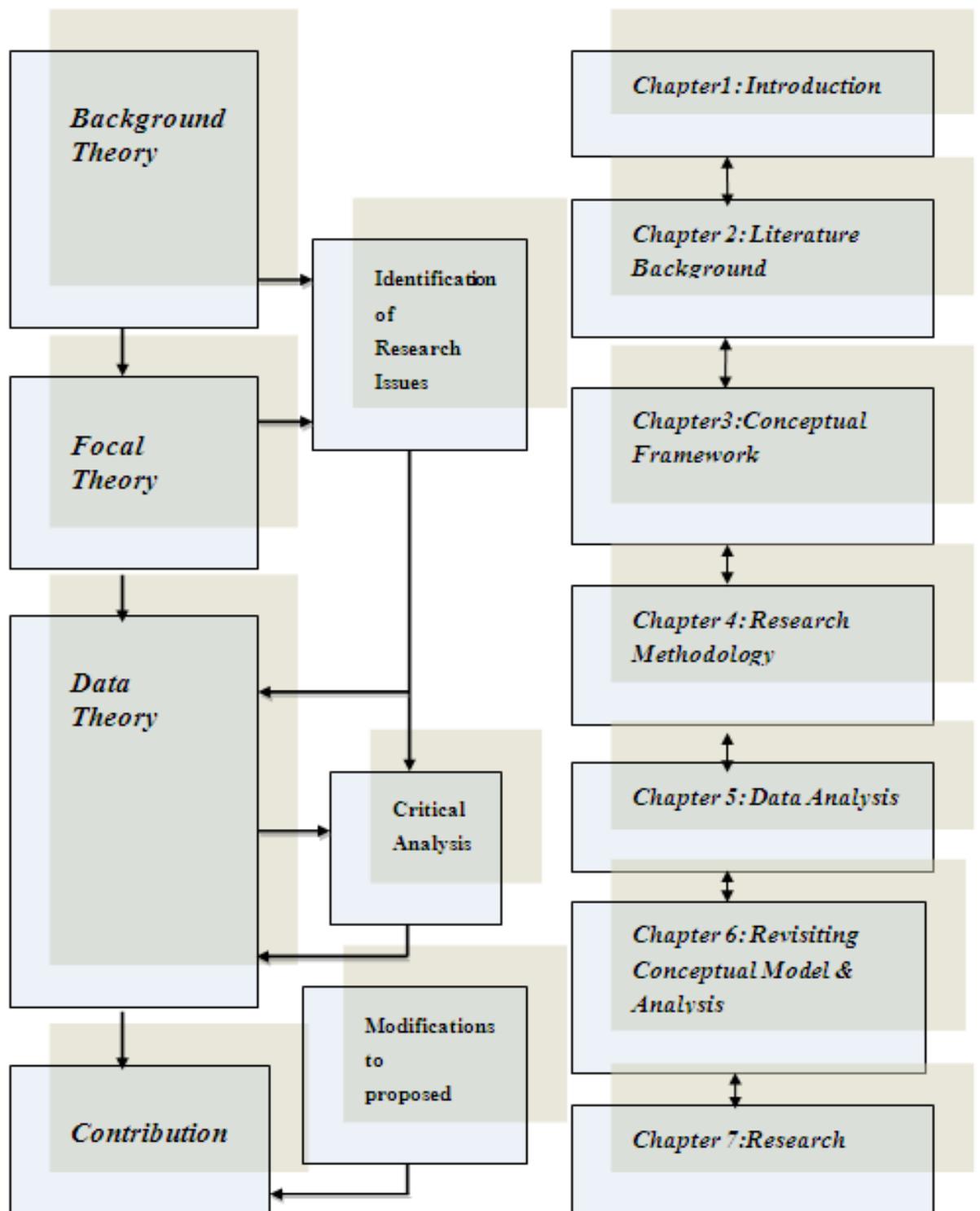


Figure 1.1: Research Synopsis – Structure of the Thesis

Figure 1-1) Research Synopsis – Structure of the Thesis

1.11 Summary

In this chapter, the researcher has presented background to the study of e-Government implementation within the context of the development countries. The research scope has been the public sector organisations (government-to-employee) from organisational perspective. The researcher provides the rationale and motivation for the study, having presented the problems. This was followed by historical context, which discussed the evolution of e-Government as well as its concept and characteristics.

The research argues that e-Government is growing steadily but rapidly. In developing countries, cutting across national, state and local levels. As a result, numerous processes and applications have been developed over time, despite having no structured methodology. In meeting with the evolving change in the global world due to ICT infrastructure, a major barrier in the developing countries is the low IT literacy level compared to the developed countries. This chapter states the aim and objectives as well as the research questions to be addressed. The next chapter covers the review of existing literature in relevance to the field of study – e-Government implementation, in particular and information systems, in general. This would enable critical review of the existing literature and development of theoretical analysis and conceptual framework in chapters 2 and 3.

Chapter 2 Literature Background

2.1 Introduction

This chapter introduces the literature background and explains the concept and characteristics of e-Government. The aim of this chapter is to review various literatures from academicians and researchers in relation to e-Government. At the beginning of this chapter, the researcher presents e-Government definitions from different context

Section 2.3 introduces the holistic factors implementing e-Government as well as explaining and categorising the motivational factors observed as influencing e-Government adoption, particularly in the developing countries. These factors were categorised into financial, technical, partnership, organisational, co-ordinational, strategic and environmental. In section 2.4, this chapter also describes and classifies the benefits and barriers of e-Government respectively, reviewing past and existing literature in e-Commerce, e-Services and e-Government. This section discusses about the barriers from review of literature and experienced by organisations while implementing e-Government and other technologies. The researcher further highlights the project development life cycle, based on review of literature in section 2.5.

However in section 2.6 the researcher discusses and reviewed various models of e-Government, ranging vis-a-vis Stage of Growth model, Government Key Business Processes (G-KBP) including other e-Government initiatives. The Stage of growth model was developed to assist public managers in formulating an appropriate strategy to pursue their organisation's objectives and used by public decision-makers as guidance and direction for architectural development; The researcher also presents the G-KBP as dependent on process modelling technologies and modern public administration concepts. It can be used to build a framework to e-Government initiatives in a way that leads to a complete integration of the delivered services.

In section 2.6.9, the researcher reviews the main issues identified by Hamed *et al* (2008a) as either barriers or benefits, having focused on e-Commerce adoption in Libya. These are; (i) Competition, (ii) Cost, (iii) Culture and Religion, (iv) Economic activity, (v) Employment, (vi) Government, (vii) Infrastructure, (viii) Knowledge of e-Commerce, (ix) Legislation and Regulation, (x) Payment system, (xi) Security, (xii) Traditional business .

The researcher reviewed and discusses Hamed (2009) Three-Quarter Moon model in section 2.12, researching on the Libyan government. He came up with three main actors applicable to any country - Government, Technologically-advanced countries and companies, both private and publics, and e-Commerce users. For a successful adoption of the model, it was recommended that adopters should go through the 3-stages – before, during and after e-commerce adoption. The researcher also attempts to suggest that these models - Three Quarter Moon model and Drivers-Barriers model, could be adopted in e-Government, particularly in developing countries since Hamed *et al* (2008a) and Hamed (2009) developed the models based on his research on the Libyan government.

Since the research focuses on the implementation of e-Government in and IT environment, the researcher attempts to compare and analyse various applications that have been successfully implemented in developing countries. For example, Hamed *et al* (2008a) developed the Drivers-Barrier model for adopting e-commerce in Libya.

This section enables the reader to appreciate that there are many e-Government issues that could count as either barriers and/or benefits depending on the country. It further recognises that for any country to guarantee a success of e-Government implementation, its government has to make sure that it has dealt with all barriers and benefits of the drivers of each issue. The researcher also presents the institutional theory, its principles and criticisms in section 2.6.9. However the theory seems to look at organisational action and behavior from environmental forces, which could be used to address some of the gaps identified in the proposed framework.

Whilst Radaideh & Salim (2004) developed a conceptual framework for identifying both internal and external factors relating to e-commerce adoption by a firm; The researcher

presented from review of literature, holistic factors influencing e-Government implementation and came up with 13 challenges: (i) Information, (ii) Political Will, (iii) Trusts/Assurance, (iv) Partnership, (v) Learning & Development, (vi) Capacity, (vii) Resistance to change, (viii) Security & Confidentiality, (ix) Technical skills, (x) Strategy, and (xi) Readiness & Competency, (xii) Critical Mass, and (xiii) Leadership use.

The researcher also analyses Lam's (2005) comprehensive barriers to e-service development project as well as other models Three Quarter Moon model and Drivers-Barriers model. In Sessions 2.7, the researcher was able to present as comparative analysis of the theories and models and based on the research gaps from relevant literature, discuss need to propose a conceptual framework using a combination of some of the relevant theories and model. The proposed framework would be developed in the next chapter in an attempt to achieve the research aim and objectives, and to addressing the research questions raised in Chapter 1.

2.2 Theoretical Framework of E-Government

As the world is evolving with advancement in information and communication technology, it is apparent that there is the need to adapt to these changes. Whilst e-Citizen relates to civil society, e-Commerce is essential for business /commercial purposes. In similar vein, e-Government is concerned with government activities. Although there is no standard definition of e-Government as academicians and practitioners have attempted to define this concept based on notion, its context and application.

Whilst Budd and Harris (2004) explained that the emergence of e-Government was as a result of a shift from technology to management as well as the development of scope performance and policy intentions. Backus (2001) defines e-Government as "a form of e-business in governance and refers to the processes and structures needed to deliver electronic services to the public (citizens and businesses), collaborate with business partners and to conduct electronic transactions within an organisational entity." It has become an explicit component of public sector reform, as an instrument to increase efficiency, strengthen competitiveness and enhance modernisation.

On the other hand, Van Der Molen & Wubbe (2007) described e-Government as ‘the use of information and communication techniques to improve the activities of public sector organisations, of course impacts on the strategy and operations of our Agency’. They believed that e-Government has become an issue in all fields of public administration.

In his own view, Otubu (2009) defines e-Government as the process whereby the use of information and communication technology and services is deployed and employed by the government in the delivery of services to members of the public and the use of same in the internal running and linkages among different governmental agencies. Academicians also describe the concept of e-Government is bi-polar that combines the key characteristics of technological department and public administration and it concentrates on customer service – front office and organisational structure – back office. For simplicity, e-Government should however be distinguished from e-Governance. Academicians have expressed e-Governance as a broader concept that deals with the whole spectrum of the relationship and networks within government regarding the usage and application of information and communication technology holistically.

In a general sense, e-Governance describes the links between government and its broader environment – political, social and administrative – within the context of use of information and communication technologies in government. Whilst e-Government is narrow, specific, and simplified, e-Governance is broad, general and more complex use of the digital revolution. Scholars have also argued that the efficiency of government, and its impact on the intended beneficiaries of public services, is decisively connected with the presence or absence of public accountability (Otubu, 2009; Bhanagar, 2004).

Scholars and practitioners have attempted to describe e-Government based on different dimensions. On historical perspective, it emerged as a result of shift from technological to management or due to change in technological status of the government (Budd & Harris, 2004). E-Government could also be described in terms of its concept and classification (Backus, 2001; Van Der Molen & Wubbe, 2007). Others based the dimension on its

features (Otubu, 2009; Bhatnager, 2004). Table 2-1 illustrates a review of e-Government implementation in terms of its historical perspective, concepts and motivation within the context of public sector organisations based on exiting literature

	Dimension	E-Government Impementation: Literature Review	References
1.	Historical perspective	<ul style="list-style-type: none"> * Emergence was as a result of shift from technology to management and the development of scope performance and policy intentions * EGov in the UK often represented a change in status for government technology * The formation of a FirstGov – inspired portal (ukonline) was to provide information and links to further, more in-depth sites, which assumes the role of search engine. 	Budd & Harris, , 2004; Bigdeli & de Casare, 2011
2.	Definition	<ul style="list-style-type: none"> * There is no standard definition of e-Government. It's a form of e-business in governance * EGov is the use of information and communication techniques to improve the activities of public sector organisations, of course impacts on the strategy and operations of our Agency 	Backus , 2001; Van Der Molen & Wubbe, 2007
3.	Concept	<ul style="list-style-type: none"> * E-Gov concept appears to be fairly new in most developing countries. - It is a bi-polar phenomenon that combines the key characteristics of technological department and public administration * It concentrates on customer service – front office and organisational structure – back office 	Backus, 2001; Budd & Harris, 2004; Bigdeli & de Casare, 2011
4.	Main Motivation	<ul style="list-style-type: none"> * Increase revenue * Competitiveness * Enhance marketing 	Ndou, 2004; <i>infoDev</i> , 2002
5.	Characteristics	<ul style="list-style-type: none"> * E-Government is narrow, specific, and simplified * Its efficiency is decisively connected with the presence or absence of public accountability 	Otubu, 2009; Bhanagar, 2004
6.	Beneficiaries	<ul style="list-style-type: none"> * Citizens * Businesses * Partners 	Ndou, 2004; <i>infoDev</i> , 2002;

Table 2-1) E- Government Implementation: Literature Review

2.3 Holistic Factors of E- Government Project Implementation

	Holistic Factors	Description	Sources
1	Information	Raising awareness of e-Government among stakeholders - leaders, end users and e-project team.	Chowdhry <i>et al</i> , 2006; Wood-Harper <i>et al</i> , 2004; Al-Awadhi & Morris, 2009.
2	Political will	Political support from decision makers is essential in order to avoid project failure.	Chowdhry <i>et al</i> , 2006; Schwester, 2009.
3.	Trust/assurance	End users (employee) require trust from their employer (government and it's agencies).	Sang and Lee, 2009; Sang <i>et al</i> , 2009; Gilbert <i>et al</i> 2004
4	Partnership	Collaborative working and participation of stakeholders are essential for successful e-project implementation.	Altameem <i>et al</i> , 2006; Scholl, 2003.
5	Learning and Development	Need for training and supporting stakeholders where required for effective implementation.	Sang <i>et al</i> , 2009; Altameem <i>et al</i> , 2006; Goings <i>et al</i> , 2003.
6	Capacity	The scope in terms of the start-to-end workflow and span are essential for e-Government implementation.	Esteves and Joseph, 2008; Layne and Lee, 2001; Heeks, 2003b, Cardoso <i>et al</i> , 2004.
7	Resistance to change	Change management issue in respect of staff attitude to change often impact on effectiveness of any e-project failure.	Lam, 2005; Schwester, 2009; Ebbers and Van Dijk, 2007.
8	Security and Confidentiality	Privacy and safeguarding of relection data and are significant to boost the confidence of stakeholders.	Lam, 2005; Schwester, 2009; Altameem <i>et al</i> , 2006; Goings <i>et al</i> , 2003.
9	Technical skills	For speacific role that require high-tech usage, acuqiring the right (technical) skills is criucial.	Lam, 2005; Sang <i>et al</i> , 2009; Themisticleous <i>et al</i> , 2005.
10	Strategy	Based on the top management vision, appropriate approach much be adopted.	Chowdhry <i>et al</i> , 2006; Sang <i>et al</i> , 2009; Altameem <i>et al</i> , 2006
11	Readiness and Competency	The willingness and ability of stakeholders to be involved is crucial. .	Al-Shafi, 2009; Ifinedo, 2006; Goings <i>et al</i> , 2003.
12	Critical mass	Organisation's knowledge about how other agencies participate in similar initiatives.	Fan & Zhang, 2006; Fernández-i-Marín; 2011; Weerakkody & Reddick, 2013.
13	Leadership	Suport from top management and decision makers.	Hunter & Jupp, 2001; .Jaeger & Thompson, 2003.

Table 2-2) Holistic Factors influencing E-Government Implementation

Table 2-2 above illustrates review of literature by examining the holistic factors influencing e-Government implementation. The factors have been classified as: Information, political will, trust or assurance, partnership, learning and development, capacity, resistance to change, security and privacy, technical skills, strategy, readiness and competency, critical mass and leadership (Lam, 2005; Fan & Zhang, 2006; Al-Rashidi, 2012).

2.4 E- Government Implementation Benefits, Barriers and Risks

2.4.1 Benefits of E- Government Implementation

E-Government is generally perceived as an enabling tool for increasing efficiency and enhancing transparency. Various applications to public sectors have helped in facilitating reform and collection of more revenue. A hypothetical example is the stakeholder model, which could be adopted by governmental agencies all over the world for change of power in relationships between administration and for identifying relevant stakeholders.

As observed by Anderson (2006), e-Government holds the potential to facilitate the complementary use of information systems in government comprising both operational and strategic uses. He feels the quest to implement e-Government is motivated by policy goals of increased effectiveness, efficiency, and information quality, improved interaction mechanisms, and in turn better governance tools. Further, e-Government uses ICT to promote more efficient and cost effective government and facilitates more convenient services. Most importantly, it allows greater access to information and makes government more responsible to their citizens.

The adoption of e-Government services is essential in reducing corruption, increasing transparency, creating convenience, increasing revenue and cost reduction. These IT benefits arise from the transformation of e-Government relations with citizens, businesses and other areas of government. E-Government also reduces discretion and flexibility of

civil servants and alters accountability. It forces information sharing since services would be available online for all to access and provides easier and quicker access to organisational knowledge to all employees, thereby flattening hierarchy.

Ndou (2004) supported the need for exploring e-Government services when he summarises the opportunities as:

1. Cost reduction and efficiency gains
2. Quality of service delivery to business and customers
3. Transparency, anti-corruption and accountability
4. Increase the capacity of government
5. Network and community creation
6. Improve the quality of decision making
7. Promote the use of ICT in other sectors of the society

As far as most developing countries are concern, emphases are laid on opportunities such as transparency, anti-corruption accountability, cost reduction and efficiency gains and promoting the use of ICT. Despite the benefits, it is imperative to classify them into elements and these would enable researcher to formulate theoretical and conceptual framework that could be tested and validated through survey and data analysis.

2.4.1.1 Classification of E- Government Benefits

Review of literature suggests that e-Government benefits could be classified under the following concepts:

Internal – Internal benefits are e-Government drivers, which are core to the organisation. This include: retrun on investment based on cost-benefit analysis; encouraging transparency and increaing output in terms of productivity of the organisations; having a simplified organisational structure and hierarchical line of authorities and responsibilities; service and quality improvement including management of internal data; supporting with the decision-making and monitoring process, as well as organisational effectiveness through careful

application of the workflow systems and business process (OECD, 2001; Bonham *et al*, 2001; Heeks, 2001; UN/DESA, 2002; Carbo & Williams, 2004; Ma *et al*, 2005; Beynon-Davies, 2005).

Operational – According to scholars, e-Government implementation leads to improvement of organisation's policy effectiveness and reduces the time required to complete transactions within minutes, which would otherwise have taken days. E-Government enables restructuring of administrative functions and processes, and monitoring government performance. It eases the pressure that could occur in the organisation as a result of queuing or aligning in waiting rows and because of its flexibility, it improves efficiency of operations and the growth in public esteem for government. (OECD, 2001; Chandler & Emanuels, 2002; Shag & Sheddon, 2002; James, 2002; Moon, 2002)

Organisational - Organisational changes are encouraged with innovation and creativity in the aspect of the systems, labour law and workforce and has the benefit of improving the precision of orders and reducing the personnel dedicated to administrative department (National Research Council, 2002; Beynon-Davies, 2005; Ifinedo, 2006; Buccoliero *et al*, 2008; Almarabeh & AbuAli, 2010).

Technical – Technical benefits of e-Government implementation are enormous, some of which include: Opportunity to tackle issues such as those related to the digital-divide; Ability to transform the existing services and expanding the new service delivery; encouraging stakeholder's participation in government operations and changing the way of working within the public sector.

Other benefits are provision of portability between systems and applications to encourage one-stop shop and self-service; building trust and increasing reliability and accuracy of data sharing; reducing data collection, process and storage; and encouraging intra- and inter-organisational networking through enhancement of ICT infrastructure (Atkinson & Ulevich, 2000; Chandler & Emanuels, 2002; Borrás, 2004; Kaliontzoglou *et al*, 2005; Hamed *et al*, 2008a; Martin & Reddington, 2009).

External – Apart from transformaing public sector internally, e-Government implementation has the ability to improve external relationship with agencies and partners. A review of literature has enabled classification of the other external benefits under the following: Improving interactions with business and industry; good governance by interconnecting various ministries and government departments electronically to share information; provision of one integrated e-Government portal, to enable citizens and businesses to benefit from various government services, and transacting through online or automated system. (Shang and Seddon, 2000; Heeks, 2001; Moon, 2002; Wimmer & Tambouris, 2002; Carbo & Williams, 2004; Beynon-Davies, 2005; Ifinedo, 2006).

Other factors include: accessing information and interacting with various government departments or agencies rather than having to wait in long queues; digitising procurement services from and to the business sector by better management and control of government procurement system; and ability to attract more foreign direct investments and business projects (Cabinet Office, 2000; Ma et al, 2005; Zhang, *et al*, 2005; Muoka, 2010).

Category	E-Government Benefits	References
Internal	<p>Core benefits include transparency and increasing productivity of government organisations;</p> <p>Having a simplified organisational structure and hierarchical line of authorities and responsibilities</p> <p>Service and quality improvement including management of internal data;</p> <p>Supports decision-making process and enabled effective workflow systems and business process re-engineering</p>	Shang and Seddon, 2000; OECD, 2001; Bonham et al, 2001; Heeks, 2001; UN/DESA, 2002; Carbo & Williams, 2004; Ma <i>et al</i> , 2005; Beynon-Davies, 2005.
Operational	<p>E-Government makes organisational policy to be effective and it reduces the time required to complete transactions;</p> <p>It enables restructuring of administrative functions and processes, and monitoring government performance.;</p> <p>Ease of pressure that could occur in the organisation as a result of queuing or aligning in waiting rows</p>	OECD, 2001; Chandler & Emanuels, 2002; Shang & Sheddon, 2002; James, 2002; Moon, 2002.
Organisational	<p>Improving the precision of orders and reducing the personnel dedicated to administrative department</p> <p>Organisational changes through innovation and creativity</p>	National Research Council, 2002; Beynon-Davies, 2005; Ifinedo, 2006; Buccoliero <i>et al</i> , 2008; Almarabeh & AbuAli, 2010.
Technical	<p>Transforming the existing services and expanding the new service delivery;</p> <p>Encouraging stakeholder's participation and changing the way of working within the public sector.;</p> <p>Provision of portability between systems and building trust – Data sharing and reducing data collection, process and storage</p>	Shang & Seddon, 2000; Atkinson and Ulevich, 2000; Chandler and Emanuels, 2002; Ndou, 2004; Borrás, 2004; Kaliontzoglou <i>et al</i> , 2005; Hamed <i>et al</i> , 2008a; Martin & Reddington, 2009.
External	<p>Improving external relationship with agencies and partners;</p> <p>Digitising procurement services from and to the business sector by better management and control of government procurement system;</p> <p>Good governance by interconnecting various ministries and government departments electronically to share information;</p> <p>One integrated e-Government portal, to enable citizens and businesses to benefit from various government services</p>	Shang & Seddon, 2000; Heeks, 2001; Moon, 2002; Wimmer & Tambouris, 2002; Carbo & Williams, 2004; Beynon-Davies, 2005; Ifinedo, 2006.
Others	<p>Security and privacy; sustainability; accessing information and interacting with various government departments or agencies rather than having to wait in long queues; digitising procurement services from and to the business sector by better management and control of government procurement system</p>	Cabinet Office, 2000; Ma <i>et al</i> , 2005; Zhang, <i>et al</i> , 2005; Muoka, 2010.

Table 2-3) Classification of E-Government Implementation Benefits

Table 2-3 above classifies the e-Government implementation benefits for public sector organisations based on a fundamental categorisation that identified through a review of relevant literature (OECD, 2001; Ndou, 2004; Ebrahim, 2005; Ifinedo, 2006; Almarabeh & AbuAli, 2010; Muoka, 2010.)

2.4.2 Barriers of E- Government Implementation

E-Government is perceived to experience challenge in its implementation (and adoption). This is due to the amount of expertise and personnel required for successful development. A review of literature has enabled us identify some of the barriers to implementation of e-Government. These include:

- a) Lack of technology or web staff
 - b) Lack of financial resources
 - c) ICT infrastructure: E-readiness, computer literacy, telecommunication equipments
 - d) Issues regarding security, and
 - e) The need to upgrade existing IT
 - f) Policy issues: Legislation
 - g) Human capital development and lifelong learning: Skills, capabilities, education and learning
 - h) Change management: Culture, resistance to change
 - i) Partnership and collaboration: Public and private partnership, community and network creation
 - j) Strategy: Vision and mission
 - k) Leadership role: Motive, involve, influence and support
- (Eddowes, 2004; Ndou, 2004)

To buttress the above-mentioned points, Carter & Belanger (2004) have also observed that there are challenges involved with e-Government. For instance, customers cannot be chosen since e-Government provides access to information and services to the entire eligible population, including individuals with lower incomes and disabilities. More so, decision-making authority is less centralised in government agencies than in other business

and this diffusion hinders the development and implementation of new government services. Finally, accountability is an issue in the sense that in a democratic government, public sector agencies are constrained by the requirements to allocate resources and provide services that are in the best interest of the public.

From the management viewpoint, Anderson (2006) supports the claim that management need to move from transactional view of IT to strategic view of IT adoption in government. This is because IT in government faces a quicker pay-back time than private sector. He explains further by highlighting five key strategic challenges of management as:

- 1) Assessing the demand paradox of e-Government.
- 2) Ensuring that gate-keeping mechanisms of the street level bureaucrats are not eroding the dynamics of e-Government.
- 3) Use of IT to decrease the high labour intensity in public service provision
- 4) Revision the employees' readiness of e-Government
- 5) Building competencies with government to ensure dynamic use of IT.

2.4.2.1 Classification of E- Government Barriers

IT managers and researchers have realised that barriers facing e-Government implementation in developing countries are highly correlated with the socio-economic and political environment. The image of the developing countries often appears as poor economy, corruption, bureaucracy and illiteracy. For simplicity, the researcher has classified e-government implementation barriers into following: Technology / IT infrastructure, security and privacy, IT Literacy skills, organisational/operational and economic/financial resources..

Technological /IT Infrastructure – Technological barriers of implementing e-Government his relates to issues such as inconsistency as technology changes from time to timeshortage of reliable networks and communication; lack of telecommunication network; lack resources standards and communication architecture policies and definitions; explicit reference to ICT access; tele-density; collaborating systems, maintenance of government

websites. Other challenges include danger of existing systems either being complex or no compatible with new system; integration issues in respect of communication government departments (Layne & Lee, 2001; Eddowes, 2004; Ebrahim, 2005; Zhang *et al*, 2004; Beynon-Davies, 2005; Ebrahim & Irani, 2005; Mundy & Musa, 2010; Nkohkwo & Islam, 2013).

Trust and Security – Security has always been a major challenge in implementing e-Government services successfully. There is the need to keep personal data private and confidential, not used for other purposes as a general distrust of government can undermine confidence in e-Government. The barriers include: Confidentiality; lack of security and privacy of information in government’s websites; threats from viruses, worms and Trojans; lack of users’ trust and confidence to employ e-government services; unauthorised external and internal access to systems and information; assurance that transaction is legally valid; lack of security rules, policies and privacy laws; inadequate security of government hardware and software infrastructure; and lack of proper risk management in place (Joshi *et al*, 2001; Lambrinoudakis *et al*, 2003; Joia, 2004; Beynon-Davies, 2005; Gilbert *et al*, 2004; Alshehri *et al*, 2012; Nkohkwo & Islam, 2013; Rana *et al*, 2013).

IT Literacy and Skills – According to scholars and practitioners, having employees with relevant IT skills are essential for e-Government implementation, absence of which could lead to the drawbacks. These constraints could be any of the following: Lack of technology tools and skills; technical staff lack of program knowledge; technical know how and proper hardware; shortage of well-trained IT staff in market; lack of employees with integration skills (Layne & Lee, 2001; Ho, 2002; Pavlichev, 2004; West, 2004; Zhang *et al*, 2004; Lam, 2005; Ebrahim, 2005; Al-Rashid, 2009; Almarabeh & AbuAli, 2010).

Organisational/ Operational – Organisational barriers to e-Government implementation impact on its effectiveness. These relate to: Lack of support from top management and leadership; deficiency and implementation guidelines; HRM issues such as recruitment of ICT personnel; change management and human capital development; lifelong learning and organisational motivation; non- contextualisation of e-Government practices; partnership between private and public sector, ability and commitment, disintegrated projects, e-

Government vision, evaluation framework, transparency, citizen inclusion; political and cultural issues; resistance to change by high level management; and time consuming for re-engineering or complexity of business processes in public organisations (Burn & Ronins, 2003; Joia, 2004; Hu *et al*, 2006 West, 2004; Enyon & Dutton 2007).

Economic / Financial Resources – Financial matters are essential to any e-Government implementation and delayed completion for instance could impact negatively on the cost. Financial and human capital investments need to be made if e-Government is to flourish. Other financial challenges are as follows: Local and foreign investment, network economy, cost of accessing internet; economic impacts in respect of knowledge and information economies; market forces in terms of supply and demand, e-Commerce and e-Business; shortage of financial resources in public sector organisations; high cost of IT professionals and consultancies; cost of installation, operation and maintenance of ICT systems; and cost of training and system development (OECD, 2001; Irani *et al*, 2003; Eddowes, 2004; Carbo & Williams, 2004; Ma *et al*, 2005; Ebrahim & Irani, 2005; Nkohkwo & Islam, 2013).

The classification of e-Government implementation barriers is illustrated in Table 2-4 below and has been an review of previous research work. In support of these barriers, other factors hindering e-Government deployment and development are: the size and abilities of infrastructure between developed and developing countries differ dramatically); hierarchy and resistance to change by government officials are traditional features of public organisations in developing countries; scarce resources to fund the costly government initiatives; political context that consume much of the public resources, which are mostly directed to military expenditure, the security threats of terrorisms and war and politically motivated commercial or technological embargos; slow economic growth has caused slow rates of technological progress and innovation – a digital divide in ICT; importance of the existence of a legal framework to guide e-Government legislative side in developing countries (Heeks, 2003; Basu, 2004; Ebrahim, 2005; Chen *et al*, 2006; Mundy & Musa, 2010; Alshehri *et al*, 2012; Nkohkwo & Islam, 2013).

Category	E-Government Barriers	References
Tchnological / IT Infrastructure	Inconsistency as technology changes from time to timeshortage of reliable networks and communication; Lack of telecommunication network, lack resources standards and communication architecture policies and definitions; Explicit reference to ICT access and tele-density; Collaborating systems, maintenance of government websites; Danger of existing systems either being complex or no compatible with new system; Integration issues in respect of communication government departments and lack of integrating capabilities	Layne & Lee, 2001; Heeks, 2001; Eddowes, 2004; Zhang <i>et al</i> , 2004; Beynon-Davies, 2005; Ebrahim & Irani, 2005; Mundy & Musa, 2010; Nkohkwo & Islam, 2013
Trust and Security	Confidentiality; not ensuring personal information is kept confidential and secure; General distrust in government, thereby undermining e-Government; Threats from viruses, worms and Trojans; Lack of users' trust and confidence to employ e-Government services; Unauthorised external and internal access to systems and information; Lack of security rules, policies and privacy laws	Joshi <i>et al</i> , 2001; Lambrinouidakis <i>et al</i> , 2003; Joia, 2004; Beynon-Davies, 2005; Gilbert <i>et al</i> , 2004; Alshehri <i>et al</i> , 2012; Rana <i>et al</i> , 2013
IT Literacy and Skills	Lack of employees with relevant IT skills; Lack of technology tools and skills; Technical staff lack of program knowledge; Technical know how and proper hardware; Shortage of well-trained IT staff in market	Layne & Lee, 2001; Ho, 2002; Pavlichev, 2004; West, 2004; Zhang <i>et al</i> , 2004; Lam, 2005; Al-Rashidi, 2009; Almarabeh & AbuAli, 2010.
Organisational / Operational	Lack of support from top management and leadership; Deficiency and implementation guidelines; HRM issues such as recruitment of ICT personnel; Change management and human capital development; Partnership between private and public sector; Political and cultural issues	Burn & Ronins, 2003; Joia, 2004; West, 2004; Hu <i>et al</i> , 2006; Enyon & Dutton 2007
Economic/ Financial Resources	Local and foreign investment, network economy, cost of accessing internet; Economic impacts - knowledge and information economy; Market forces e.g. supply and demand, e-Commerce and e-Buiness; Shortage of financial resources in public sector organisations; High cost of IT professionals and consultancies; cost of installation, operation and maintenance of ICT systems; and cost of training	OECD, 2001; Irani <i>et al</i> , 2003; Eddowes, 2004; Carbo & Williams, 2004; Ma <i>et al</i> , 2005; Ebrahim & Irani, 2005; Nkohkwo & Islam, 2013

Table 2-4) Classification of E-Government Barriers

It is imperative to note that various IT professionals and researchers have endeavoured to catalogue e-Government opportunities and challenges as follows:

Opportunities –

- 1) Cost reduction and efficient gains
- 2) Quality of service delivery to business and customers
- 3) Transparency, anti-corruption, accountability
- 4) Increase the capacity of government
- 5) Network and community creation
- 6) Improve the quality of decision making
- 7) Promote use of ICT in other sectors of the society.

Challenges -

- 1) ICT infrastructure (e-readiness, computer literacy, telecom equipment)
- 2) Policy issues (legislation)
- 3) Human capital development and life- long learning (skills, capabilities, education, learning)
- 4) Change management (culture, resistance to change)
- 5) Partnership and collaboration (public/private partnership, community and network creation)
- 6) Strategy (vision, mission)
- 7) Leadership role (motivate, involve, influence, support)

Despite the classification, it has been observed from literature that there is the need for discussing the costs of implementation in terms of the risks are essential elements to be classified. Most of the previous research studies have focused mainly on the benefits (drivers) and barriers (challenges) either collaboratively or separately, however there has been little emphasis on the risks of e-Government implementation, despite the fact that the environment and type of e-Government services to be implemented would determine the magnitude of the peril involved. Hence, the researcher has made an effort to discuss and classify the risks of e-Government implementation in the next sub-section – 2.5.3.

2.4.3 Risks of E-Government Implementation

Scholars have argued that in spite of the many benefits that can be accrued through knowledge sharing, true participative systems have difficulties in sustaining themselves because barriers and risks are deeply embedded in social, economic, and political principles and values of organisations that are usually viewed as having a higher value than the potential gains from such systems.

Review of literature reveals that because of the high level of corrupt practices in some of the public services most especially in the developing countries, the staffs who are beneficiaries are likely to frustrate and resist the e-Government implementation. These staff would believe the newly implemented services would help alleviate or even put an end to their illicit and bureaucratic conducts. This explains why the staff prefer the current paper-form to 'paperless' workflow documentation and face-to-face contact with citizens from inception to accomplishment of the transaction.

2.4.3.1 Classification of E- Government Risks

According to OECD (2001, pp.2), "Risk identification and management are paramount features of successful IT project management. Some countries have well-developed guidelines and practices in this field; others still have something to learn.., however, that many failures can be explained by poor compliance with otherwise very good guidelines and existing good practice."

E-Government implementation risks have been classified under the following categories: Technological, process, people, organisational and financial (see Table 2-5).

Technological – A technological risk of implementing e-government could be dependence on foreign technical know-how to be able to fully operate the technology. However because of widespread lack of IT skills in most developing countries, software and personal computers vendors would have the ultimate say on the design of the infrastructure. Where there are issues, it will take time before the country will be able to build its own capacity. This breakdown tends to seriously affect how the government

machine operates. If the security level reduces in the region say civil unrest, this may lead to emergency may provoke the sudden emigration of key experts and maintenance personnel. Other risks envisage are: Risk of failure or uncertainty of new technologies, and fear of duplication of similar services across departments – service duplication (West, 2004; Ciborra and Nevarra, 2005).

Process – Scholars have argued that process in terms of operational or implementation could adversely impact on e-Government implementation. For instance, if the process is not properly managed, it could lead to reduction in full control over information or inferior service quality due to delay service (Bhatnager, 2004; Ndou, 2004).

People – In addition to processes, people are required for transformation of services. E-Government implementation risks would include the following: Reduction in manpower; increase in unemployment; and more corruption as a result of the frontline service being delegated to intermediaries thereby leading to lack of transparency and accountability (Lam, 2005; West, 2004).

Organisational – Organisational risks could be misinterpretation and mis-use of e-Government services, leadership failure, or increased criticisms by other agencies (Heeks, 2001; Irani *et al*, 2003; Palvia *et al*, 2001).

Financial – Financial matters and funding are essential for any e-Government services to be successfully implementation. Lack of funds could lead to delay or eventual abandonment of projects. There is also the risk of financial sustainability so that after implementation, the project is properly managed and last longer (Eddowes, 2004; Heeks, 1999).

Security and Privacy – Kessler *et al* (2011, pp.3) defined privacy as ‘the absence of unreasonable, and potentially intrusive, collection and use of personal information.’ Privacy is more of a social consideration, whereas security is more of a technical consideration (Choudrie *et al*, 2009; Solove, 2004). Scholars have therefore emphasised on the need to provide to e-Government services with the different levels of confidentiality, integrity and

availability, which are requested, for the different users regardless of their literacy in electronic information technology. This is because lack of security could lead to cyber-attacks or identity thefts (Robins, 200; Nijaz & Moon, 2009; Hector, 2012; Abdallah & Fan, 2012; Weerakkody *et al*, 2013).

Category	E-Government Risks	References
Technology	New technologies - Risk of failure; Dependence on foreign technical know-how; Service fragmentation - Duplication of similar services across different departments	Deloitte Research, 2001; OECD, 2001; West, 2004; Ciborra & Navarra, 2004; Matavire, 2010; Abdallah & Fan, 2012.
Process	Reducing full control over information; Inferior service quality e.g. delayed service; More corruption if front office functions are delegated to intermediaries	Bhatnagar, 2004; Ndou, 2004; Abdallah & Fan, 2012; Weerakkody <i>et al</i> , 2013.
People	Reduction in manpower ; Increase in unemployment; More corruption if front office functions are delegated to intermediaries	West, 2004; Lam, 2005; Liu & Zhou, 2010.
Organisational	Misinterpretation and misuse of e-Government services; Increase criticisms by other agencies and citizens	Palvia <i>et al</i> , 1994; Heeks, 2001; Irani <i>et al</i> , 2003; Ghapanchi <i>et al.</i> , 2008.
Financial	Limited or lack of funding especially during implementation; Financial sustainability	Heeks, 1999; Eddowes, 2004; Liu & Zhou, 2010; Abdallah & Fan, 2012.
Security and Privacy	Environmental info' security e.g. identify theft; Cyber- attacks using technique like, internet infrastructure attack	Robins, 2001; Solove, 2004; Nijaz & Moon, 2009; Kessler, 2011; Hector, 2012.

Table 2-5) Classification of E-Government Implementation Risks

2.4.4 Presentation of E-Government Characteristics: Benefits, Risks and Barriers

In the light of the review of various literatures, the researcher has categorised the e-Government characteristics in terms of the benefits, barriers and risks of implementation, into six: Technology, Processes, People, Organisational, Financial Resources and Security and Privacy. These would enable consistency and depth in terms of data collection and analysis.

Technology (IT Infrastructure and Skills) - Although the technological drivers for implementing e-Government services in terms of IT infrastructure and skills include promotion of ICT usage, increased reliability and accuracy of data, scholars have highlighted some of the challenges as lack of IT skills and qualifications and shortage of reliable networks and communication. The risks to be considered in implementing e-Government services are risk of failure of new technologies and service fragmentation (Heeks, 2001; Deloitte Research, 2001; Eddowes, 2004; West, 2004; Zhang *et al*, 2004; Lam, 2005; Hamed *et al*, 2008a; Martin & Reddington, 2009; Matavire, 2010; Mundy & Musa, 2010; Abdallah & Fan, 2012; Nkohkwo & Islam, 2013)

Processes – As summarised in Figure 2.5.3.1, the risks of e-Government implementation could be highlighted as inferior quality of services, reduction in control over information and corruption, especially if the front office is outsourced. However, it should be emphasised that successful implementation will lead to efficient service delivery and reduction in error, transparency and reduced corruption as well as greater convenience and saves time. Some of the key issues discussed as having adverse impact on e-Government implementation are maintenance and consistency, lack of awareness or promotion, lack resources standards and communication architecture policies and definitions (Heeks, 2001; Burn & Robins, 2003; Bhatnagar, 2004; Ndov, 2004; Eddowes, 2004; Abdallah & Fan, 2012; Weerakkody *et al*, 2013.)

People – People skills are essential for provision of e-learning to the employee, promoting knowledge sharing among employees and personalisation: meets citizens' expectations.

Review of literature have also identified staff resistance, lack of trust and lack of acceptance or buy in. However, some of the risks involved as a result of personnel are relational privacy e.g. background checks, reduction in manpower and increase in unemployment (Robins, 2001; West, 2004; Lam, 2005; Liu & Zhou, 2010.)

Organisational (Structure and Culture) – Organisational dimension has been categorised in relation to structure and culture. Organisation benefits of implementing e-Government include effective change management and communication among all government agencies and integration of government services. Other barriers highlighted are different organisational priorities, socio-economic and cultural issues, and lack of institutional framework and leadership failures. Scholars have however explained the organisational risks as involving misinterpretation and misuse of e-Government services as well as increase criticisms by other agencies and citizens (Heeks, 2001; Burn & Robins, 2003; Irani *et al*, 2003; Ifinedo, 2006; Anderson, 2006; Hu *et al*, 2006; Enyon & Dutton 2007; Ghapanchi *et al*, 2008; Buccoliero *et al*, 2008; Almarabeh & AbuAli, 2010)

Financial Resources – Another category is financial resources, availability of which would lead to economic motivations and good value for money when assessing the cost-benefit (CBA) of implementing the services. Nevertheless, review of literature focuses on some of the hindrances to e-Government implementation vis-à-vis lack of funding and financial resources, resource allocation, cost of training and system development. Researchers and academicians have therefore expressed that limited or lack of funding especially during implementation and financial sustainability are some of the implementation risks (Bonham *et al*, 2001; Moon, 2002; Eddowes, 2004; Carbo & Williams, 2004, Ma *et al*, 2005; Ebrahim & Irani, 2005; Liu & Zhou, 2010; Abdallah & Fan, 2012; Nkohkwo & Islam, 2013)

Security and Privacy – Review of literature suggests that security and privacy could either act as drivers or barriers in most organisations. The benefits include confidentiality and accuracy of information sharing and electronic storage of large data. The security and privacy issues discussed in literature are mainly loss of data due to threats from viruses, unauthorised external and internal access to systems and information and lack of risk

management security programme. Security and privacy risks of implementing e-Government services relate to environmental information security such as identify theft and cyber- attacks using technique like, internet infrastructure attack (Robins, 2001; Joshi *et al*, 2001; Zichner, 2001; Gefen *et al*, 2002; Lambrinouidakis *et al*, 2003; Sanchez *et al*, 2003; Joia, 2004; Solove, 2004; Beynon-Davies, 2005; Nijaz & Moon, 2009; Kessler, 2011; Hector, 2012).

Table 2-6 below presents the benefits, risks and barriers to e-Government implementation in perspectives of the government, employee and citizen or business.

	Element	Benefits	Barriers	Risks	Authors
1	Technology (IT Infrastructure & Skills)	Promotes the use of ICT in the society; Increase reliability, consistency and accuracy of data sharing; Portability between systems and applications	Technical know-how; Shortage of reliable networks and communication; Lack of IT skills and qualifications	Accessibility of info by other agencies; New technologies - Risk of failure; Dependence on foreign technical know-how; Service fragmentation -	Heeks, 2001; Deloitte Research, 2001; Eddowes, 2004; West, 2004; Zhang <i>et al</i> , 2004; Lam, 2005; Hamed <i>et al</i> , 2008a; Martin & Reddington, 2009; Matavire, 2010; Mundy & Musa, 2010; Abdallah & Fan, 2012; Nkohkwo & Islam, 2013
2	Processes	Efficient service delivery and reduces error; Transparency and reduces corruption Greater convenience and saves time	Maintenance and consistency; Lack of awareness or promotion; Lack resources standards and communication architecture policies and definitions	Reducing full control over information; Inferior service quality e.g. delayed service; More corruption if front office functions are delegated to intermediaries;	Heeks, 2001; Burn & Robins, 2003; Bhatnagar, 2004; Ndov, 2004; Eddowes, 2004; Abdallah & Fan, 2012; Weerakkody <i>et al</i> , 2013.
3	People	Provision of e-learning to the employee; Promotes knowledge sharing among employees;	Staff resistance; Lack of trust; Lack of acceptance or buy in	Relational privacy e.g. background checks; Reduction in manpower; Increase in	Robins, 2001; West, 2004; Lam, 2005; Liu & Zhou, 2010

	Element	Benefits	Barriers	Risks	Authors
		Personalisation: meets citizens' expectations		unemployment	
4	Organisational (Structure & Culture)	Effective change management; Increases communication among all government agencies; Integration of government services	Different organisational priorities; Socio-economic and cultural issues; Lack of institutional framework; Leadership failures	Misinterpretation and misuse of e-Government services; Increase criticisms by other agencies and citizens	Heeks, 2001; Irani <i>et al</i> , 2003; Ifinedo, 2006; Anderson, 2006; Hu et al, 2006; Enyon & Dutton 2007; Ghapanchi <i>et al</i> , 2008; Buccoliero <i>et al</i> , 2008; Almarabeh & AbuAli, 2010.
5	Financial Resources	Good value for money in terms of cost-benefit analysis (CBA); Economical motivations	Lack of funding and financial resources; Resource allocation; Cost of training and system development	Limited or lack of funding especially during implementation; Financial sustainability	Bonham <i>et al</i> , 2001; Moon, 2002; Carbo & Williams, 2004, Ma <i>et al</i> , 2005; Ebrahim & Irani, 2005; Liu & Zhou, 2010; Abdallah & Fan, 2012; Nkohkwo & Islam, 2013
6	Security and Privacy	Promotes confidentiality and accurate information sharing; Electronic storage of large data	Security and privacy issues – loss of data due to threats from viruses, worms and Trojans; Unauthorised external and internal access to systems and information; Lack of risk management security programme	Environmental info' security e.g. identify theft Cyber- attacks using technique like, internet infrastructure attack	Robins, 2001; Joshi <i>et al</i> , 2001; Zichner, 2001; Gefen <i>et al</i> , 2002; Lambrinouidakis <i>et al</i> , 2003; Sanchez <i>et al</i> , 2003; Joia, 2004; Solove, 2004; Beynon-Davies, 2005; Nijaz & Moon, 2009; Kessler, 2011; Hector, 2012.

Table 2-6) Taxonomy of E-Gov Characteristics: Benefits, Risks and Barriers

2.5 E- Government Development Life-Cycle

2.5.1 E-Government Project Life- Cycle: Four Phases

The 'Auditing e-Government' (2010) report describes the life cycle of e-Government projects is a continuous circular chain of activities, which is divided into: Initiation, Planning and implementing, Operations and Monitoring. The argument is whether or not this life-cycle is still relevant in terms of modern day e-Government.

Figure 2-1 shows the diagram of the project life cycle.

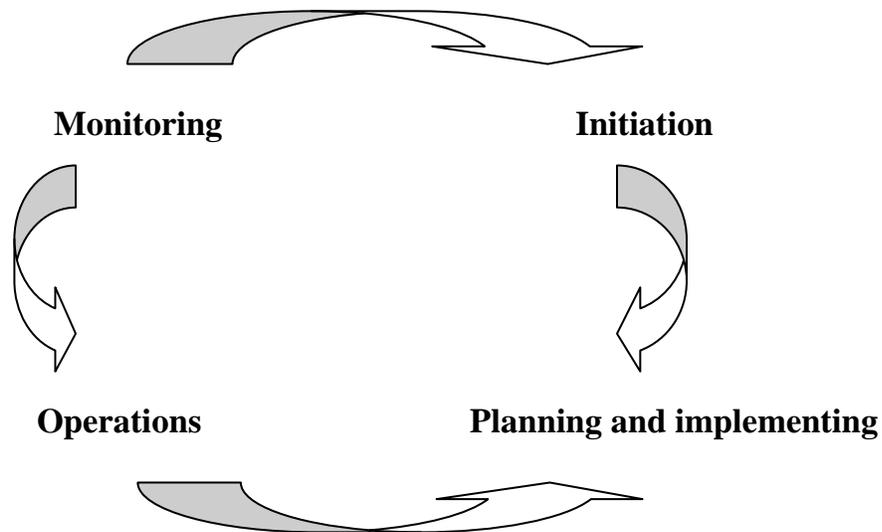


Figure 2-1) E-Government Project Life-cycle
(Source: Auditing e-Government, 2010)

Initiation –The first phase of e-Government project life cycle where governments makes clear their objective and vision for service transformation. Transformation is the ultimate outcome of the life cycle process, whereas initiation is articulated in a vision statement (of intent) of the government to embark on this journey. This is the reason why it is the most vital phase as other phases depend largely on the clarity and realism that is incorporated in the first phase.

Planning and implementation -The two most important factors that contribute to success are human and financial resources. Change management is another important issue,

whereas applications must be deployed to provide the services specified. Information sharing and getting rid of silos is one of the goals of e-Government. The main issues are co-ordination, technology, user friendliness, availability, scalability, ownership and pricing of services. The risks relating to implementation are developing, running, delivering, and maintaining.

Operations - This phase has two objectives; reliable day-to-day operations, and the progressive integration of systems to achieve service transformation.

Monitoring - Monitoring relates to optimization of services; however e-Government projects can take a long time to permeate. Transaction of business requires day-to-day monitoring since confidence of users through impersonal machines. The prime concerns during this phase are building up the services, capturing and resolving customer feedback. This project development life cycle appears to be inappropriate for modern day e-Government due to the advancement in technology and the rapid pace of change.

2.5.2 E-Government Systems Development Life Cycle: Five Stages

Despite recognising the e-government development life cycle as consisting of four phases, Heeks (2006) have a different view, claiming that an e-Government development project should consist of five stages – see Figure 2-2:

- a) **Project assessment** – where outline of basic project parameters are done, and assessment of whether or not to proceed with a project,
- b) **Analysis of current reality** – This stage consists of a mixture of hard and soft techniques such as information system audit, information systems analysis, problem analysis, context analysis in order to build an overall picture.
- c) **Design of the new system** – consists of setting the objectives, putting together the different objectives for the new for the new system to meet.
- d) **System construction** – consists of the processes and activities in acquiring any new IT, undertaking detailed design of the new e-Government system (e.g. system installation), building it, testing it, and documenting it, and

- e) **Implementation and beyond** – represented by the planning of implementation processes.

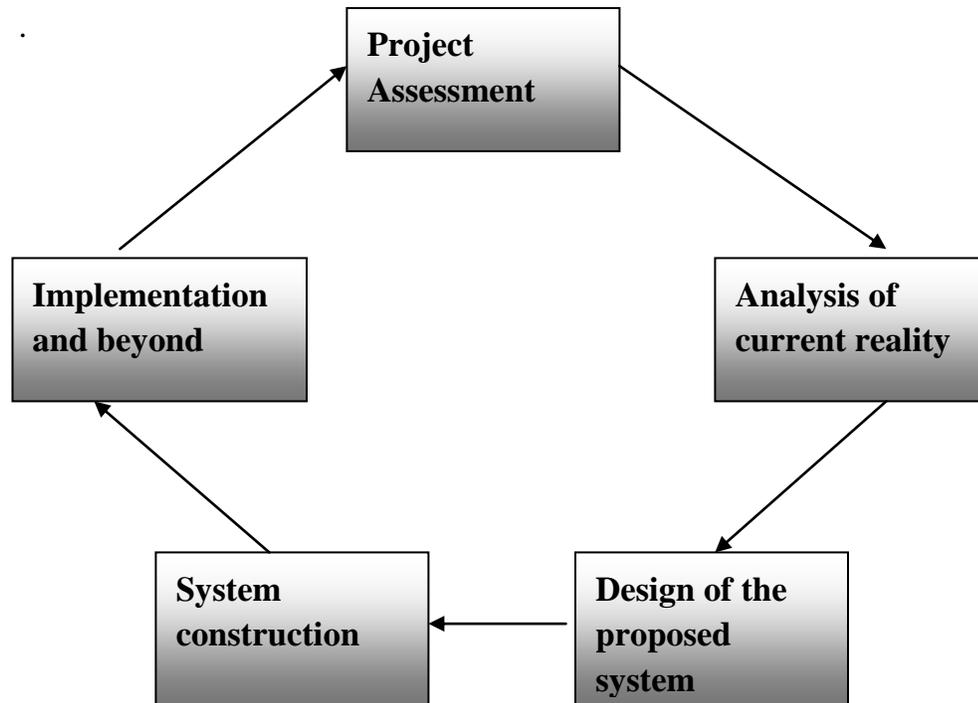


Figure 2-2) An e-Government system development life cycle
(Source: Heeks, 2006)

2.5.3 E-Government Development Life cycle: Three Stages

Review of literature indicates that there are three main phases of e-Government initiative implementation that go beyond just identification of factors. These phases are vital as they enable implementers to determine the role and responsibility of stakeholders; they are:

- Pre-Implementation – Design phase
- Implementation – Development Phase
- Post-Implementation - Deployment Phase

Projects tend to start from the initial or pre-implementation stage and are processed through to the final or post-implementation stage. (Heeks, 2006; Al-Rashid, 2012; Sharif & Manian, 2010; Baum & Di Maio, 2000).

Studies have shown that various scholars have different views on the development life cycle of implementing e-Government projects. Whilst Heeks (2006) categorised them into 5 stages (Project assessment, analysis of current reality, design of the proposed system, system construction and implementation and beyond); Auditing e-Government (2010) classified the life cycle of e-Government projects into 4 steps (Initiation, planning and implementation , operations and monitoring), as applicable to both governmental/state level and departmental level in Norway.

For simplicity, the researcher have adopted the e-Government development life cycle described by Al-Rashidi (2012). Further, each stage has its own critical success factor and fits into these studies as it would enable researcher to identify roles and responsibilities of stakeholders at every stage of the development life cycle as well as the critical activities at every stage. This is illustrated in Figure 2-3 below.

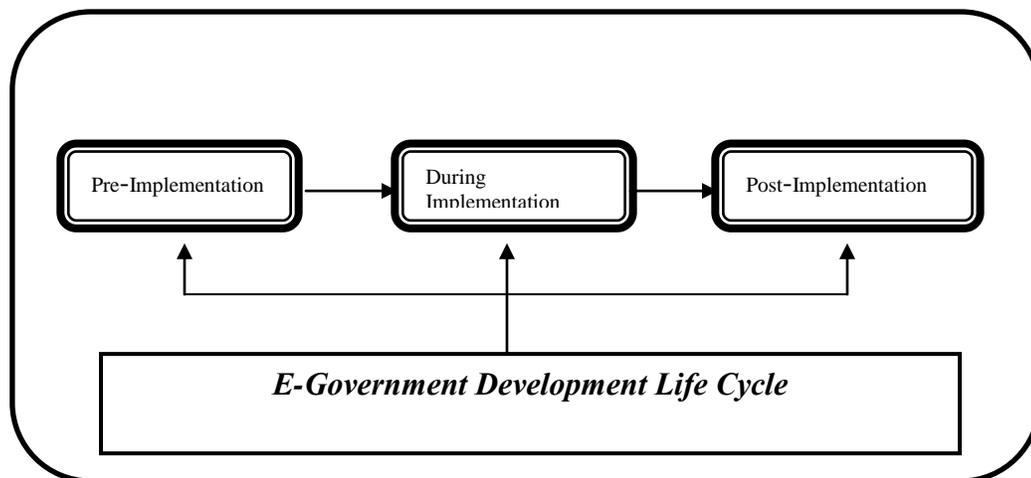


Figure 2-3) E-Government Implementation Phases
 (Adapted from Al-Rashidi, 2012)

Although Al-Rashidi (2012) classified the factors influencing the stakeholders in e-Government implementation initiatives throughout the development phases – pre-, during and post-implementation, into three main stakeholders – political, organisational and technical, review of literature has shown little or no studies on the identification of these key actors. Most of the literature review have classified them as stakeholders. It is also vital to understand which of the actors and activities are critical and at every stage of the

development life cycles. These would serve as frame of reference for decision makers and implementer of changes particularly in public sector organisations.

2.6 E- Government Theories and Models

As observed during the literature review, most government agencies all over the world are in different phases of development to drift their conventional methods architectures to more horizontally and vertically integrated architectures.

Some of the models to be discussed, which are relevant to this study are: Growth Stage Model, Government Key Business Process (G-KBP), Drivers-Barreirs Model and . Institutional Theory. Attempt would therefore be made to adopt one or more of these theories and models with various applicants that fit into the environment of chosen studies.

2.6.1 Stage of Growth Model

The Growth Stage Model was introduced by Janssen & van Veensra (2005) to assist public managers in formulating an appropriate strategy to pursue their organisation's objectives. Also used by public decision-makers as guidance and direction for architectural development. In addition, the growth model could be applied to reduce complexity of progression of e-Government initiatives.

The model, which is categorised into 'No integration', one-to-one messaging, warehouse, broker and orchestrated broker architecture, was adopted to communicate change to the rest of the organisation and to provide milestones to evaluate and control cost of architectural development. It would be pertinent to attempt to apply this model to other e-government services especially in relation to land administration systems. The growth model can be viewed as a learning model where stage adoption is influenced by the environment and the adaptation to the environment, compared to other models.

Table 2-7 below describes the 5-stages of the growth model:

Stages	Description	Source
No integration	Cataloguing services: where the website comprises an overview of useful information; Replacement of personal contact at the desk or telephone by information delivery through the internet; Electronic compiling between information systems is not relevant yet; Web applications and data are 'stand-alone' applications and there is no need for exchange of data.	Janssen & van Veensra, 2005
one-to-one messaging	Data stored in back-office systems are automatically published on the website and e-mail or forms are used for communication; Technological demands are not high; One2one messaging starts on a small scale.	Janssen & van Veensra, 2005
Warehouse	Organisations looking for new types of co-ordination; for collecting and storing integral customer information that can be used in various channels to ensure coherent customer responses; Concept of data warehouse concerns the design of a dedicated database that is installed; The back-office application retains ownership of the data that cannot be muted directly from the front office.	Janssen & van Veensra, 2005
Broker architecture	The more information is exchanged between agencies; the more real-time information exchange becomes necessary; Broker architectures fulfil the business process re-engineering (BRP) principle of entering data only once at the source.	Janssen & van Veensra, 2005
orchestrated broker architecture	Need for more open, flexible and adaptive architectures constructed of relatively small components, which can be configured to support a limited number of functions; The brook architecture becomes gradually an orchestrated system of both technical and business functions.	Janssen & van Veensra, 2005

Table 2-7) Stage Growth Model

In terms of organisational change strategies, this model can be used to plan for change to establish goals and determine progress towards accomplishing these goals. These models

are built on the assumption that development of information technology systems evolve through a number of stages of growth. And as an organisation becomes more familiar with the use of technology, it advances to a higher stage.

Although e-Government concept is still maturing as it's relatively new, there is no agreed standard stages growth model. Countries tend to have their own e-Government model because of the unique combination of circumstances, priorities and resources of each country. Further, countries are at difference stages of e-Government implementation and they do realise the need for all government stakeholders to work collaboratively when providing any single e-Service. E-Government project is enormous and requires stakeholders roles and responsibilities to the defined (Hachigian, 2002; Moon, 2002; Basu, 2004; West, 2004; Im & Seo, 2005; Ebrahim & Irani, 2005; Sagheb-Tehrani, 2010).

2.6.2 Government Key Business Processes (G-KBP)

G-KBP is based on process modelling technologies and modern public administration concepts. It can be used to build a framework to e-Government initiatives in a way that leads to a complete integration of the delivered services. G-KBP has two simplifications in comparison to private organisation's KBP because it does not include the payment, and the result delivered to the customer is always a service.

Some of the benefits of publicising this model, as observed by Budd & Harris (2004) are that it allows individual customer to identify the services applicable to the customer promptly and that complete services delivered by the G-KBPs are more effective than the current fragmented ones.

Although G-KBP may be established in a top-down way, it remains a fact that much other human knowledge is required in order to achieve desired results. There is the need for further research on the application of this concept in addition to adequate use of ICT to enhance e-Government environment in developing countries, in particular. One crucial thing that can be deduced from the G-KBP is its fundamental guideline to the construction and maintenance of e-Government portal (Lamersdorf, 2004; Budd & Harris, 2004)

The crucial issue for G-KBP in terms of e-Government implementation is the ability to be able to describe appropriately, complete services to be delivered and the real customers. Due to bureaucracy in public sector organisations, the government official who requests for e-Government services is not often the same person who would receive the service on implementation. Thus there are immense theoretical and practical challenges that have to be overcome in order to be able to successfully reach the G-KBP. Nevertheless, the model is able to cope effectively and objectively with government implementation issues (Lamersdorf *et al*, 2004; Budd & Harris, 2004).

2.6.3 Adaptive Structuration Theory (AST)

Adaptive Structuration Theory is based on Anthony Giddens' structuration theory. This theory is formulated by adopting members' use of rules and resources in interaction to produce and/or reproduce the social systems.

Scholars described AST as being organised around a set of concepts (features, spirit, appropriation moves, attitudes toward the technology, instrumental uses, etc.) that are meant to be applied generically in the study of IS implementation and use, as well as in other contexts. A few scholars have adapted the theory to study the interaction of groups and organisations with information technology (DeSanctis & Poole, 1984; Sewell, 1992; Kontopoulos, 1993; Jones & Karsten, 2008).

AST criticizes the technocentric view of technology use and emphasises the social aspects. Groups and organizations using information technology for their work dynamically create perceptions about the role and utility of the technology, and how it can be applied to their activities. These perceptions can vary widely across groups. These perceptions influence the way how technology is used and hence mediate its impact on group outcomes.

AST is also regarded as profitable methods for studying the role of advanced information technologies in organisation change. The theory allows for ready usage of survey and archival data, rather than limiting it to ethnographic approaches. Thus AST examines the change process from two vantage points: 1) the types of structures that are provided by the

advanced technologies, and 2) the structures that actually emerge in human action as people interact with these technologies.

Academicians have attempted in the past to apply AST in the areas of decision making, focusing on technology engineering (Jarvenpaa, 1989; Pinfield, 1986); social technologies from integrated perspectives, focusing on technology and social structure (Orlikowski, 1992); and institutional, focusing on social structure (Walther, 1992). AST thus provides a model that describes the interplay between advanced information technology, social structures and human interaction (DeSanctis & Poole, 1994).

Further, AST helps reveal the complexity of technology-organisation relationship and gives better understanding of how to implement technologies. However academicians and practitioners have argued that despite the benefits of AST, advances in computer technology have not brought about remarkable improvements in organisational effectiveness. AST cannot completely determine outcomes such as organisational change since technology could serve as a trigger of such outcomes.

2.6.4 Attraction-Selection-Attrition Framework (ASA)

This is a framework that closely relates to psychology, but part of the socialisation process that enables new additions to organisations to fit into the structure of the organisation. The idea of ASA framework was first mooted by Schneider (1987) when he stressed that 'the people make the place' and that organisational culture, climate and practices are determined by the people in the organisation. There have been deliberations over a century on how the situational variables - such as groups, technology, structure, environment - have impacted on the behaviour of the organisation. However, psychologists have failed to incorporate people types into the theories of organizations.

In addressing some of the questions that remain open to various suggestions, Schneider *et al* (1995) included the element that the societies are accountable for the structure, processes and culture of the organisation, and that these people are functions of a sequence known as

Attraction-Selection-Attrition cycle. Various scholars have tested this person-oriented framework in a view to making propositions that persons make environment. This is in addition to the notion that the model outlines a framework for understanding organisational behaviour that integrates both individual and organisational behaviour (Chatman, 1989, 1991; O'Reilly, Chatman, & Caldwell, 1991).

Since then scholars and practitioners have extended the model of behaviour to include job design (Hackman & Oldham, 1980); ability-performance relationships (Schneider, 1978); difference-performance relationships (Peters & O'Conner, 1988) and personality and leadership effectiveness (Fiedler, 1967). The scientific and field study emerging from direct test of ASA model has validated the hypothesis regarding homogeneity as well.

ASA model is relevant for understanding organisations better since it critical model on the current situational theories of organisations, and can assist in evaluating 'common thoughts' of organisations. Some of the implications of the model are:

- 1) Organisations do encounter some problems whenever they are to implement any change since people's preference are not the same
- 2) The utility of personality and interest measures for understanding organisational behaviour
- 3) Organisational climate and culture are not clearly-defined in an organisation especially where people share a common set of assumptions, values and beliefs.
- 4) Recruitment and selection issue
- 5) The need for person-based theories of leadership and job attitudes.

In respect of e-Government, ASA will fit perfectly into research studies on human resource management since it outlines a framework for understanding organisational behaviour that integrates both individual and organisational theories. ASA model presents a way to think about organisational functioning and organisational effectiveness.

2.6.5 Diffusion of Innovations Theory (DOI)

Diffusion of innovation theory was postulated by Rogers (1983). It is concerned with the manner in which a new technological idea, artefact or technique, or a new use of an old one, migrates from creation to use. It has potential application to information technology ideas, artefacts and techniques. It has also been used as the theoretical basis for a number of IS research projects.

Diffusion research goes one step further than two-step flow theory and explains the stages through which a technological innovation passes as follows:

- knowledge (exposure to its existence, and understanding of its functions);
- persuasion (the forming of a favourable attitude to it);
- decision (commitment to its adoption);
- implementation (putting it to use); and
- Confirmation (reinforcement based on positive outcomes from it). (Rogers,1983; 1995),

Scope and Application: Diffusion research has focused on five elements: (1) the characteristics of an innovation which may influence its adoption; (2) the decision-making process that occurs when individuals consider adopting a new idea, product or practice; (3) the characteristics of individuals that make them likely to adopt an innovation; (4) the consequences for individuals and society of adopting an innovation; and (5) communication channels used in the adoption process.

The adoption of new ideas, media, etc. (or: Multi-step flow theory). Diffusion research goes one step further than two-step flow theory. The original diffusion research was done as early as 1903 by the French sociologist Gabriel Tarde who plotted the original S-shaped diffusion curve. Tardes' 1903 S-shaped curve is of current importance because "most innovations have an S-shaped rate of adoption" (Rogers, 1995).

Rogers (1995) argued that it consists of four stages: invention, diffusion (or communication) through the social system, time and consequences. The information flows through networks. The nature of networks and the roles opinion leaders play in them

determine the likelihood that the innovation will be adopted. Innovation diffusion research has attempted to explain the variables that influence how and why users adopt a new information medium, such as the Internet. Figure 2-4 below shows the DOI model.

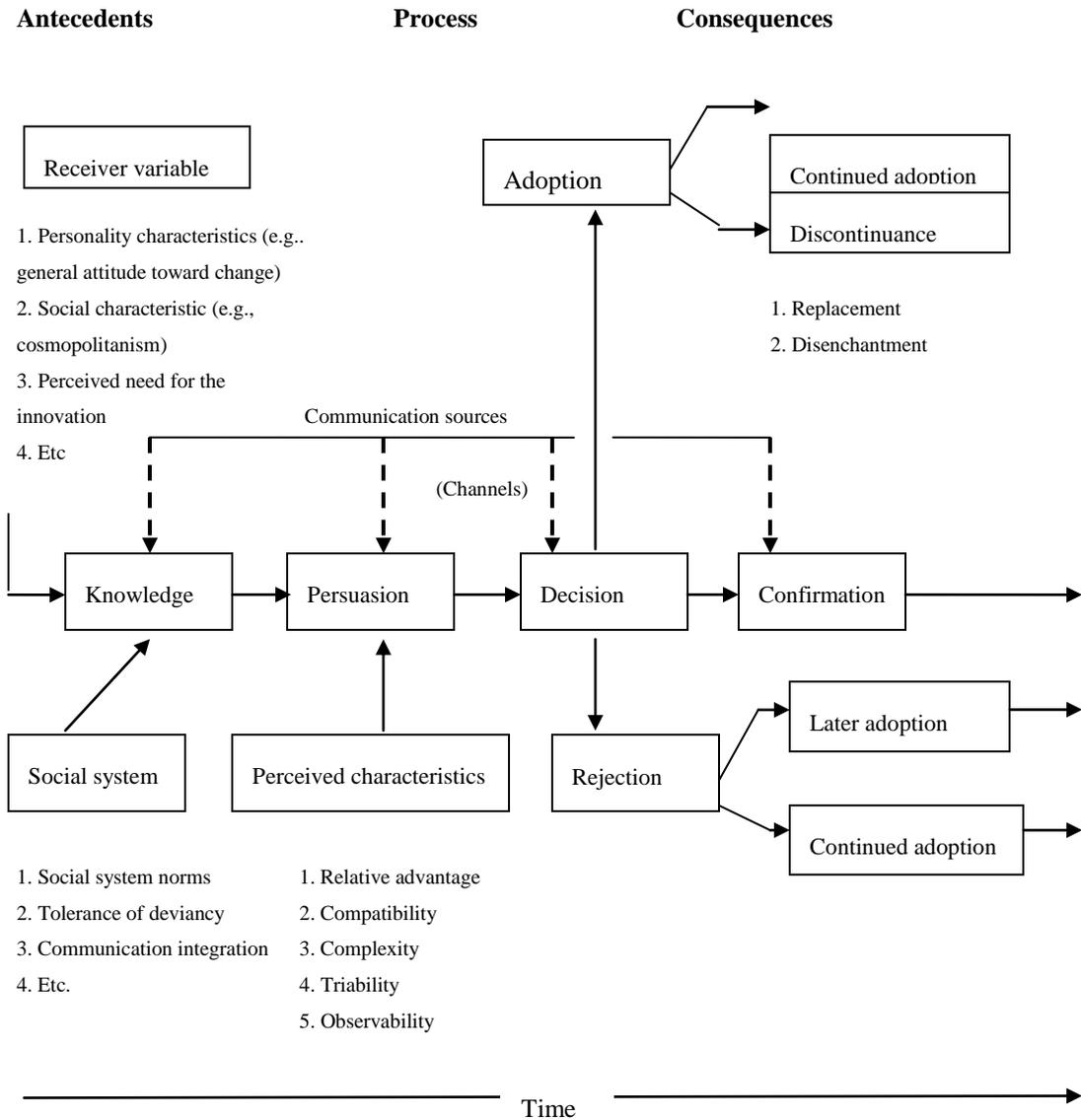


Figure 2-4) Diffusion of Innovation (DOI) Theory
(Source: Rogers, 1995)

A criticism of this theory is that some of its elements would need to be extended and modified before it can be applied to technology transition, in general, and information systems, in particular. In addition, the theory tends to disregard the arrangement and interaction of competition, marketing mix variables, competitive advantage, resource allocation, and how they might influence the speed and pattern of diffusion in alignment with the product life cycle.

2.6.6 Theory of Reasoned Action and Planned Behaviour

Ajzen and Fishbein developed this behavioural theory in 1980. This model is to be considered the backbone of studies associated with attitude behaviour and it is widely used in academic and business research (Ajzen and Fishbein, 1980). The theory of reasoned action (TRA) has two determinants on intention attitude toward behaviour and subjective norms associated with behaviour.

This theory is a general research intention theory that has been used to explain and predict human behaviour (Ajzen & Fishbein, 1980). Suh and Han (2003) claim that this theory is used by information systems researchers to study the determinants of IT innovation-usage behaviour. Most literature related to technology acceptance, initiated studies with the theory of reasoned action. Madden *et al* (1992) are of the assumption that TRA is applicable when the behaviour in question is under volitional control; otherwise Theory of Planned Behaviour (TPB) becomes superior to it.

The theory of Planned Behaviour (TPB) was developed by Ajzen in 1985 and was proposed as an extension to the TRA. The TPB introduced a third independent determinant of intention, called perceived behaviour control, in addition to the two TRA determinants (Ajzen, 1985, 1991). It was proposed to influence behaviour, in addition to attitudes, toward use, subjective norms and perceived behavioural patterns. In essence, TPB is a theory that predicts intentional behaviour, and Chau & Hu (2002) claim that TPB is considered to be more general than TRA, because of the added determinant, perceived behaviour control. TPB provides useful conceptual framework or dealing with complexities

of human social behaviour, incorporating and defining the two concepts – social and behaviour sciences in such a way that allows for prediction and understanding of particular behaviours in specific contexts. Researchers have argued that a high proportion of variance in behaviour is determined by intentions and perceived behavioural control.

A major criticism of TPB is the uncertainty in describing the exact form of relations between concepts such as: behaviour beliefs v attitudes towards behaviour; normative belief v subjective norms; control beliefs v perception of behavioural control. Although the application of TPB to a particular area of interest provides a lot of useful information for understanding these behaviours and for implementing effective interventions for understanding behaviours, there is thus much room for improvements.

Therefore, both TRA and TPB would be effective models to be applied for change management and organisational behaviour studies in information systems. This model will not be fit properly into the research studies on determining e-Government implementation factors and role of key actors, as opposed to studying their behaviours and intentions (Van Ryn & Vinokur, 1990; Schlegel *et al*, 1990; Ajzen, 1991)

2.6.7 Triangle Relationship Model: E-Gov, E-Commerce and E-Citizen

Academicians have argued that e-Business and e-Commerce are subsets of e-Government since e-Government offers broader functions than e-Business and e-Commerce. The knowledge society suggests that whilst both businesses and the government work collaboratively to serve the customers, i.e. Civil society. This is the reason why e-Government offers a great motivation to enable the government towards meeting up with the 21st century advancement in technology. E-Government offers effective and efficient services with higher service quality and delivery; it also promotes a healthier relationship between citizens and government.

As shown in Figure 2.5 below, whilst e-Commerce is basically the buying and selling of goods and services on the internet – world-wide-web, electronic Business (e-Business)

relates to a wider definition of Electronic Commerce as it entails delivering service to customers and working closely with all stakeholders including business partners to ensure smooth transaction within an organisational entity.

This explains why both e-Government and e-Commerce are seen as introduction of innovations in modern technology, although e-Government enables better service delivery in terms of information and data sharing. It involves transactions between government and business (G2B), government and citizen (G2C), government and employee (G2E), as well as amongst different government parastatal, agencies and departments. Because of the similarities in most of the functions of e-Business and e-Commerce, the researcher intend to apply model or applications that have been developed and validated in either e-Business or e-Commerce industry in the context of developing countries and there is little evidence to suggest whether this model has been validated.

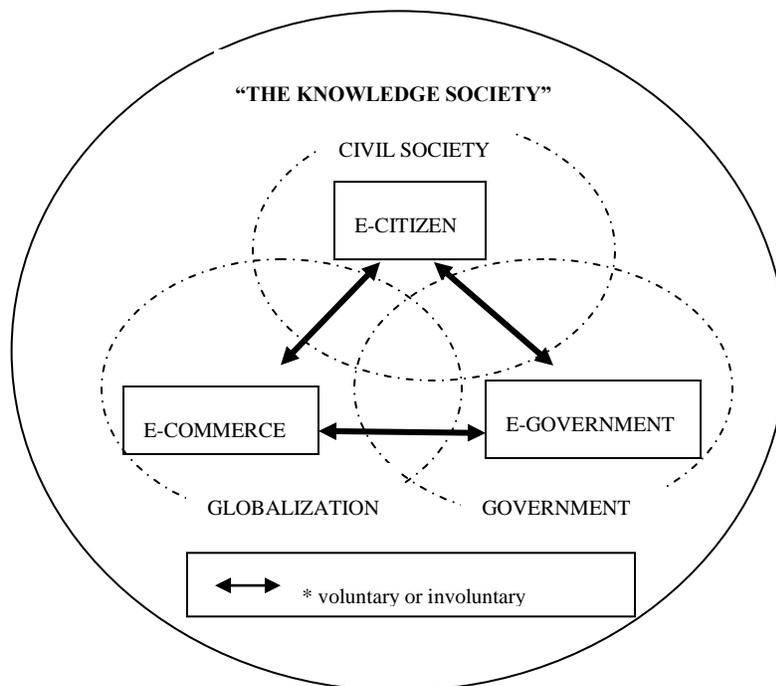


Figure 2-5) Triangle Relationship Model: E-Government, E-Commerce and E-Citizen
 (Source: Chief Executives Group on Information Management and Techology, 1999; Fang, 2002)

2.6.8 Institutional Theory

Institutional theories of organisations provide a rich, complex view of organizations (Zucker, 1987). Björck (2004) however proposed the following, whilst applying institutional theory to the management of IS/IT security in organisations, that:

- it can help us understand and explain why formal security structures and actual security behaviour differs
- it can help us shed light on why organisations often create and maintain formal security structures without trying to implement them fully
- it helps us identify and explore the main mechanisms by which actual security behaviour is controlled.

Scholars and practitioners have maintained institutional theory is the most noticed in sociology (Jepperson, 1991), political science (Miranda & Kim, 2006) and economics literature (Hodgson, 1995; Williamson, 1985). To support this notion, Davis and North (1971) reasoned that for any institution to exist, it must be bounded by a set of social, political, economic and legal perspectives.

In order to achieve a sound and cost-effective IS/IT security management infrastructure, researchers and practitioners should engage institutional perspective to these issues in organisations. The key assumptions are about how institutions are created, maintained, changed, and dissolved. The three pillars of the theory are regulative, normative, and cognitive or mimetic, whilst the institutional carriers are symbolic systems, social structures, routines, and artefacts (objects).

Regulatory – relates to the formal and informal pressure following government in the aspect of rules or laws;

Normative – This exists due to the competency of the actors in the organisation actors. This includes managers and administrators affected by the burden of cultural prospects;

Mimetic – This transpires where organisations attempt to imitate other organisations in undefined situations so that risk is minimised, or the yearning of one organisation to bear a resemblance to the other (Zucker, 1987; Björck, 2004; DiMaggio & Powell, 1991; Kim *et al.*, 2009, Scott 2005; Currie and Guah, 2007).

In terms of its application to various fields of study, Avgerou (2000) adopted institutional theory to study the relationship between organisational transformation and information systems development. He then suggested that IT innovation in organisations is to a large extent sustainable by its own institutional forces, regardless of contribution to the processes of organisational change. Further, the theory can be combined with other theories as adopted by Jensen *et al* (2008) when they explore Institutional theory with Sense Making theory with a case study in a health care setting. The benefit of combining two theories is that it enables alternation between levels of analysis, and this expedites a more affluent interpretation of IS adaptation.

However, a review of literature suggests there have been studies that have adopted institution to explore how organisations are institutionalised by political, economic, legal, or cultural context. For instance, Currie (2009) examines the use of institutional theory in information system research, and the findings are that most institutionalist accounts within information systems research adopt an organisational unit of analysis as opposed to a multi-level approach which encompasses societal and individual levels.

Currie (2009) illustrates the narrow use of the theory adopted by the IS community and suggests that a more fruitful approach is to use a wider multi-level and multi-method approach. It was however argued that IS researchers need to become more aware of the wider debates within the institutional theory literature, particularly as the theory is conceptually ambiguous, yet not amenable to over-simplification as a means to achieve methodological rigour.

The above suggests that this research embraces to have an understanding of e-Government in respect of organisational change, which is often influenced by important factors such as organisational, political, economic, legal or critical mass. This approach is comparable to other e-Government adoption and implementation studies (Scott, 2005; Currie & Guah,

2007; Al-Shafi, 2009; Currie, 2009). For these reasons, the researcher applies the methodology of using an institutional theory as the perspective lens where the theory is used as principal frame of reference for categorising the environmental forces – both external and internal factors - impacting on e-Government implementation.

2.6.9 The Drivers - Barriers Model

The Drivers and Barriers model was developed by Hamed (2009) in the research into e-Commerce and economic development in Libya. The model postulates a number of barriers experienced in public sector organisations that prevent the realisation of anticipated benefits and degrade successful implementation of e-Government projects. On the other hand, there are potential benefits and motivations arising from e-Government literature that could promote the top management to adopt it. The classifications of e-Government benefits, barriers and risks have been reviewed and analysed (see Tables 2-6).

Hamed (2009) identified twelve factors, which are correlated and could either be identified as drivers and/or barriers since these factors vary from country to country. It was noted that some drivers apparent in some developed countries have not yet appeared in many developing countries. Thus the model recommends that some drivers in developed countries might even appear as barriers in some of the developing countries. The more benefit the issue is to economic development, the more the issue counted as a driver'. This implies that the barriers and benefits are not standardised or static and these depend of the stage of e-Government growth of the country.

The model of e-Commerce drivers and barriers underlines twelve issues that are generally influence e-Commerce adoption in most countries as follows and in Figure 2-6:

- Competition (Good quality services at competitive prices)
- Cost (Cost of implementing and establishing economy vs. investment returns)
- Culture and Religion (Business culture, cultural ideas and issues)
- Economic activity (Competition may increase economic activities e.g. create new jobs)
- Employment

- Government (Vital role in all activities – international/internal trade, education)
- Infrastructure (ICT infrastructure and payment system)
- Knowledge of e-commerce (Government need to engage users to be involved)
- Legislation and Regulation
- Payment system
- Security
- Traditional business

Using a developing country – Libya as a case study, Hamed (2009) observed that some of the barriers such as competition and culture have not been experienced in the country because Libya is still in early stage of e-Commerce adoption. He observed from that result that all the driver and barrier issues are apparent in the country. The model enables government to identify gaps and think seriously about what to do with each of these issues in order to close these gaps. In the case of Libya, the government would need to pay attention to the fundamental issues in the economy, such as infrastructure, payment systems, and most importantly education before other issues of e-Commerce. The model suggests that the more benefit the issue is to economic development, the more the issue is counted as a driver.

According to Hamed (2009), for e-Commerce adoption to be successful, the government will have to ensure that the cost of implementing and establishing the e-Commerce is not higher than the investment returns. To achieve this, the government of Libya has to choose the right organisation to deliver good quality services at competitive prices. Most of these organisations will be international companies. Government has to play an important role in all activities for e-Commerce adoption. The companies can be the main drivers; therefore the government should do its part by introducing credit and debit cards, legislation and help in education. The absence of government action may result in delays or even the death of e-Commerce in Libya.

The researcher adopts this model in conjunction with other models, since institutional theory allows for its combination with other theories and research models especially in respects of organisational actions and behaviours. The researcher therefore attempts to use some elements of the drivers'barriers model and not necessarily its structure.

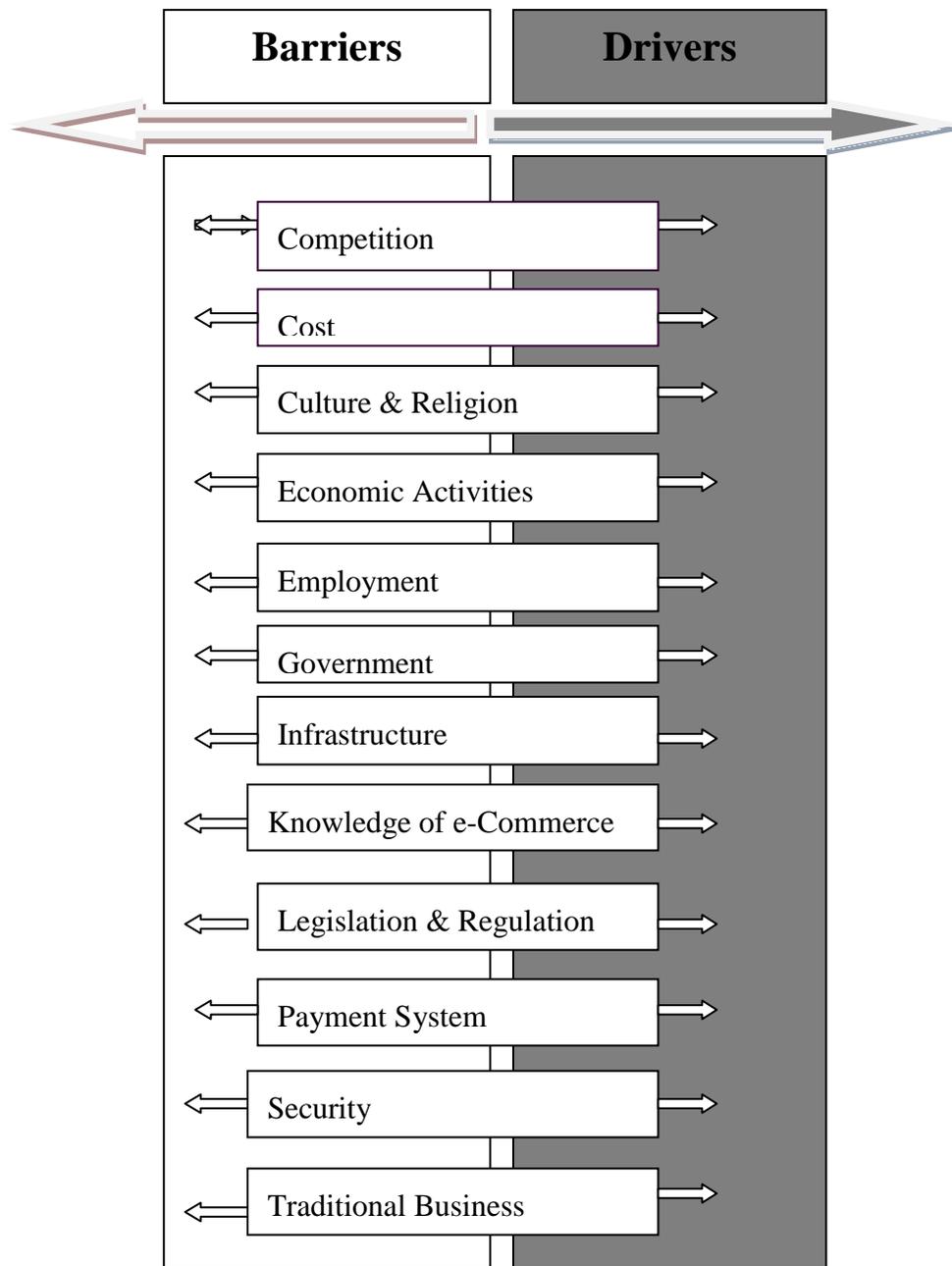


Figure 2-6) E-Commerce Drivers and Barriers
 (Source: Hamed et al, 2008a; Hamed, 2009)

2.6.10 Comprehensive Barrier Framework

E-Government projects are faced with different barriers and obstacles depending on the countries stage of growth in e-Government. However, Ebrahim and Irani (2005) have clarified that government leaders should recognise the importance of electronic government to improve the performance of the service towards the citizens. As Ndou (2004) puts it, governments face a wide range of challenges because of the multi-dimensionality and complexity of e-Government initiatives.

A number of framework and models regarding barriers to e-Government project developments have been developed and proposed by different academicians. Lam (2005) classified the comprehensive framework to explain the barriers of e-Government service delivery base on four categories: Strategy Barriers, Policy Barriers, Organisational Barriers, and Technology Barriers.

Lam (2005) explains various issues relating to the barriers as follows:

1. Strategic barriers: These are barriers such as lack of goals and objectives, over-ambitious objectives, lack of ownership, lack of guideline and financial Matter.
2. Technical Barriers – Include poor ICT infrastructure, lack of architecture integration, lack of data standard and lack of Security Model.
3. Organisational Barriers – such as lack of readiness, rapid pace of the reform, absence of a champion, management/technical skills and change challenges.
4. Policy Barriers – The policy barriers include citizens' privacy, data ownership and e-Government policy evolution.

The researcher therefore attempts to adopt some of the elements of the framework is structuring the perceived barriers, in order to develop a conceptual model for in e-Government implementation. The proposed framework therefore considers only the factors that hinder implementation in e-Government projects, in particular and IS/IT in general.

Figure 2-7 below provides a detailed description of these four areas identified as barriers.

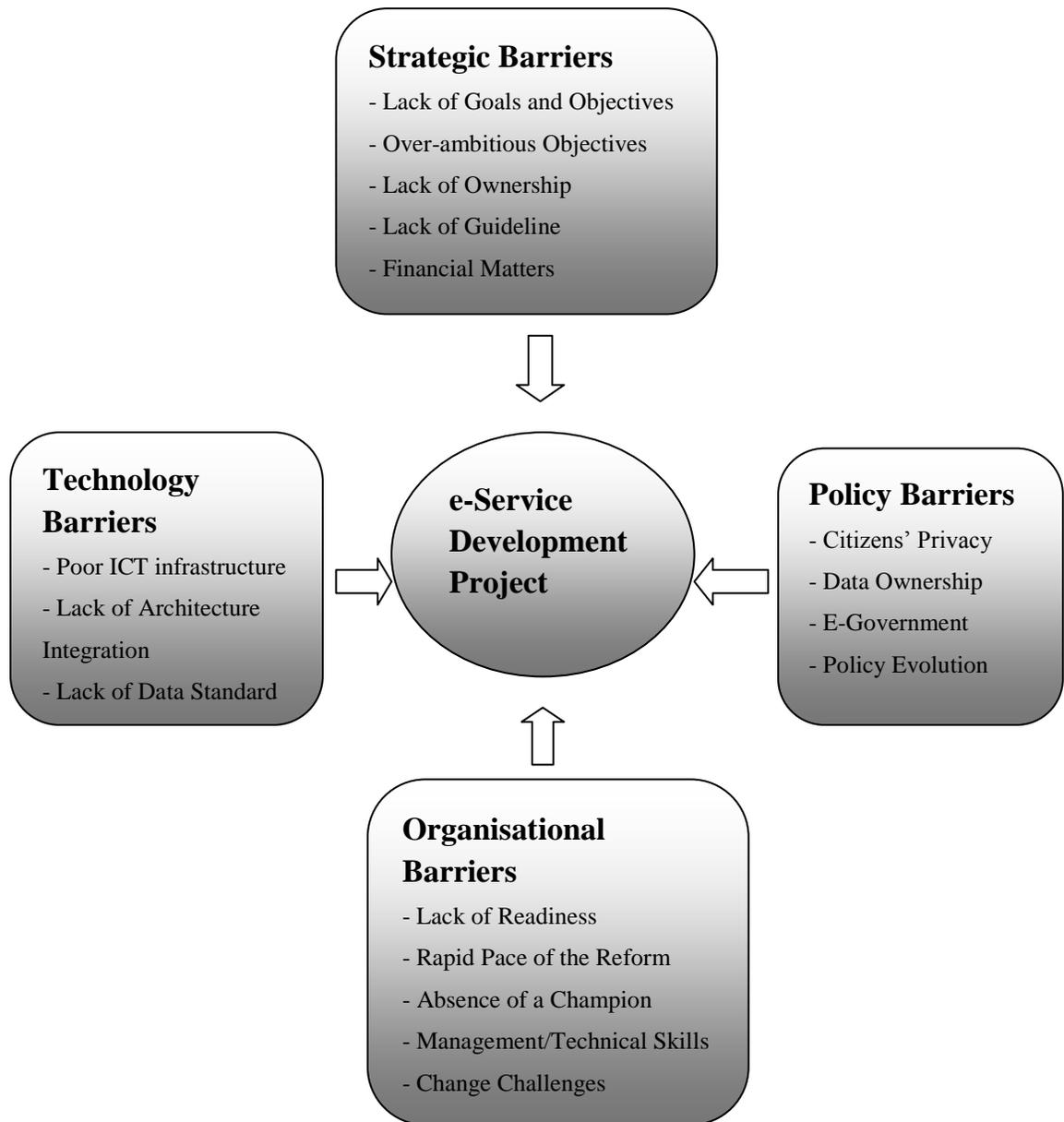


Figure 2-7) Comprehensive Barriers to E-Service Development Project
 (Adapted from Lam, 2005)

2.6.11 Three Quarter Moon Model

The Three Quarter Moon model was proposed by Hamed (2009), in a research specific to Libyan economic development. He noticed that e-Commerce can be a driver-barrier in the country due to the observation that there is no organisation that is responsible for setting the e-Commerce strategies and planning. More so, the government does not have a clear strategy for e-Commerce adoption.

Hamed (2009) noticed that some drivers apparent in developed countries have not yet been observed in many developing countries. The research was an improvement on the Drivers-Barriers model postulated by Hamed *et al* (2008a) and he discovered two additional issues – security and knowledge of e-commerce. In answering the question: How can e-Commerce be adopted in Libya? Hamed (2009) developed a strategy with infrastructure being a necessity for e-Commerce adoption. Figure 2-8 explains the model, which relates to the Libyan government, Libyan companies and Technologically-advanced countries and e-Commerce users.

Hamed (2009) noted that once the government and technologically-advanced countries agree on the type of technology to be adopted, the two parties can then work collaboratively to provide the necessary technology and train government employees to use and maintain the adopted technology. The third actor, companies – both private and public, plays a crucial role in increasing the number of e-Commerce users by providing online services and lower prices in addition to recruitment and leisure activities.

Whilst the government works closely with the companies of achieve the above objectives, the fourth actor – e-Commerce users enable the government and the companies to gain benefit from their investment in technology. The involvement of the users is observed as dependent on the other three actors. The model also suggests that government needs to bear in mind that technology is developing rapidly and as such, research and development and educational programmes are needed to keep up-to-date with these technological changes.

For a successful adoption of the model, it is recommended that adopters should go through the 3-stages – before, during and after e-Commerce adoption. This 3-stages, which is also known as ‘an adoption life cycle’ should involve all the four actors.

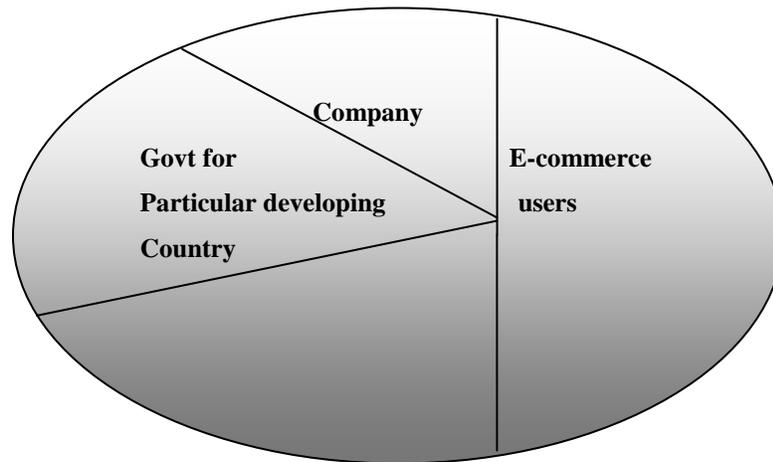


Figure 2-8) Three Quarter Moon Model
(Source: Hamed, 2009)

2.7 Change Management Models and Theories in relation to E-Government

According to Bumes (2004b), “Change is a constant feature of organizational life and the ability to manage it is seen as a core competence of successful organizations.” Change management is becoming increasingly popular particularly in the IS/IT environment. Lorenzi & Riley (2000) describe change management as the process by which an organisation gets to its future state, its vision.

Kurt Lewin’s three-stage model deeply enriched the understanding of how change occurs and the role change agents could and must play in planning in order to be successful. Lewin explains this planned approach to change as four elements: Field Theory; Group Dynamics; Action Research; and 3 Step-Model – considered as fundamental method of analysing, understanding and bringing about planned change at the group, organisational and societal

level. Lewin (1947) believes successful change project would evolve around these three stages:

- a) Step1: Unfreezing – this relates to releasing from the present level, which involves quite different problem in different cases.
- b) Step 2: Transition – At this stage, change occurs and all forces are at work in order to be able enables to identify and evaluate iteratively, the available options.
- c) Step 3: Refreezing – Stability is essential to ensure the group norms and routines are transformed, since individual behaviour will not work.

One of the criticisms of Lewin’s theory is its overly-simplistic view of organizations and change and limitation in opportunity to rise to the difficulties of any concept that is just emerging such as e-Government. However, it could be useful in understanding the environmental forces – external and internal – that would impact on changes in the government institutions. This is the reason why the 3-stage change model has become outmoded in the last few years; although scholars believe it can be used in parallel with other theories such as complexity theories. Past studies have also shown that what has also been shown is that for any organisation that wishes to use other change theories apart from Lewin’s theory, they will have to change considerably in how they are managed and the way power is distributed (Kanter et al, 1992; Dawson, 1994; Hatch, 1997; Gleick, 1988; Lorenz, 1993; Styhre, 2002).

Despite the limitations, scholars and acadmecians have modified Lewin’s change theory to capture a more detailed and comprehensive representation of the organisational changes, mostly internally and needed for implementing concepts that are evolving. These theories also focus on personal features influencing implementation of change and e-Government is an hypothetcal example that relates to change in public institutions and often influenced by a number of external facets, which tend to be more complex than the internal aspects (Lewin, 1947; Lippitt et al, 1958; Koter, 1995; Kritsonis & Student, 2004; Miranda & Kim, 2006; Irani et al, 2007; Al-Rashidi, 2012).

Lewin’s theory thus gives more consideration on how to deal with change and the impact of change on the organisation, and this is relevant to implementation of change. Despite the

fact that the theory enables better understanding of level of changes in an organisation especially internal changes that government institutions often require in order to implement e-Government systems, it has some limitations as regards the difficulty in increasing the value of the developing notion or idea. As a result of these limitations, a few theories have been developed to either extend and/or modify Lewin's theory. For instance, Kotter's 8 – stage change model was an extension of Lewin's theory include the following steps: Increase urgency for change; build a team for the change; construct the vision; communicate; empower; create short-term goals; be persistent and make the change permanent. These eight steps are necessary to bring about effective change.

Further, Lewin's model focuses on change efforts and self-organising group; the researcher intend to explore the institutional theory in order to have understanding how e-Government implementation influences organisational change and how these factors impact on the institution both internally and externally. The external factors are classified under organisational, political, economic, legal and critical mass, whereas the internal factors include leadership or management capability, financial matters, goals and objectives, attitude and network collaboration.

Previous studies have supported the notion that institutional theory (discussed in session 2.6.8) could be adopted to examine the external and internal viewpoints since all institutional are framed by a set of organisational, political, economic, legal, and technological perspectives. Scholars have adopted institutional theory to postulate how these organisational changes would influence characteristics such as the perceived benefits and barriers in information systems such as e-Government (Lewin, 1947; Robbins, 2003; Kritsonis & Student, 2004; Burnes, 2004; Ebrahim, 2005; Andoh-Baidoo & Osatuyi, 2009; Kim *et al*, 2009; Irani *et al*, 2009; Al-Shafi, 2009).

The researcher therefore draws ideas from previous studies on organisational change in a public sector organisations, within the context of e-Government implementation. The researcher also believes institutional theory would offer more theoretical insight into reviewing organisational change within the context of e-Government implementation in public sector organisations. Although change management is outside the scope of this study,

the researcher draws a parallel relationship with e-Government since institutional theory relates to organisational change and organisational behaviour. In relation to e-Government, change management is an aspect of organisational behaviour that focuses on the following issues within institutional context: resistance to change, approaches to change management and requirements for change management in e-Government. This is illustrated in Figure 2-9 below:

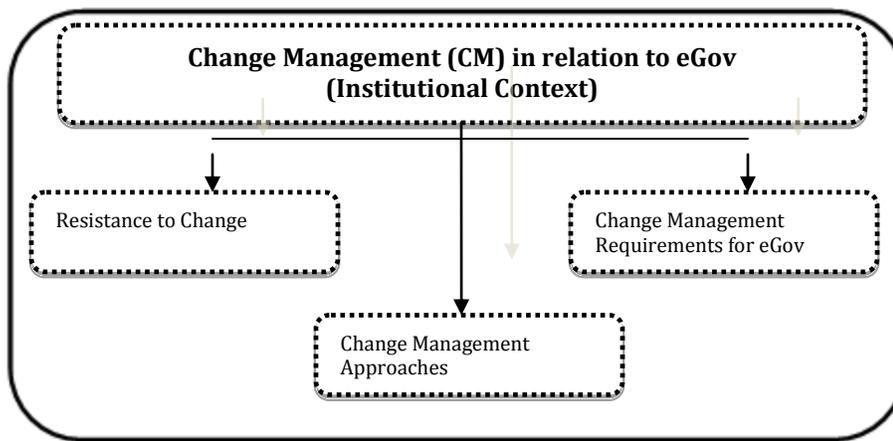


Figure 2-9) Change Management in relation to e-Gov: Institutional Context

The researcher presents the change management issues that relate to e-Government implementation in public sector organisation as part of the conceptual framework due to its parallel relationship with e-Government in respect of organisational behaviour in organisational change. However the scope of study relates to understanding how change is managed and how staff and managers react to organisational change within the context of the public sector institution. The researcher therefore exemplifies the change management concepts using broken lines in the proposed conceptual framework, to depict the indirect correlation with e-Government with an institutional perspective. This would also be beneficial for future research on e-Government and change management concepts.

2.8 Comparative analysis of e-Government theories and model

Stage of growth model has been described as useful for implementation of IT innovation in Organisation and IT adoption in Organisation; it is also ideal for addressing the organisational and cultural change that arise as a result of resistance from stakeholders in a public sector organisation during various stages of implementation. It can be used to plan for change to establish goals and determine progress towards accomplishing these goals. The model is however applicable to evolutionary process and not this study where the researcher's focus is on organisational perspective and not citizen adoption, from Government to Employee (G2E). This research is not to identify or analyse the stage of growth or e-readiness of the public sector organisation.

Government Key Business Process Model (G-KBP) is useful for describing appropriately how complete services could delivered and the real customers; it is also relevant for building a framework to e-Government initiatives in a way that leads to a complete integration of the delivered services. However, the model has been criticised as having enormous theoretical and practical challenges that would need to be overcome before it could be successfully applied; for instance, it fails to consider the bureaucracy that often occur in publicsector organisations. More so, it fits it properly into studies within the context of citizens' adoption of e-Government.

Based on previous applications, Adaptation Structuration Theory (AST) could be adopted for examining the initiation of various inventions such as the internet, electricity, radio, or telephone as well as describing the strategies for using these inventions as framework to infiltrate the respective societies, influencing them, and how the social structures of those societies in turn influenced and modified innovations' original intent. Thus despite AST's appropriation process being considered to be a good model to analyse the utilisation and penetration of new media technologies in our society, there is the question of whether or structures can be embodied in Information Technology. There is also an important issue for IT scholars regarding structures continuing outside on-going practices.

Previous studies have therefore suggested the need to combine AST with other models depending on the area of application. For instance, Bhattacharjee & Harris (2009) constructed their model of IT adaptation by individuals by relying upon the technology acceptance model (TAM) and AST. Thus AST would not be effective model to be applied in determining e-Government implementation factors as previous researchers have suggested further management studies to be carried out to extend the limited research conducted in information systems. More so, quantitative research approach has been recommended for this theory (Giddens, 1984; DeSanctis & Poole, 1994; Griffin, 2000; Bhattacharjee & Harris, 2009).

Attraction-Selection-Attrition Framework (ASA) allows for ready usage of survey and archival data, rather than limiting it to ethnographic approaches. However, practical implications of ASA models are cautionary and personnel selection enterprise. The model presents a new paradigm for organisational research but not necessarily a new technique or technology. Further, the ASA framework seems to support testing of hypothesis, based on previous studies, and as such the researcher is of the view that the theory would not fit properly into this study, particularly in developing conceptual framework and mapping the key roles of actors of e-Government. This study does not extend to exploring the culture of the top management in association with the organisation. Whilst the theory highlights the importance of influence of founders and top management of organisations, there is the strong requirement for further studies to assess the direct connection between personality of these founders and top managers and the structure, process, and culture associated with their organisation (Edwards & Parry, 1993; Edwards, 1994; Schneider et al, 1995).

One of the criticisms of the Diffusion of Innovation (DOI) theory is the doubt about the extent to which it can give rise to readily refutable hypotheses. Rogers (1983) offered no empirical justification for using a normal distribution for all products and this has enabled different academicians and practitioners to improve the predictability of the model. The research is focusing on e-Government implementation from the government to employee perspective and not on how services are diffused to the citizens. More so, scholars have criticised the theory undervaluing the influence of the media and the notion that it is linear and source dominated since it perceives communication process from the elite perspective

who has decided to diffuse information or an innovation (Bayer & Melone, 1989; Gatignon & Robertson, 1985; Mahajan, Muller & Srivastava, 1990; Lambkin & Day, 1989; Witchel, 2004).

Triangular Relation Model (TRM) argues that e-Government, e-Commerce are innovations in modern technology, and both businesses and government work collaboratively to serve the customers, i.e. Civil society. Further, e-Government is believed should be able to accommodate these applications particularly if explored with institutional theory that allows for combination of theories and research models. The proposed model is to serve as framework that would give decision makers and implementers of change more practical guidelines and it is not clear whether this model is flexible enough to apply it together with others.

Scholars have argued that institutional theory is a change theory that has historically explained why organisational structures and values endure, since social reality is a human construction created through interaction (Robey & Boudreau, 1999; Berger & Luckmann, 1967; Scott, 1995). As a result, practitioners and researchers have suggested the need for future researchers to extend the combination of institutional and sense making theories to other phenomena within the IS field. This supports the need for better understanding of organisational actions and behaviour since institutional theory allows for more practical guidelines for decision makers and implementers of change (North, 1990; Jensen *et al*, 2008; Currie, 2009; Tolbert & Zucker, 1996; Peter, 2000).

Institutional theory examines how institutionalised structures are constructed in practice and that institutions exist because of the uncertainties involved in human interaction, which are developed to put interaction into structure. Although Institutional theory has been praised to be a central analytical perspective for investigating the role of larger social and historical structures of Information System (IS) adaptation, academicians have argued that it does not explicitly account for how organisational actors make sense of and enact IS in their local context. It is also incapable of coping with the dynamism and complexity of the contemporary political world; and difficult in measuring institutions (Peter, 2000; Björck, 2004; Jensen *et al*, 2008).

However, apart from the ability to be able to combine institutional theory with other theories and research models, it also allows for the creation of theories of endogenous institutional change by looking at how change at the margins works itself in toward the core institutions. It could also be used for analyses of organizations, and to develop a theoretical perspective further in order to enhance its use in empirical research (Tolbert & Zucker, 1996; Peter, 2000). It is believed this research study would benefit from adoption of institutional theory, because of its flexibility and the ability to the use of the theory in exploring pertinent research challenges facing the IS community. Researcher should therefore be able to use institutional theory in in an attempt to critically review the role of actors involved in implementing e-Government systems in institutions – public sector organisation, in order to find answers to the research questions in 1.5.2 in Chapter 1.

The Driver-Barrier model describes the level of factors that inhibit the adoption of e-Government or impact on the organisation, which negatively influence the implementation process in each adoption stage of the proposed model. It explains that each stage requires different ICT tools, organisation capabilities, and strategic action plan. The model has been successfully adopted by researchers for different countries in the past – in Bahrain (Ebrahim, 2005); in Jordan (Khasawneh-Jalghoum, 2011). Driver-Barriers model is relevant for determining the benefits and challenges of e-government, which vary from one stage to other because each stage. The model should therefore be more relevant for this research study since it also gives the opportunity to identify potential e-Government implementation drivers and barrier that e-Government leaders could use as frame of reference.

Comprehensive barrier framework was adopted from Lam's (2005) Model is relevant for study of information systems especially barriers of e-Government which could be used as a checklist for project planning or evaluation. The study revealed a broad set of barriers to e-Government integration and classified them into strategy, technology, policy and organisation domains. It emphasised on the nature of e-Government services that necessitates closer working relationships between government stakeholders. This framework will therefore be relevant in formulating good practice guidelines for e-Government implementation.

Hamed (2009) developed the Three-Quarter Moon model after extending the work conducted with other scholars (Hamed *et al*, 2008) for e-Commerce adoption in Libya in a study of economic development in development countries. The model identified four actors as the main stakeholders in e-Commerce industry as well e-Commerce adoption key actors as government, technologically-advanced countries, companies and users. The researcher believes this model will fit properly into this research study and assist in addressing the research question (RQ3) – identifying the key actors and their main activities in e-Government implementing.

Table 2-8 below presents a comparative analysis of the various theories and models in this literature and their relevance to e-Government implementation. Based on the gaps identified from relevant literature and the theories and models already discussed in this chapter, the researcher would be able to determine the extent to which these theories and models will be adopted extended or modified useful in developing a proposed conceptual framework. The intention will then be to rank and map the implementation factors and characteristics (benefits, barriers and risks) in order of priority, following the testing and validation through research survey and then reconceptualise the proposed model that will be presented in the next chapter.

	Theory/Model	Characteristics	Relevance to E-Government Implementation
1	Stage of Growth Model	Useful for implementation of IT innovation in Organisation and IT adoption in Organisation. Model will be ideal for addressing the organisational and cultural change that arises as a result of resistance from stakeholders in a public sector organisation during various stages of implementation.	Although stage of growth model is relevant for evolutionary process application, this however study focuses on organisational perspective, from Government to Employee (G2E), not citizen adoption. This research is not to identify or analyse the stage of growth or e-readiness of the public sector organisation.
2	Government Key Business Process Model (G-KBP)	G-KBP model can be used to build a framework to e-Government initiatives in a way that leads to a complete integration of the delivered services. It also allows individual customer to identify the services applicable to him promptly.	Process is more relevant to study from citizen's perspective. Further, there are immense theoretical and practical challenges that need to be overcome in order to be able to successfully apply this model. For instance, the model emphasises on the complete services delivered and the real customers but fails to consider the bureaucracy in public sector organisations
3	Adaptation Structuration Theory (AST)	Theory was formulated by adopting members' use of rules and resources in interaction to produce and/or reproduce the social systems. It describes the interplay between advanced information technology, social structures and human interaction.	Critiques have doubted the ability of the theory or structures can be embodied in I T or for structures continuing outside on-going practices. Further, AST most suitable for quantitative research approach, which is outside the scope this research study. There is doubt as to its flexibility,

	Theory/Model	Characteristics	Relevance to E-Government Implementation
			particularly applying it with other theories or models.
4	Attraction-Selection-Attrition Framework (ASA)	ASA is a person-oriented framework for understanding organisational behaviour that integrates both individual and organisational behaviour. The theory allows for ready usage of survey and archival data, rather than limiting it to ethnographic approaches	ASA presents a new paradigm for organisational research but not necessarily a new technique or technology. It supports hypothesis testing, so it would not fit properly into this study, particularly in developing conceptual framework and mapping the key roles of actors of e-Government. The framework fits perfectly into research studies on human resource management
5	Diffusion of Innovation (DOI)	Model consists of four stages: invention, diffusion (or communication) through the social system, time and consequences	DOI focuses on how services are diffused to the citizens, which is outside the scope of this study. DOI has been used as the theoretical basis for a number of IS research projects; and some of its elements would need to be extended and modified before it can be applied to technology transition and IS generally.
6	Theory of Reasoned Action and Planned Behaviour (TRAPB)	TRAPB is an effective model applicable to change management and organisational behaviour studies in IS.	TRAPB provides useful information for understanding behaviours and for implementing effective interventions, not particularly for organisational change. Theory has limitations in its application for understanding the e-Government implementation factors and the role of key actors in

	Theory/Model	Characteristics	Relevance to E-Government Implementation
			the implementation process.
7	Triangle Relationship Model (TRM)	Model argues that e-Business and e-commerce are subsets of e-Government.; and that e-Government, e-Commerce are innovations in modern technology, and both businesses and government work collaboratively to serve the customers, i.e. Civil society	Whilst TRM is useful for comparison of e-Government and e-Commerce practice, there is little evidence to suggest whether this model has been validated or extensively applied by academicians and practitioners.
8	Kurt Lewin's 3-Stage Theory (Change Management) *	The theory deeply enriches the understanding of how change occurs and the role change agents could and must play in planning in order to be successful. Lewin believes successful change project would evolve around these three stages: Unfreezing, transitional and refreezing.	The theory gives more consideration on how to deal with change and the impact of change on the organisation. It also focuses on personal features influencing implementation of change Scholars believe it can be used in parallel with other theories such as complexity theories
9	Institutional Theory *	Institutional theory is a change theory that has historically explained why organisational structures and values endure, since social reality is a human construction created through interaction. It examines how institutionalised structures are constructed in practice and that institutions exist because of the uncertainties involved in human	Review of literature suggests researchers have adopted institution to explore how organisations are institutionalised by political, economic, legal, or cultural context (Currie, 2009; Scott, 2005; Currie & Guah, 2007; Al-Shafi, 2009). Due to its flexibility, the theory could be combined with other theories and models to determine the implementation factors (external and internal) and impacts

	Theory/Model	Characteristics	Relevance to E-Government Implementation
		interaction, which are developed to put interaction into structure. Critiques have however argued about the difficulty of the theory in measuring institutions.	of organisational change in respect of actions and behaviours. The theory will also allow for more practical guidelines for usage by decision makers and implementer of changes.
10	Drivers-Barriers Model *	Model describes the level of factors that inhibit the adoption of e-Government or impact on the organisation, which negatively influence the implementation process in each adoption stage of the proposed model. It explains that each stage requires different ICT tools, organisation capabilities, and strategic action plan.	Driver-Barriers model is relevant for determining the benefits and challenges of e-Government, which vary from one stage to other because each stage. Model has been successfully adopted by researchers for different countries – in Bahrain (Ebrahim, 2005); in Jordan (Khasawneh-Jalghoum, 2011). Applying the Drivers-Barriers model will assist in the recognition of potential drivers and barriers that affect effective implementation of e-Government implementation in the case study and this would be opportunity for e-Government leaders to use as frame of reference. The model will therefore be more relevant for this research study. However the model does not identify implementation risks.
11	Comprehensive Barrier Framework *	Adopted from Lam (2005) whose study revealed a broad set of barriers to E-Government integration and classified them into strategy, technology, policy	Model is relevant for study of information systems especially barriers of e-Government which could be used as a checklist for project planning or evaluation. It

	Theory/Model	Characteristics	Relevance to E-Government Implementation
		and organisation domains.	emphasised on the nature of e-Government services that necessitates closer working relationships between government Stakeholders. This framework will therefore be relevant in formulating good practice guidelines for e-Government implementation. There is presently no e-Government model that identifies implementation benefits, barriers and risks simultaneously.
12	Three-Quarter Moon Model *	Developed by Hamed (2009) for e-Commerce adoption in Libya in a study of economic development in development countries. Identified four actors as the main stakeholders in e-Commerce industry: Government, technologically-advanced countries, companies and users. It also described the main activities of each actor at every stage of the development lifecycle.	The four key actors explained in the model would be useful in attempting to identify similar actors in for e-Government implementation Model was developed within the context of developing countries, although a generalised version was developed for validation in other countries. This model will be useful for addressing the research question (RQ3) – identifying the key actors and their main activities in implementing e-Government.

Table 2-8) Comparative Analysis of E-Gov Theories and Model

2.9 Towards proposing a framework for e-Government implementation

There is limited research and few conceptual and theoretical framework on information systems (IS) in respect of e-Government implementation in developing countries, which focus on the drivers and barriers as well as the implementation factors. Most of the studies and model developed have been based on analysing and not differentiating the factors as either internal or external factors; review of existing literature indicates that most of the previous and existing research studies have been based on discussing the drivers and barriers of e-government implementation. The researcher therefore intends to use a combination of models and theories (highlighted in bold (*) in Table 2.8 - from Nos 8 to 12) in developing the conceptual model for e-Government implementation since there is currently no framework that maps these factors and concept together, and it could be argued that it will be useful for organisations to have holistic view of the implementation process. There is also the need for practitioners to have step by step guide in form of a frame of reference on how to identify and map the implementation factors and characteristics, which is not available at the moment.

There is no framework or concept that relates to the benefits, barriers and risks simultaneously, as risks are sometimes classified under challenges or linked with costs.

In addition to the drivers and barriers, e-Government implementation should require evaluation of the risk factors such as technological, political, people, organisational, financial, security and privacy. Although review of literature has revealed there is no single list of challenges or benefits to e-Government initiatives, there is need to include the implementation risks for clarity and simplicity. Researchers have even suggested that e-Government initiative would result in numerous barriers and risks from both citizen and government perspectives, and these would vary from country to country. Thus the researcher aim to propose a framework in the next chapter to attempt to address this research gap by identifying and mapping the characteristics – benefit, barriers and risks (Layne & Lee, 2001; Irani *et al*, 2003, Ndow, 2004; Bhatnagar, 2004; West 2004; Eddowes, 004; Lam, 2005; Weerakkody & Choudrie, 2005; Al-Shafi, 2009; Kessler, 2011; Al-Rashidi, 2012; Hector, 2012; Rana *et al*, 2012)

Although there have been research studies on e-Government stakeholders most of the studies have been based on general categorisation (Minzberg, 1996; Scholl, 2004; Scott, 2005, Heeks, 2006; Orange *et al*, 2006). In fact, there have been some with special purpose categorisations (Heeks, 2003; Flak & Nordheim, 2006; Irani *et al* 2007; Al-Rashidi, 2012), there is no research specifically identifying the key actors (and not just the stakeholders). As a result of this gap in literature, the researcher intends to develop a framework that would incorporate the e-Commerce model presented by Hamed *et al* (2008) into e-Government systems comprising government, technologically-advanced countries, companies and users. This would serve as a frame of reference and practical guide for practitioners and researchers in evaluating e-Government implementation factors. It will also enable us determine whether or not, both concepts - e-Government and e-Commerce have similar and transferable applications and methodologies.

This research study consists of developing a new theoretical framework based on the critical review and analysis of the relevant information collected from the studies, using institutional framework as the perspective. The institutional theory, which consists of regulative, normative, and cognitive or mimetic, have been successfully applied to information systems in general, and e-Government systems, in particular. In addition, most research studies tend to adopt an organisational unit rather than a wider multi-level and multi-method approach and this is where institutional theory will be beneficial to this research study that would allow combination of theories and models in developing a conceptual framework (Avgerou, 2000; Jensen *et al*, 2008; Currie, 2009; Al-Shafi, 2009; Al-Rashidi, 2012).

The researcher has therefore categorised these issues into themes in the next chapter having reviewed most of the relevant literature and framework, with the aim of proposing an appropriate framework that could incorporate the benefits, barriers, risks and institutional factors influencing e-Government implementation within the context of developing countries. The proposed framework will be divided into the following: implementation factors (external and internal), implementation characteristics (benefits, barriers and risks); key actors (government, technologically-advanced countries, companies and users), main

activities and the development stages (pre-implementation, implementation and post-implementation). Previous studies have not focused extensively on these concepts, as most of the factors vary from locality to locality and if not considered carefully, could have an impact on e-Government initiatives particularly in the developing countries which is the focus of this study (Heeks 2003; West, 2004; Ndou 2004; Ebrahim, 2005; Ebrahim & Irani 2005; Ajayi, 2007; Hamed, 2009; Al-Shafi, 2009; Adeyemo, 2011; Al-Rashid, 2012).

2.10 Conclusions

In this chapter, the researcher explains e-Government concepts and characteristics and reviews existing literature of e-Government. However it has been observed there is limited literature in the implementation of e-Government services as most previous research work have related to e-Commerce adoption and mostly in developed countries. Researcher has been able to identify gaps such as absence of theoretical models which have been tested and validated for e-Government implementation factors, and identifying the key actors involved. This brings about confusion and little support for theories and models that are already on ground.

The researcher discusses the holistic factors that motivate the public sector to adopt e-Government services. Reviewing and analysing existing theories and model, the researcher was able to discuss the holistic factors that influence e-Government implementation generally. The driver and barrier model developed by Hamed *et al* (2008a) was reviewed and gap identified. For instance, the model was applied to e-Commerce environment and was specific to the Libyan economy. Although Hamed (2009) also developed the Three Quarter Moon model as an improvement on the driver-barrier model, which is a strategy with infrastructure being a necessity for e-Commerce adoption. This study was also specific to the Libyan economy and he proposed a generalised version, which is yet to be validated by researchers and IT managers.

The researcher proposes a conceptual framework in the next chapter – chapter 3 based on the limitations and gaps identified in existing theories and models. Lam (2005) identifies

four major barriers to e-Service development projects – (1) Strategic, (2) Technology, (3) Organisational, and (4) Policy and these factors would form the perceived barriers adopted in the proposed framework. More so, the Three Quarter Moon model was discussed but it was adopted for e-Commerce in Libya with proposition for it to be generalised by extending to other developing countries. The researcher argues that there is no similar model for e-Government adoption or implementation.

As a result of the need to have an understanding of e-Government in respect of organisational change, which is often influenced by factors like organisational, political, economic, legal or critical mass; the researcher explains the institutional theory. The theory could be used as the principal frame of reference for categorising the environmental forces – both external and internal factors - impacting on e-Government implementation (Scott, 2005; Currie and Guah, 2007; Al-Shafi, 2009; Curry, 2009).

The researcher therefore discusses and presents the proposed framework in Chapter 3, which would focus on improving on existing models of evaluating government systems using various components with measures to determine the levels of e-Government from the environment. One of the gaps the researcher identifies is that the drivers-barriers and other model discussed have failed to highlight or consider insinuating factors, both internal and external that could impact on e-Government implementation.

Chapter 3 Conceptual Framework

3.1 Introduction

The aim of this chapter is to develop a conceptual framework for e-Government implementation which can support the execution process within the context of developing countries. The framework consists of four parts: Implementation factors (external and internal); implementation characteristics (benefits, barriers and risks); key actors (government, technologically-advanced countries, companies and users) and main activities; and the development (pre-implementation, implementation and post-implementation) stages. This framework is within the scope of institutional theory.

This chapter examines the external and internal factors as well as benefits, barriers and risks of e-Government excerpted from the review of literature, and development of a theoretical framework to conceptualise e-Government implementation. The researcher also presented taxonomies of e-Government factors, characteristics in terms of benefits, barriers and risks, as well as the roles of key actors involved throughout the development life cycle. By mapping these elements, the researcher was able to justify the adoption of institutional theory in conjunction with the other models.

In this chapter, the researcher was able to justify the development of a conceptual framework, and explaining the need for testing and validating this model, since there has been limited research in e-Government implementation, especially in identifying key actors involved and their crucial activities at every stage of the development. Based on the identification of the gaps in the literature as well as theories and models reviewed in chapter 2, this chapter proposes a conceptual framework for identifying factors that influence successful implementation of e-Government in developing countries, within the institutional context.

Thus the researcher presents the change management theories in relation to e-Government and justification for institutional theory in determining organisational change and behaviour. Lewin's 3-Stage theory was believed to have overly-simplistic view of

organisations, and outmoded, which explains why other complex theories and change models have been used either in parallel or as substitute to it in understanding organisational change. This study capitalise on the flexibility of the institutional theory to be used in conjunction with other models – Three Quarter Moon and Drivers Barrier / Comprehensive Barrier framework – which would be appropriate for identifying factors influencing e-Government implementation in developing countries.

It is expected that the proposed framework in Figure 3.8 would be embraced by decision makers or implementer of changes in government organisations, especially when implementing e-Government. The framework should also allow practitioners such as IT managers and researchers to better analyse and explore the implementation aspect of e-government.

This chapter was able to explain the components of the framework that will be tested and validated in the fieldwork, and which of the factors or components is to be validated during the course of study. The researcher concludes by explaining the strategies and motivations for validating the proposed framework, based on gap identification areas.

3.2 Justification of Theories and Models for e- Government Implementation Framework

Organisational change often occurs when organisations are going through transformation. It relates to incremental improvement on existitng organisational capabilities. Organisation change occurs when business strategies or major sections of an organisation are modified, and sometimes known as restructuring, turnaround or re-organisation. With the evolving technology, organisational battle with the need to meet up with the constant change in strategies, processes and people. This has brought about major awareness of ICT in public sector organisations, where top managers and key decision makers concentrate on the need to improve their business processes, performance and strategies through e-Government implementation. These changes are beeneficial to all stakeholders, including the end users. The researcher therefore feels that the conceptual framework would act as agood practice

guide and frame of reference for decision makers and implementer of changes particularly in public sector organisations.

There appears to be limited literature and few conceptual and theoretical framework on information systems (IS) analysing e-Government implementation process in developing countries. In fact some of the models developed have been on Geographical information Systems (Williamson, 2001; Ndou, 2004; Bhatnager, 2004). However, not many research studies have focused on the drivers, barriers and risks of e-Government including the implementation factors and most of the model developed have been based on generalising the implementation factors and not categorilising them into internal or external factors. In fact, review of existing literature indicates that some authors have classified risk factors as part of challenges or as part of the cost factors. In addition to the drivers and barriers, e-Government implementation should require evaluation of the risk factors such as technological, political, people, organisational, financial, security and privacy (Ndou, 2004; West, 2005; Weerakkody & Choudrie, 2005, Al-Shafi, 2009; Rana *et al*, 2012).

Institutional theory is known as variance theory because it is able to explain difference that occur among institutional types, more than explaining the development of one or motre indicidual institution. Institutionalisation involves instilling structures with value, and this will be beneficial for public servants because it has the following attributes: autonomy, adaptability, complexity, and coherence; and these attributes would enable in the identification of factors that could assist in measuring institutions and the level of institutionalisation. The theory is connected with different individual behaviour as well as different effect in decision-making.

Further scholars have suggested that the robustness of institutional analysis makes that it is relevant for determining institutional heterogeneity and homogeneity forces as well as the multi-layer of its processes within fields and across institutions. As a result, the theory will fit perfectly in identifying external and internal factors including the various concepts influencing e-Government implementation within the context of developing countries (Peter, 2000; Powell, 2007; Rana *et al*, 2012).

Since review of literature suggests that many developing countries do not have the infrastructure necessary to deploy e-Government systems, it is necessary to categorise the factors into external and internal forces impacting e-Government implementation. More so, the concepts of e-Government have been grouped into three main headings: benefits, barriers and risks. It is essential that public servants understand the risks (potential variance between expectation and realisation) implementation, which are not necessarily the same as the challenges (Irani *et al*, 2003, Bhatnagar, 2004; Lam, 2005; Al-Shafi, 2009; Kessler, 2011; Al-Rashidi, 2012; Hector, 2012).

Review of literature and pilot studies conducted have highlighted some limitations, which calls for the development of a framework to support decision makers and implementer of changes when implementing e-Government systems. Issues such as resistance to change by government officials and non-familiarity of government officials with potentials of IT (awareness programme and regular training) have impact on organisational change. Other factors include lack of awareness of the intangible costs which ascribes failure to the whole of e-Government paradigm in developing countries and instability of economy and government systems in most developing countries, which are often ignored. It is therefore essential to propose an implementation framework that would highlight the key drivers and barriers as well as rank these factors in order of importance through mapping (Van Der Molen and Wubbe, 2007; Wallace, 2009).

Although there have been research studies on e-Government stakeholders most of the studies have been based on general categorisation (Minzberg, 1996; Scholl, 2004; Scott, 2005, Heeks, 2006; Orange *et al*, 2006). In fact, there have been some with special purpose categorisations (Heeks, 2003; Flak & Nordheim, 2006; Irani *et al*, 2007; Al-Rashidi, 2012), there is no research specifically identifying the key actors (and not just the stakeholders). As a result of this gap in literature, the researcher intends to develop a framework that would incorporate the e-Commerce model presented by Hamed *et al* (2008a) into e-Government systems comprising government, technologically-advanced countries, companies and users. This would us to enable determine whether or not the both concepts - e-Government and e-Commerce have similar and transferable applications and methodologies.

This research study consists of developing a new theoretical framework based on the critical review and analysis of the relevant information collected from the studies, using institutional framework as the perspective. The institutional theory, which consists of regulative, normative, and cognitive or mimetic, have been successfully applied to information systems in general, and e-Government systems, in particular. In addition, most research studies tend to adopt an organisational unit rather than a wider multi-level and multi-method approach and this is where institutional theory will be beneficial to this research study that would allow combination of theories and models in developing a conceptual framework (Avgerou, 2000; Jensen et al, 2008; Currie, 2009; Al-Shafi, 2009; Al-Rashidi, 2012).

The researcher has therefore categorised these issues into themes in the next chapter having reviewed most of the relevant literature and framework, with the aim of proposing an appropriate framework that could incorporate the benefits, barriers, risks and institutional factors influencing e-Government implementation within the context of developing countries. The proposed framework will be divided into the following: implementation factors (external and internal), implementation characteristics (benefits, barriers and risks); key actors (government, technologically-advanced countries, companies and users), main activities and the development stages (pre-implementation, implementation and post-implementation). Previous studies have not focused extensively on these concepts, as most of the factors vary from locality to locality and if not considered carefully, could have an impact on e-Government initiatives particularly in the developing countries which is the focus of this study (Heeks 2003; West, 2004; Ndou 2004; Ebrahim, 2005; Ebrahim & Irani 2005; Ajayi, 2007; Hamed, 2009; Al-Shafi, 2009; Adeyemo, 2011; Al-Rashidi, 2012).

Review of literature has also shown that any identified factors influencing e-Government implementation may change over time. As such, there is need to carry further research work in this area of study to test and validate the proposed framework and to attempt to identify new factors, if any, as well as opportunity to map and rank existing factors in order of importance, within the case study (Williamson, 2002; Ebrahim, 2005; Hamed, 2009; Al-Shafi, 2009; Al-Rashidi, 2012).

This section intends to look at e-Government in holistic view; it is believed that adoption of a combination of models would help develop a well-structured framework that could be used to address the research questions. These include the drivers-barriers model and Three Quarter Moon model reviewed in the literature (Ebrahim, 2005; Hamed *et al*, 2008a; 2009). There is need to determine the internal and external forces impacting on e-Government implementation, with the internal factors being specific to the organisation whilst the external being the environmental factors. The Three Quarter Moon model for e-Commerce adoption was specific to Libyan economy, where Hamed (2009) developed an extended version that could be applied to other countries. The researcher therefore intends to modify this model of e-Commerce adoption to e-Government implementation in public sector organisations since both studies are within the context of developing countries. This study is however limited to implementation within government –to- employee (G2E) perspectives, and outside the scope of citizen adoption; to be tested and validated by researchers and IT managers.

More so, the Barrier-Drivers model recognises that whereas an issue may be identified as a driver in a particular country, the same issue could be a barrier in another country, and this would make the practising of such models in the fieldwork difficult. This therefore calls for development of a framework that would classify the factors into external and internal factors. Using a case study approach – Nigeria where limited research studies have been carried out on the application e-Government systems particularly from employees' perspective. Most of the studies have focused on e-Government adoption or implementation from citizen's perspectives. The researcher hence aims to adopt a well-structured and detailed research rather than conducting research studies on one-off view approach, as observed in previous research studies on similar field of study.

In this study, the researcher intends to develop a conceptual framework that can be applied in the specific context - The Federal Republic of Nigeria. This would enable proper testing and validation of a framework within the case study organisations in the Federal Republic of Nigeria where the government structure and decision-making level of public sector organisations are different from other countries. This would be explained in the following sections. It is intended that the proposed conceptual framework should also assist

researchers, government officials, IT managers and decision makers in the public sector organisations to have a better understanding of the e-government implementation process in their establishments and to have a balanced view of the key factors (both internal and external) as well as the implementation benefits, barriers and risks influencing an e-Government environment, in the context of government to employee (G2E).

There is the need to develop e-government systems to support and improve the effectiveness of government activities and to provide e-Services for the citizens and external users. The researcher believes that application of electronic government systems should be a major step towards having a framework that would be generally acceptable and transparent. However this would need to be tested and validated by during the research survey and by future researchers and IT managers.

Apart from corruption, bureaucracy and political barriers as a result of instability of the government from countries to countries would determine the level of support and e-Government applications required. This is an area that needs more emphasis as has been observed where most developing countries still transact businesses on face-to-face basis, have no online payment systems such as keeping paper filing records of land titles, deeds and application forms, amongst other issues.. As a result, the application of the proposed model would help identify key factors influencing implementation of e-Government system, as well as the role of the key e-Government actors and their role at every stage of the development life cycle.

There is limited literature that identifies the role of key stakeholders in e-Government implementation, some of whom have generalised the stakeholders. The researcher therefore adopts the Three-Quarter Moon model of e-Commerce to establish if similar actors would have significant role in implementation of e-Government. Three-Quarter Moon model identifies the government, technologically-advanced countries, companies and users are the key e-Commerce actors. Whether the same concepts applies to e-Government is to be determined through test and validation using research survey and analysing the findings.

3.3 Need for E-Government Implementation Factors in Public Sector Organisations

3.3.1 Factors Influencing E-Government Implementation

One of the issues with implementing e-Government is the need for government to consider the complex problems that impact on it. As reviewed in literature in Chapter 2, these issues could be organisational, political, economics legal or policy related (DiMaggio & Powell, 1983; Pardo, 2002; Reffat, 2003, Lee-Kelly & James, 2005; Agunloye, 2007; Irani *et al.*, 2009)

The researcher intends to propose a conceptual framework that could be used by IT practitioners and decision makers to standardise and evaluate the development stage in terms of organisational change as a result of e-Government implementation. The proposed framework should also assist e-Government (and IT) practitioners in the public sector organisations to have better understanding of the implementation process and the importance of organisational readiness, as well as the impact of organisational change on the environment. By incorporating these models and theories reviewed in the previous chapter (such as Drivers-Barrier model, Comprehensive Barrier, Three-Quarter Moon model, and Institution theory), the researcher would be able to develop a holistic framework for implementation of e-Government and this would contribute towards information system studies (Lam, 2005; Ebrahim, 2005, Hamed *et al.*, 2008a, Hamed, 2009)

In determining the factors, the researcher has taken into consideration the environmental factors that impact on organisational change and organisational behaviour. Institutional theory is the preferred theory to be applied since it emphasises considering a set of social, political, economic and legal perspectives for any organisation to exist. From the three pillars of the theory: regulative (formal and informal pressure due to government regulation), normative (competency of the actors in the organisation, both managers and administrators) and cognitive or mimetic (organisations ability to imitate other organisations), the researcher intends to adopt institutional theory to determine the external and internal factors impacting on e-Government implementation (Davis & North, 1971; Zucker, 1987;

DiMaggio & Powell, 1991; Björck, 2004; Scott 2005; Currie & Guah, 2007; Kim *et al.*, 2009).

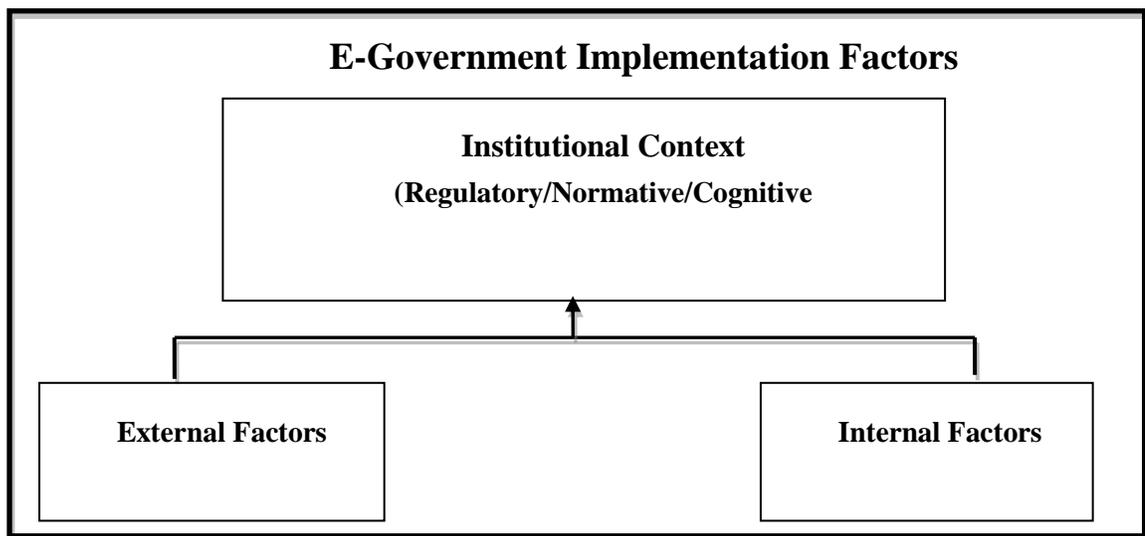


Figure 3-1) E-Gov Implementation Factors: Institutional Context

As seen from Figure 3-1 above, the focus of this study is on the factors – both external and internal influencing e-Government implementation. These are the environmental forces that bring about changes within the institutional context. From review of literature, the researcher sets out the external factors as organisational, political, economic, legal, and critical mass. The internal factors are however discussed under the following themes: Leadership or managerial capability, financial matters, goals and objectives, attitude and network collaboration (Bonham *et al.*, 2001; Moon, 2002; Carbo & Williams, 2004; Heeks, 2001; Ma *et al.*, 2005; Beynon-Davies, 2005; Ifinedo, 2006; Anderson, 2006; Buccoliero *et al.*, 2008; Martin & Reddington, 2009; Almarabeh & AbuAli, 2010; Bernhard, 2014).

3.3.1.1 External Factors:

The themes chosen for external factors are organisational, political, economic, legal and critical mass:

Organisational – There are different views by different researchers on how organisational issues are classified. Whilst some emphasis on the individual within the organisation, others stress on the wider issues. For the purpose of this study, organisational factors relate to understanding the pressures the public service organisations faced from regulation and competition environment. This could be psychological or organisational issues in terms of planning of organisational impact, job design, design of work, assigning tasks and activities between human and computers and usability of new systems. Review of literature that supports the notion that e-Government calls and lead to organisational change of institutional arrangements in the aspects of re-engineering and/or re-tooling. Organisational factors could therefore impact on the following: administrative structures and legacies; public administration reforms; civil service reform; central coordination and support unit, policy coordination and inter governmental relations (DiMaggio & Powell; 1983; Agunloye, 2007; Al-Shehry, 2008).

Political – Political factors could be classified as either external or internal, however for the purpose of this research, the focus is on the external issues which are mostly outside the scope and power of the organisation. These include the political will of the government and political participation in the policy-making sense – which are mostly common in the developing countries where political instability is often observed. Political conditions demand having awareness of political value of e-Government, being committed to e-Government and good governance, and having good leadership skills (UN/DESA, 2002; Macintosh, 2004; Chowdhry *et al*, 2006; Saebo *et al.*, 2008; Schwester, 2009).

Economic – The economic factors that have external influence on implementing e-Government systems could be the external source of funding or the access to capital markets. There is the need for motivation to reduce cost and time for service delivery. The economic factors would be impact on the implementation of e-Government systems include the following: resource allocation process, national income structure, access to alternative financing mechanisms, partnerships with private sector and other role players, mechanisms for venture investment, and available financial resources (UN/DESA, 2002; Basu, 2004; Khanh, 2014).

Legal – Apart from creating economic conditions to enable easy accessibility to ICT infrastructure and services, there is need for proper legislative or regulative framework for securing exchange of information within and between government agencies, the citizens and businesses. Thus government policies and regulations are necessary to impact on e-Government implementation, including legal risks. These include: security standards, privacy legislation, legal validity of transactions on line, degree of liberalisation of telecommunication market, including the internet service providers market, and positive fiscal environment for acquiring IT equipment. Government often tend to set up regulatory bodies to formulate policies and monitor and evaluate ICT implementation including e-Government and other information systems (Watts, 2001; UN/DESA, 2002; Agunloye, 2007).

Critical Mass – From the review of literature, a positive step taken by government does generate critical mass for e-Government as well as reducing resistance to organisational change. Critical mass helps organisations to define, build, and expand their Internet strategy and presence, thereby ensuring efficiency. This would enable organisations to have knowledge about other agencies participating in the same initiative (Fan and Zhang, 2006; COMESA, 2008; Fernández-i-Marín, 2011; Weerakkody & Reddick, 2013).

3.3.1.2 Internal Factors:

The internal factors influencing the implementation of e-Government have been classified under the following themes: Leadership, financial matters, goals and/or objectives, attitude and network infrastructure.

Leadership – Researcher believes leadership should be a crucial implementation factor to be considered internally for organisational change and effectiveness. This includes top management support and strong governance or management are essential to avoid most challenges. A lots of e-Government projects tend to fail because of lack of the leaders understanding on e-Government and their inability to show consistency from inception to completion of the projects. Leadership and awareness are crucial factors scholars argue

should be considered especially prior to implementation of e-Government (Hunter & Jupp, 2001; Jaeger & Thompson, 2003; Song, 2006).

Financial Matters – There is the need for financial support and proper planning and budgeting, taken into account inflation amongst other factors to ensure successful completion of e-Government projects. E-Government implementation is associated with organisational change in public organisations and this impact not only on the availability of public e-Service for citizens, but for employees who will be the link between the employer and the end users, the citizens. Thus internal financial problems such as lack of adequate funding arrangements have consequences on implementation and often lead to unfinished projects and higher maintenance cost (OECD, 2001; Heeks, 2003; Basu, 2004; Bernhard, 2014).

Goals/Objectives – E-Government vision is a desirable blueprint that should be clearly stated and simplified so that the objectives and strategies for implementation and the future are feasible. The vision include enhancement of national competitiveness, facilitation of market economy and reducing governmental failure so as to improve the quality of life of the employees and managers in the the organisation as well as the end users. Visions and strategies would also enable decision makers to have project plan and priority system for their services (Chowdhry *et al*, 2006; Song, 2006; Altameem *et al*, 2006; Sang *et al*, 2009).

Attitude – Attitude is identified as basis of intention, and it could either be towards the object and towards the employee's evaluation of a specified behavior. When staff are exposed to technological innovations, they tend to have favourable or unfavourable attitudes. But with e-Government still growing in most developing countries, there is the possibility that employee would resist change as common with most public servant; thus behavioural intention and cultural issues are crucial factors to be considered (Lam, 2005; Ebbers & Van Dijk, 2007; Schwepher, 2009; Suki & Ramayah, 2010).

Network Collaboration – There is the quest for organisation to have activities and tactics most effective in garnering partner participation, collaboration, and sponsorship, as well as fostering initiatives and success within the organisation.

Network collaboration would impact on the following: (Tele) communications infrastructure, penetration rates of telecommunications, urban versus rural: demographic/geographic bias, software and hardware (legacy systems) and IT standards.

Thus, collaborative working and participation of stakeholders are essential for successful e-Project implementation. Both the government agencies and stakeholders would have positive contributions to make. In addition, lack of trust between employees and government agencies could impact on e-Government implementation (UN/DESA, 2002; Scholl, 2003; Gilbert *et al*, 2004; Altameem *et al*, 2006; Sang & Lee, 2009).

The responsibility of the e-Government implementers and decision makers is to understand how these factors influence implementation of e-Government services. Figure 3.1 illustrates the relationship between e-Government implementation process as the institutional context in respect of the environmental forces – external and internal factors.

Figure 3-2 illustrates the factors – external and internal – influencing the e-Government implementation process, from institutional perspective; whereas Table 3-1 presents the taxonomy of the e-Government implementation factors.

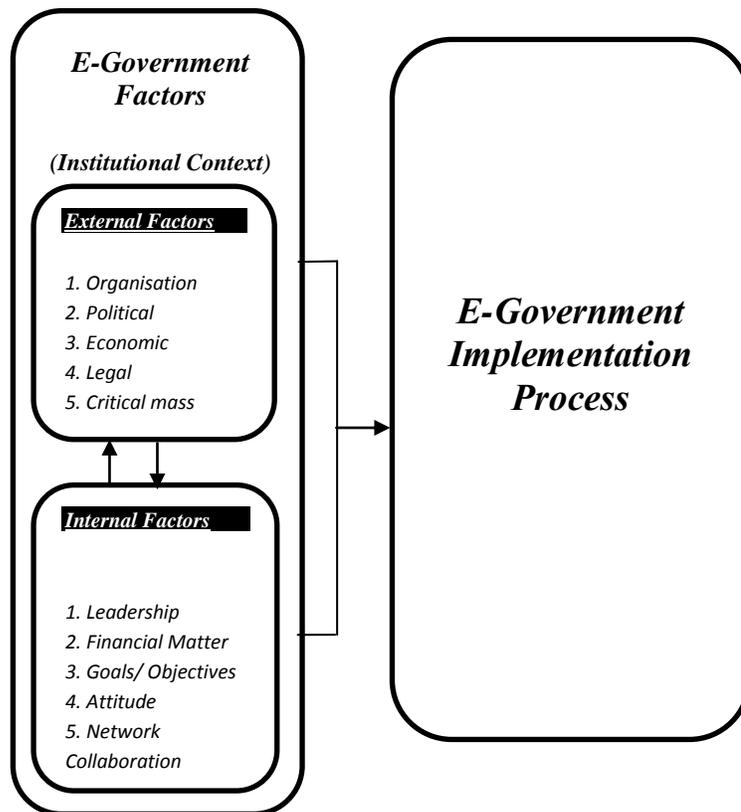


Figure 3-2) E-Gov Implementation (External and Internal) Factors

Themes	Factors	Description	References
External	Organisational	This relates to understanding the pressures the public service organisations faced from regulation and competition environment.	DiMaggio & Powell, 1983; Agunloye, 2007.
	Political	Political will of the government and political participation 'in the policy-making sense.	Macintosh, 2004; Saebo <i>et al.</i> , 2008.
	Economic	Motivation to reduce cost and time for service deliver; sourcing external funding	UN, 2001; Basu, 2004; Khanh, 2014.
	Legal	Government policies and regulations that would impact on e-Government implementation, including legal risks	Watts, 2001; UN/DESA, 2002; Agunloye, 2007.
	Critical Mass	Ability of the organisation to have knowledge about other agencies participating in the same initiative	Fan & Zhang, 2006; Fernández-i-Marín, 2011; Weerakkody & Reddick, 2013.
Internal	Leadership	Top management support and strong leadership are essential to avoid most challenges.	Hunter & Jupp, 2001; Jaeger & Thompson, 2003; Song, 2006.
	Financial Matters	Financial support and proper planning and budgeting, taken into account inflation amongst other factors.	OECD, 2001; Heeks, 2003; Basu, 2004; Bernhard, 2014.
	Goals/Objective	Visions and strategies that would enable decision makers to have project plan and priority system for their services.	Chowdhry <i>et al.</i> , 2006; Altameem <i>et al.</i> , 2006; Song, 2006; Sang <i>et al.</i> , 2009.
	Attitude	Behavioural intention and cultural issues. Ability to manage change in respect of resistance to change.	Lam, 2005; Ebberts & Van Dijk, 2007; Schwepher, 2009; Suki & Ramayah, 2010.
	Network Collaboration	Stakeholders and government agencies positive contribution. Lack of trust between employees and government agencies could impact on e-Government implementation.	UN/DESA, 2002; Scholl, 2003; Gilbert <i>et al.</i> , 2004; Altameem <i>et al.</i> , 2006; Sang & Lee, 2009.

Table 3-1) Taxonomy of Factors Influencing E-Gov Implementation

3.3.2 Development Life Cycle

Review of literature shows different project development life cycle by different authors. For instance, Heeks (2006) describes five stages; project assessment, analysis of current reality, design of the new system, system construction, and Implementation and beyond; whereas the Auditing e-Government (2010) elaborated on the four-stage development lifecycle - Initiation, Planning and implementing, Operations and Monitoring, which can be argued is no longer relevant in this modern day.

As a result, the research has adopted the more contemporary development life cycle comprising three stages, illustrated in Figure 3-3 below: pre-implementation (development) phase; implementation (design) phase and post-implementation (deployment) phase. Previous and recent studies have suggested that this three-stage development life cycle has the benefit of enabling implementers to determine the role and responsibility of stakeholders. Further, each developmental stage has its own critical success factor, which fits properly into these studies since the researcher intend to identify roles and responsibilities of key actors and the main activities at every stage of the development life cycle. This should enable presentatio of good practice guidance that would assist implementer of changes and decision makers when deliberating on implementing e-Government within public sector organisations (Baum & Di Maio, 2000; Heeks, 2006; Sharif & Manian, 2010; Al-Rashidi, 2012).

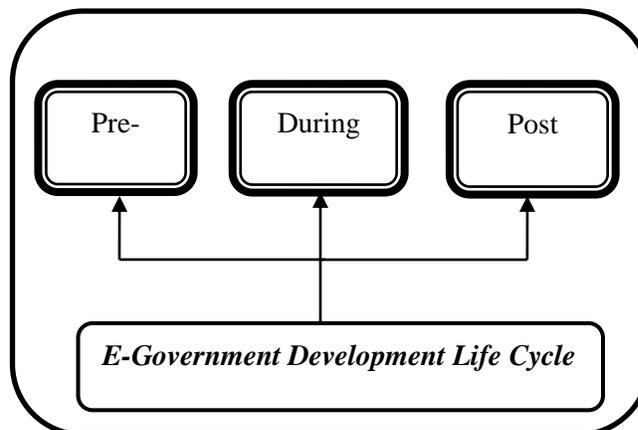


Figure 3-3)E-Gov Three-Stage Development Life Cycle

Mapping of E-Government Implementation Factors and Development Life Cycle

Based on review of literature, this study presents the three main stages of implementation of e-Government in terms of project development life cycle. The first phase is the pre-implementation stage, which is the initiation stage where government makes clear their objectives and vision. It is often regarded as most vital phase as other phases depend largely on the clarity and realism that is incorporated in the first phase.

The next phase is the implementation stage where planning and implementation take place. This is another crucial stage where success of the project is determined by human and financial resources, as well as change management issues. The change management issues relate to resistance to change, approaches and requirements of e-Government.

The final phase is the post-implementation stage, otherwise regarded by other scholars as the operation and monitoring stage. Operations in terms of reliable day-to-day operations, and the progressive integration of systems to achieve service transformation; monitoring however relates to optimisation of services.

The researcher however attempts to map the implementation factors with activities involved during the development life cycle. This is illustrated in Table 3.2. and shown diagrammatically in Figure 3-4.

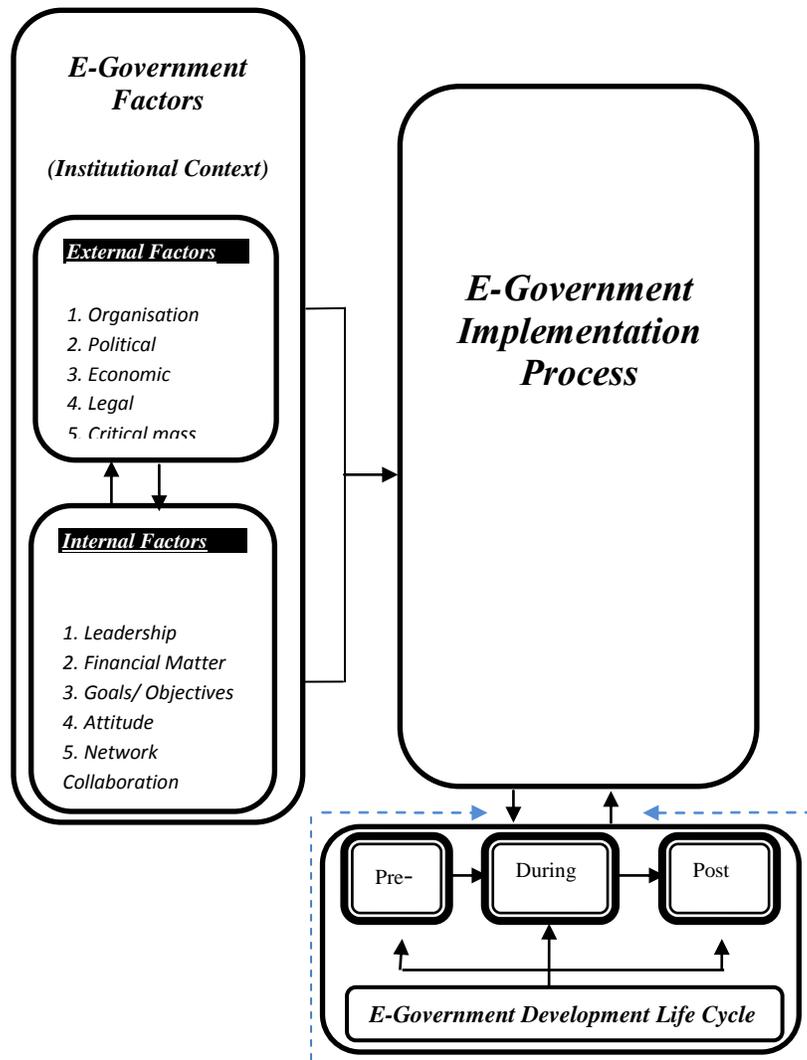


Figure 3-4) E-Gov Implementation Factors and Development life Cycle

3.4 E-Government Implementation Characteristics: Benefits, Barriers and Risks

E-Government in developing countries enables the government to improve the efficiency and transparency of the services and to be able to compete internationally (Payne, 2002; Dada, 2006). E-Government benefits include: Improve productivity and increase capacity of government; improving quality of service delivery and business and customer; reducing the overall costs of the organisation and efficiency gains; reducing intra- and inter-agency paperwork or paper flow; improving quality of decision and policy making; improving accountability, transparency and anti-corruption; and promoting the use of ICT in other sectors of the society (Heeks, 2001; Dillion *et al*, 2002; Eddowes, 2004; Beynon-Davies, 2005; Dode, 2007; Hamed *et al*, 2008a; Almarabeh & AbuAli, 2010; Muoka, 2010).

Scholars have highlighted some of the challenges faced which could have adverse impact on e-Government implementation. Lam (2005) classified the barriers to e-Service development projects otherwise known as comprehensive barrier framework into four – strategic, policy, organisational, and technological. Other practitioners have argued that due to the current poor state of social infrastructure including the power supply and road network in the developing countries, the practice of e-Government is most likely to be negatively impact upon. These challenges include: Low level of ICT compliant or literacy; political issues; attitude of the public servants towards change when e-Government; and privacy and security. (Backus, 2001; Layne & Lee, 2001; Williamson, 2001; Ndou, 2004; Dode, 2007; Ajayi, 2007; Alshehri *et al*, 2012; Rana *et al*, 2013; Nkohkwo & Islam, 2013).

Evangalidis *et al* (2002) however described the potential risk for e-Government implementation as – Technological/implementation, Social / human, security, financial and legal risk. Other risks are: accessibility of info by other agencies; environmental information security such as identify theft; and reducing full control over information (OECD, 2001; West, 2004; Nijaz & Moon, 2009; Matavire, 2010; Kessler, 2011; Hector, 2012; Abdallah & Fan, 2012; Weerakkody *et al*, 2013). Table 3-2 presents taxonomy of e-Government characteristics in respect of benefits, barriers and risks whilst Figure 3-5 illustrates the structure during implementation process.

.Benefits	Description	References
Drivers-Barriers Model (Technology; Process; People; Organisational; Financial; Resources; Security and Privacy)	<ul style="list-style-type: none"> * Improve productivity and increase capacity of government * Improve quality of service delivery and business and customer * Reduce the overall costs of the organisation and efficiency gains * Reduce intra- and inter-agency paperwork/ flow * Improve quality of decision and policy making * Improve the organisation's business process * Network and community cohesion * Improve collaboration among different department * Improve accountability, transparency and anti-corruption * Promote the use of ICT in other sectors of the society * Reduce data collection, process and storage <p>Additional Benefits identified:</p> <ul style="list-style-type: none"> * Add Benefit 1 xx 	Heeks, 2001; Bonham <i>et al</i> , 2001; Moon, 2002; Payne 2002; Beynon-Davies, 2005; Zhang <i>et al</i> , 2005; Ifinedo, 2006; Dada, 2006; Hamed <i>et al</i> , 2008a; Buccoliero <i>et al</i> , 2008; Almarabeh & AbuAli, 2010; Muoka, 2010.
Barriers	Description	References
Drivers-Barriers Model; Comprehensive Framework Barriers (Technology, Strategic, Process, People, Organisational, Financial Resources, Security and Privacy)	<ul style="list-style-type: none"> * ICT infrastructure * High level of investment required * Education, training and set-up costs * High level of knowledge among employees required * Cultural awareness * Complexity in understanding processes and systems * Resistance to change among different departments * Partnership and collaboration * Leadership role * Strategy (vision, mission & lack of ownership) * Security issues and privacy of citizens * Lack of legislative support / Formal policy <p>Additional Barriers identified:</p> <ul style="list-style-type: none"> * Add Barrier1 xx 	Layne & Lee, 2001; Williamson, 200; Ndou, 2004; Lam, 2005; Ebrahim, 2005; Dode, 2007; Hamed <i>et al</i> , 2008a; Mundy & Musa, 2010; Alshehri <i>et al</i> , 2012; Rana <i>et al</i> , 2013; Nkohkwo & Islam, 2013.
Risks	Description	References
(Technology, Process, People, Organisational, Financial, Resources, Security and Privacy)	<ul style="list-style-type: none"> * Accessibility of info by other agencies * Environmental info' security e.g. identify theft * Reducing full control over information * Inferior service quality e.g. delayed service * Relational privacy e.g. background checks * Misinterpretation and misuse of eGov services * Increase criticisms by other agencies and citizens * Legal and financial risks <p>Additional Risks identified:</p> <ul style="list-style-type: none"> *Add Risk1 ... xx 	OECD, 2001; Heeks, 2001; Evangelidis <i>et al</i> , 2002; West, 2004; Eddowes, 2004; Nijaz & Moon, 2009; Matavire, 2010; Kessler, 2011; Hector, 2012; Abdallah & Fan, 2012; Weerakkody <i>et al</i> , 2013.

Table 3-2) Taxonomy of E-Gov Characteristics: Benefits, Barriers and Risk

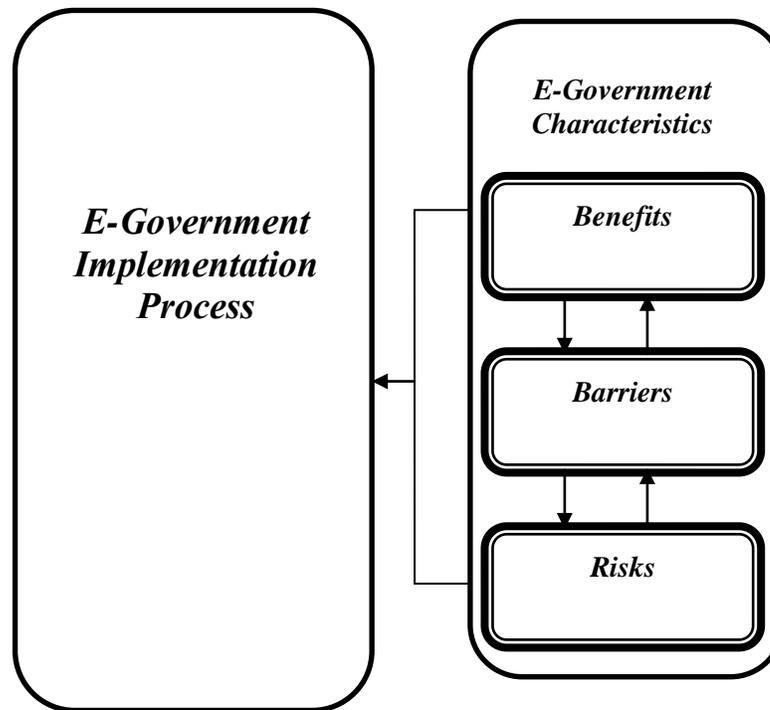


Figure 3-5) E-Gov Implementation Benefits, Barriers and Risks

3.5 E-Government Good Practice, Key Actors and Main Activities

The good practice guidelines are necessary for decision-makers and implementers of changes to follow when planning to implement e-Government services. The factors are also useful during and after the execution of the projects. Hence, the research proposes to validate these factors and rank them in order of importance, as part of the research survey to be conducted. These factors would form part of the proposed conceptual framework,

Similarly, the proposed conceptual framework consists of the parts that aim to identify the key e-Government actors and the main activities of these actors at every phase of the development lifecycle, from pre- to post-implementation stage. The framework adopts the Three-Quarter moon Model postulated by Hamed (2009) when investigating of e-Commerce adoption in Libyan economy, which was later generalised but suggested future validation by scholars. The researcher however felt, it would be appropriate to test and validate this model within the e-Government context, since Three-Quarter Moon model was

applied in a developing country. The proposed framework would be revised based on the research findings and ability to identify additional factors and other main activities.

Table 3-3 presents taxonomy of e-Government good practice, key actors and main activities throughout the development life cycle, which include:

- a) the phases of the development life cycle – pre-implementation, implementation and post-implementation stages
- b) Factors considered to be good practice guidelines for implementer of changes and decision makers to consider throughout the development life cycle
- c) Key actors involved in e-Government implementation and their main activities at every stage of project development.

The proposed framework will not only be useful for academicians, it will also serve as a valuable tool for practitioners and decision makers to follow in order to determine role of key actors and who will be responsible for the main activities at every stage of the development life cycle. Figure 3-6 also illustrates disgrammaticaly, the mapping of the e-Government development life cycle with the key actors and activities and good practice guidelines.

Development Life Cycle	Good Practice (GP) Guideline	Key Actors				Main Activities <i>[Need to map the main activities with key actor(s) at every stage of the development life cycle]</i>
		G o v	T A C	C o y	U s e r	
Pre - Implementation	1. Political support 2. Executive agency support 3. PG commitment 4. Simple project objective 5. A strong user 6. A strong case for selection of technology 7. Private sector					1. Legislation and regulations 2. Telecomms 3. Postal infrastructure 4. International trade 5. Establish an e-Gov dept 6. Payment system 7. Removing barriers for foreign investments 8. E-Gov strategy 9. Low cost hardware / software 10. Education /Labour training 11. Lowering taxation 12. Culture, religion and values <u>Additional Actors identified</u> <i>[Option to identify new additional actors and/or activities]</i>
During Implementation	1. Sustainability 2. Transparency 3. Maintaining costs 4. High structural completeness 5. Minimising costs 6. Opportunities for all stakeholders 7. Legal procedural reqts					1. New strategies 2. Change business culture 3. Local languages in website 4. Encouraging expatriate workers 5. Credit card payments 6. Transaction security 7. Security 8. Culture, religion and value 9. Training and education <u>Additional Activity identified</u> <i>[Option to identify new additional actors and/or activities]</i>
Post - Implementation	1. Demand/ commitment 2. Structure and standard 3. Technology 4. Benefit assessment 5. Training 6. Policy and regulation 7. Budget 8. Services 9. Staffing 10. Executing agency					1. Security 2. Monitoring and updating 3. Online promotions 4. Customer satisfaction and trust 5. Culture, tradition and value 6. training and education <u>Additional Actors identified</u> <i>[Option to identify new additional actors and/or activities]</i>

Table 3-3) Taxonomy of E-Gov G P, Key Actors and Activities

Note: Gov – Government; TAC – Technologically-advanced countries; Coy- Company; User – User (Employee)

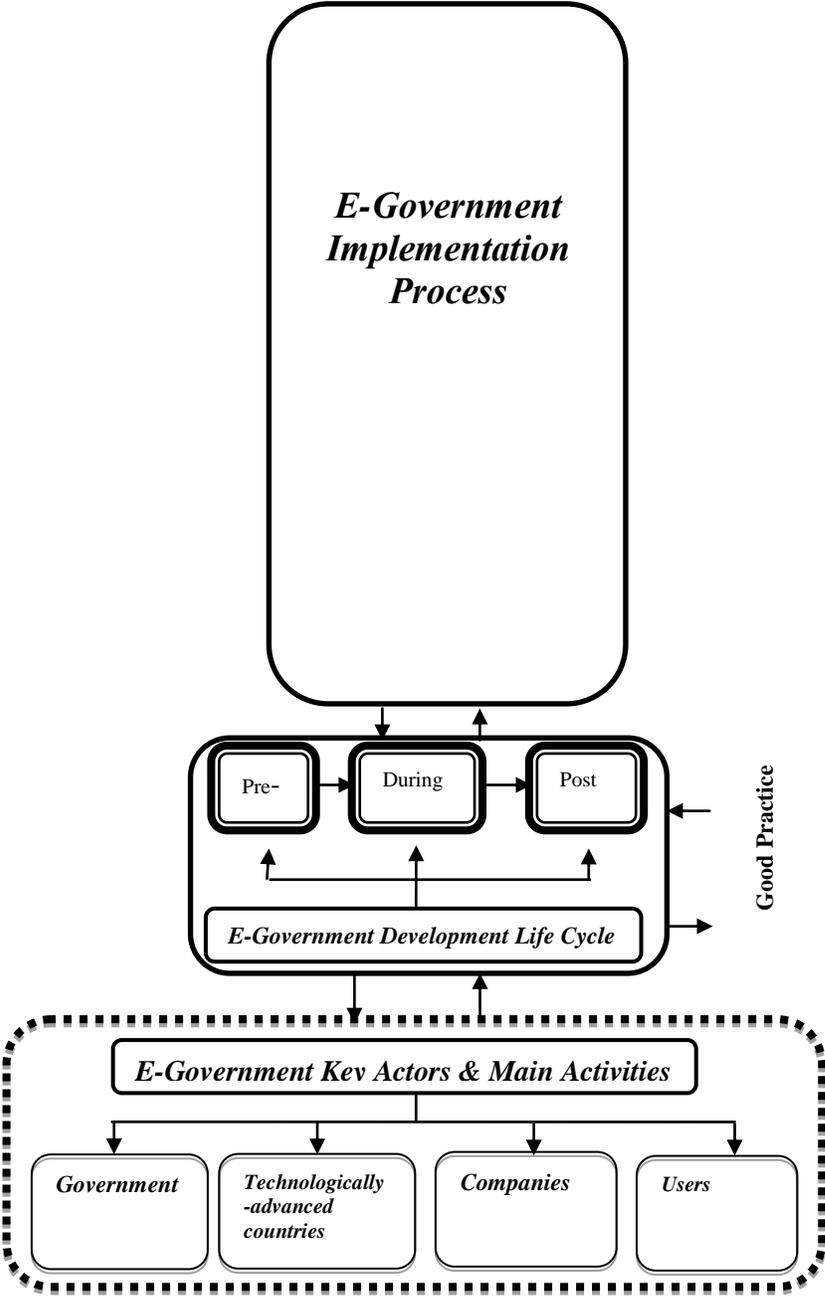


Figure 3-6) E-Gov Key Actors, Main Activities and G P Guidelines (throughout the Development Life Cycle)

3.6 Mapping of E-Government Factors, Benefits, Barriers and Risks

Table 3-4 below presents taxonomy of the mapping of e-Government factors, benefits, barriers and risks. The findings from the research survey would enable the researcher to test and validate all the elements of the proposed conceptual framework, which is illustrated in Figure 3-7..

A Taxonomy of E-Government Implementation Benefits, Barriers & Risks					
Factors	Benefits	Barriers	Risks	Rank	
Mapping of E-Government Implementation Factors, Benefits, Barriers & Risks	<u>External Factors</u>	Improve productivity and increase capacity of government	ICT infrastructure	Accessibility of info by other agencies	1 - xx
	* Organisational	Improve quality of service delivery and business and customer	High level of investment required	Environmental info' security e.g. identify theft	1 - xx
	* Political				
	* Economic	Reduce the overall costs of the organisation and efficiency gains	Education, training and set-up costs	Reducing full control over information	1 - xx
	* Legal				
	* Critical Mass				
	Additional external factors identified:	Reduce intra- and inter-agency paperwork/ flow	High level of knowledge among employees required	Inferior service quality e.g. delayed service	1 - xx
	Add external factor 1 xx	Improve quality of decision and policy making	Cultural awareness	Relational privacy e.g. background checks	1 - xx
		Improve the organisation's business process	Complexity in understanding processes and systems	Misinterpretation and misuse of eGov services	1 - xx
	<u>Internal Factors</u>	Network and community cohesion	Resistance to change among different departments	Increase criticisms by other agencies and citizens	1 - xx
* Leadership	Improve collaboration among different department	Partnership and collaboration	Additional risks identified:	1 - xx	
* Financial matters			Add Risks 1xx		
* Goals	Improve	Leadership role		1 - xx	

A Taxonomy of E-Government Implementation Benefits, Barriers & Risks				
Factors	Benefits	Barriers	Risks	Rank
/Objectives * Attitude * Network Collaboration Additional internal factors identified:	accountability, transparency and anti-corruption			
	Promote the use of ICT in other sectors of the society	Strategy (vision, mission & lack of ownership)		1 - xx
	Reduce data collection, process and storage	Security issues and privacy of citizens		1 - xx
	Additional benefits identified: Add benefits 1xx	Lack of legislative support / Formal policy		1 - xx
		Additional barrier identified:		1 - xx
		Additional barriers identified: Add barriers 1xx		

Table 3-4) Taxonomy of Mapping: E-Gov Implementation Benefits, Barriers & Risks

3.7 Proposed Conceptual Framework

There is the apparent need to develop a conceptual framework necessary for identifying e-Government implementation factors. This is as a result of the gaps in the review of literature in previous sections and discussions in Chapter 2. The proposed conceptual framework consists of the parts that identifies the key e-Government actors and the main activities of these actors at every phase of the development lifecycle, from pre- to post-implementation stage.

Having reviewed relevant literature, the researcher proposes an appropriate framework that incorporates environmental factors as well as implementation benefits, barriers, and risks influencing e-Government implementation within institutional context of public sector organisations. The proposed conceptual model illustrated in Figure 3-7 below consists of following four parts:

- i) Implementation factors – Identifying the external and internal factors, with possible new factors with the institutional context (Institutional Theory)
- ii) Implementation Characteristics: Identifying benefits, barriers and risks of implementing e-Government, and possibly new factors (Driver-Barriers Model – Hammed *et al*, 2008a and Comprehensive Barrier Framework - Lam,2005)
- iii) Identifying e-Government implementation key actors, main activities and good practice guidelines (Three Quarter Moon model - Hammed, 2009)
- iv) Development Life cycle – These comprises pre-implementation, during implementation and post-implementation phases.

The proposed conceptual framework was developed based on the normative nature of the institutional theory that allows for more practical guidelines for decision makers and implementers of change (Irani *et al*, 1999). Since there is no unified theory to focus on e-Government implementation, researcher was able to combine the institutional theory with other research models. This was to enable the determination of organisational actions and behaviours in the public sector organisation.

The researcher intends to validate the proposed conceptual framework model in public sector organisations to address the following research questions that have not been answered in the literature:

RQ1: What are the external and internal factors influencing e-Government implementation in public sector in the context of developing countries in order to bring about transparent and generally acceptable system?

External factors are under the following themes - organisational, political, economic, legal, critical mass. Internal factors are classified under the following – leadership, financial matter, goals/ objectives, attitude, and network collaboration. E-Government concepts have been caterised into implementation benefits, barriers and risks. The researcher would attempt to validate these factors and try to identify additional factors, where possible through research survey.

RQ2: How do these factors and characteristics – benefits, barriers and risks, influence e-Government implementation process and what implications may emerge from this implementation? How are we able to rank and map these factors/characteristics in order of priorities, and whether or not we are able to identify new factors/characteristics that have not been discussed in the review of literature?

RQ3: Who are the key actors involved in e-Government implementation process, and what are their main activities throughout the development life cycle? How are decision-makers able to identify, and address any challenges arising implementation of e-Government systems including change management issues?

The researcher intends to identify key actors and main activities as every phase of the development life cycle, from pre-implementation to post-implementation. This would enable proposition of practical guideliness that would act as frame of reference for e-Government implementation in public sector organisations. Change management issues are limited to

resistance of change, change management approach and change management requirements for e-Government implementation and these would be explored in the research survey.

The researcher expects through survey, additional factors could be identified, which would form part of the revised framework – where necessary. Thus the model draws from the insights offered by four streams of literature – external factors, internal factors, perceived benefits and perceived barriers. Each of these factors is grounded either in these body of literature or some empirical evidence influencing e-Government implementation, which have been classified into external and internal. As a result, the researcher will be able to adopt factors from other relevant areas in order to conceptualise a framework for e-Government adoption. In addition, the proposed framework also presents novel contributions at two levels.

Literature review has shown there is no framework that presents a holistic view of the combination of the factors and characteristics influencing e-Government implementation process. The researcher has therefore combined some of the theories and models such as the benefits-barriers model, institutional theory; Three-Quarter Moon model; (and Lewin's theory) to formulate an implementation framework.

The researcher anticipates that the application of the Three Quarter Moon model, which was applied to e-Commerce adoption process for instance, would realise similar outcome in terms of e-Government implementation process. This is because they appear to be similar concepts apart from e-Commerce relating to marketing in private sector whilst e-government relates mostly to application of ICT to improve government infrastructure. It is strongly expected there would be little or no difference in the determinant factors influencing both e-Commerce adoption and e-Government implementation in an IT environment, after all the application of the systems vary from countries to countries. This would also help managers and academicians to get a holistic view of the factors in order to effectively plan for implementation process in their organisation.

The Driver-Barrier model has been successfully applied by various researchers – e-Government implementation in Bahrain (Ebrahim, 2005; Hamed *et al*, 2009) and e-

Commerce adoption in Libya (Hammed, 2009). It has proven to be a reliable model which could be adopted by researchers in any e-Government or e-Commerce or e-Services development project as the factors vary from countries to countries. Lam (2005) comprehensive barriers framework discussed in sections 2.7.11 above was developed in his research study on the barriers to e-Government integration explains the nature of e-Government services necessitates closer working relationships between government and stakeholders.

Lam (2005) however recommended the need for further studies in order to validate the list of e-Government integration (EGI) barriers identified in the study on a larger scale with participants from different organisations. It is in this wise that these barriers have been combined with other framework or models to formulate the e-Government implementation framework. These perceived barriers identified as – Strategic, policy, organisational and technological - should be applicable to developing countries

The researcher also reviewed the generalised three quarter moon model, which Hammed (2009) postulated but yet to be tested and validated. The model was developed after initially focusing on Libyan economic development before proposing a generalised framework.

The proposed model incorporates factors identified in previous studies as influencing implementation of ICT projects. The researcher extends these works and adapts them to the e-Government context by combining factors discussed in the normative literature, thus resulting in the development of an integrated model for e-Government implementation process. In addition, the concepts of the proposed model can be used as a guide for the implementation of e-Government projects in public sector organisations.

Apart from the key actors, the researcher believes the main responsibilities of the actors at every phase of the development are essential. This would enable the decision makers and developers understand who the key actors would be and which of the activities are crucial for these actors and at what stage of the development life cycle? The researcher believes this should be a novel contribution to the body of knowledge because there is no study

identifying the main activities and responsibilities of key actor in e-Government implementation. The Three-Quarter Moon model was applied to e-Commerce adoption and the study was focused on economic development, not necessarily on the major activities of the four actors identified in the study.

The researcher also affirms that, as good practice, it is necessary to formulate guidelines for decision-makers and implementers of changes to follow in order to effectively plan when implementing e-Government services, as part of organisational change. This practical guide would also be useful during and after the execution of the e-Government projects.

The researcher proposes to rank and validate these factors in order of priorities through mapping, as part of the research survey to be conducted. Thus e-Government factors (external and internal), concepts (benefits, barriers and risks) and key role of actors and main activities are to be prioritised including deliverables; otherwise, e-Government projects may face major barriers that could impact on trust and confidence of the employees as well as delay in implementation of the services.

These factors would form part of the proposed conceptual framework. Table 3-3 presents taxonomy of e-Government Good Practice, Key Actors and Activities, which forms part of the proposed conceptual framework.

Based on the research findings, the revised conceptual framework will be presented in Chapter Six.

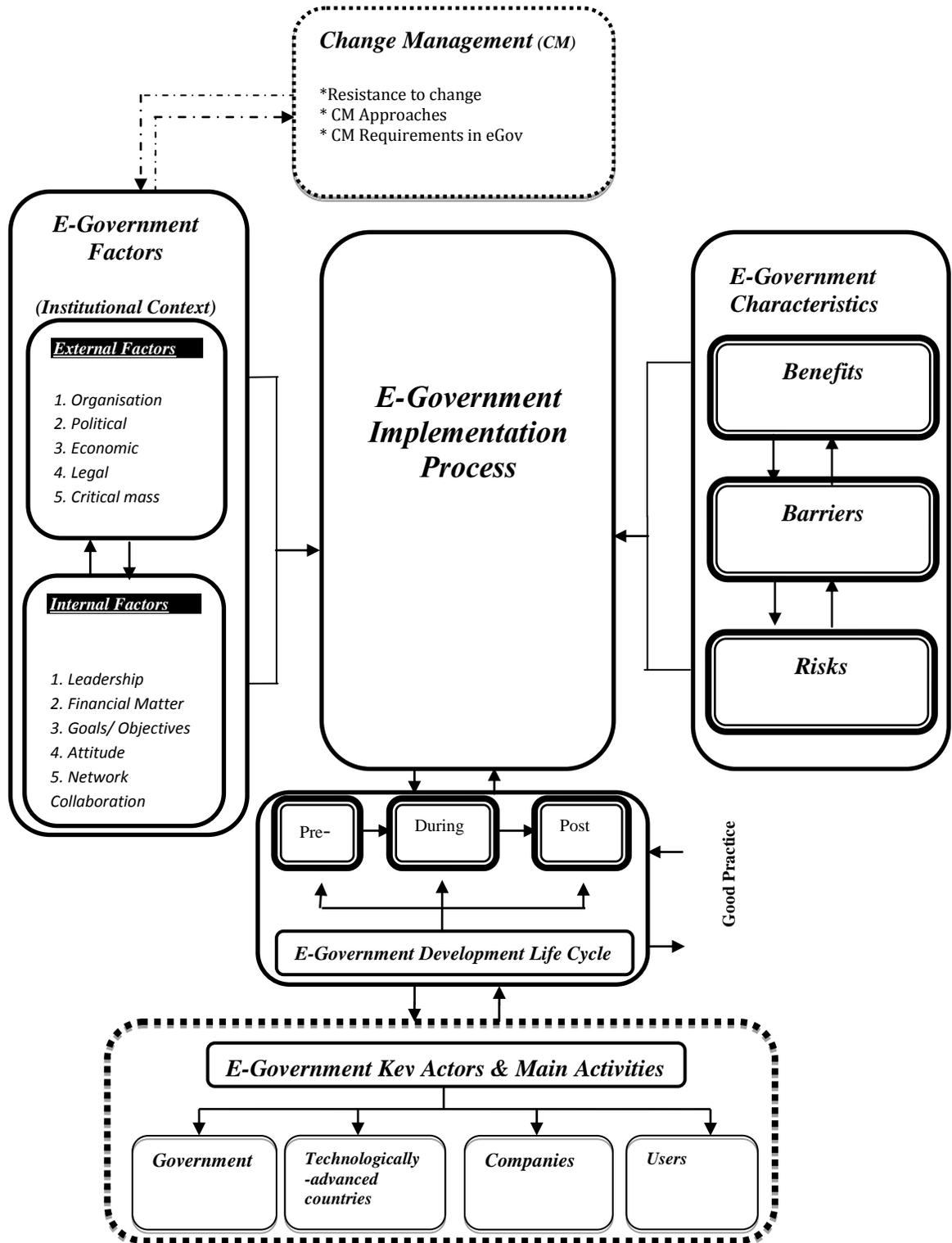


Figure 3-7) Proposed Conceptual Model: E-Gov Implementation Framework (E-Government Factors, Benefits, Barriers, Risks, Good Practice, and Key Actors)

The conceptual framework shown above identifies key factors influencing e-Government implementation throughout the development life cycle – pre-, during and post-implementation. It also identifies the main actors involved and their key activities, which would enable academicians and researchers to prioritise in order of relevance as well as determining good practice guidelines required for successful implementation at every phase of the development life cycle.

In exploring institutional theory, this framework enables its application for wider IS/IT context since it helps researchers to understand and explain why organisations often create and maintain formal security structures without trying to implement it fully. This is in addition to the fact that institutional theory allows for combination with other theories and models, as have been observed in past literature relating to management of IS/IT security in organisations. Based on institutional context, application of this conceptual model relates to the environmental factors of the organisation and these include the external factors influencing e-Government implementation.

3.8 Proposed Strategy for Validating Conceptual Framework

The proposed conceptual framework presented above has integrated three different models that represent a comprehensive model for e-Government implementation in any developing (and possibly developed) country. Government has a crucial role to play in ensuring successful implementation of e-Government, being the major actor especially in areas of people, process, cost and technology. Hence the next stage of this research would be to test the validity of the proposed framework in real case study focusing on public sector organisations, as will be discussed in Chapters 4 and 5.

The four parts (implementation factors – external and internal; characteristics/concepts – benefits, barriers and risks; key role of actors and main activities; and development life-cycle – pre-, during and post-implementation) would need to be tested and validated.

The research study highlights the importance of the factors that influence e-Government implementation both within and outside the organisation, and linking that to e-Government implementation concepts in respect of the benefits, barriers and risks.

As part of the implementation process, these factors and concepts or characteristics are linked to the three-stage development life cycle, which would enable determination of the roles and responsibilities of the key actors and the main or crucial activities at every stage of the development life cycle, right from inception to completion. This development life cycle adopted for this research is the modern method classified as pre-implementation (development stage), implementation (design stage) and post-implementation (deployment – monitoring and evaluation stage). The next step would be mapping the implementation factors and characteristics to the three-stage development life cycle. It is anticipated that the key actors would be identified and each actor will be able to highlight the main activities and link them to the development life cycle. For instance, actor 1 (say government and its agencies) might have a key role at the initial stage in terms of planning and mapping out strategies for successful implementation. Their role might be at every stage of the development, and this would give the decision makers and implementers of changes the opportunity to be able to identify who are the key stakeholders and be able to effectively manage the implementation process in all phases of the developmental.

The researcher also intends to formulate good practice guidelines that could be used as a frame of reference by academicians and practitioners when implementing e-Government systems in organisations.

Depending on the scope and limitation, the researcher anticipates that research visits to case study organisations would be conducted to test and validate this framework. This would enable determination, whether or not; all the elements of the proposed framework would be validated. More so, there is the need to reveal the complexity of the proposed model, depending on resources and feasibility as well as availability of required data, and other constraints such as time and cost. Lessons learned and research limitations will be discussed in the later chapters..

3.9 Conclusions

The researcher has been able to present the proposed conceptual framework for identifying factors influencing e-Government implementation and the key actors and main activities involved throughout the development life cycle. The researcher was able to review and identify gaps in existing literature, in which limited researches have been carried out, especially in the aspect of good practice guidelines and identification of key e-Government actors. The researcher intends to explore the limitations in the theoretical models for e-Government implementation in developing countries.

The researcher integrates the institutional theory with Drivers-Benefits, which correlates with the Barriers-Benefits model (Hammed *et al*, 2008a; Ebrahim, 2005). The comprehensive barriers framework described by Lam (2005) was also incorporated with the Drivers-Barriers, which the researcher connects the Three-Quarter-Moon model for e-commerce adoption (Hamed, 2009) in order to refine it within the e-Government context, and to conceptualise a strategic framework for identifying e-Government implementation framework in the developing countries.

The researcher mapped the implementation factors and development life cycle with the characteristics – benefits, barriers, and risks. The taxonomy of these elements together with the key actors and their main activities were also mapped with the good practice guidelines factors. These combinations of these elements form the proposed conceptual framework for influencing e-Government implementation in developing countries.

Further, the critical review of literature reveals that perceived barriers, benefits and risk are part of the utmost essential factors that impacts on e-Government implementation process. Hence, the researcher expects that perceived benefits, barriers and risks in public sector organisations would guide the decision makers and implementers of changes during e-Government implementation.

The proposed conceptual model is anticipated to be validated after the research analysis and findings in chapter 5 and 6 of this research study and novel contributions made in addition to this chapter.

Chapter 4 Research Methodology

4.1 Introduction

This Chapter presents various perspectives that could be adopted in the use of electronic government implementation. The purpose of the research is to identify and evaluate factors influencing the use of e-Government systems in developing countries, using Nigeria as a case study. For this research work, a conceptual model has been developed based on previous literature to test and validate this specific area services.

The methods of addressing the research questions and research strategies are explained. The two research categories – Qualitative and Quantitative are also discussed with their characteristics, strengths and weakness. The researcher also attempts to explain whilst the Qualitative analytical method is mostly preferred to the Quantitative analysis, for this research work. One major reason is that this research is inductive and would be case study focus, which allows for flexibility and complexities in e-Government implementation. However, the researcher also used questionnaire survey to back up the qualitative data collection (interviews) in order to develop richer data analysis – therefore not purely qualitative as per triangulation.

The adoption of multiple methods allows for qualitative and ordinal quantitative method, by using questionnaire to collect data. This natural ordering method would allow for ordering and ranking of factors and characteristics, despite not collecting statistical or numerical data. The researcher thus explains the various strategies and sources of data collection through literature review and case study. These include sampling, interviews, questionnaire and documentation analysis. This chapter also discusses the data triangulation in this research – the case study Nigeria and the protocol in relation to research objectives and schedules. The case study protocol is explained under the following topics – overview, fieldwork research procedures, questions addressed by research and research output format.

4.2 Epistemological Stances

According to Collis & Hussey (2009), a research paradigm is a philosophical framework that guides how scientific research could be carried out. New research paradigms have emerged over time due to change in people's idea leading to inadequacies of the earlier paradigms.

Natural sciences have been existence for years due to the scientific achievements. However the emergence of social sciences led to the development of another research paradigm.

As regards information systems research, the three philosophical paradigms are common: positivism, interpretivism and critical (Lee 1991; Myers 1997; Klein & Myers 1999; Myers & Avison 2002; Oates 2006). Although Orlikowski & Baroudi (1991) tried to include a fourth philosophical paradigm called post-positivism.

4.2.1 Positivist

Positivist studies generally attempt to test theory, in an attempt to increase the predictive understanding of phenomena. Several researchers classified IS research as positivist if there was evidence of formal propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about a phenomenon from the sample for a stated population.

It is quantitative and deductive since it uses general results to attribute properties to explicit instances. Scholars have however argued the following three techniques of scientific methods influence the positivist stances - reductionism, repeatability and refutation (Popper, 1963; Mintzberg, 1979; Lincoln & Guba, 1985; Lee 1991; Orlikowski & Baroudi, 1991; Easterby-Smith *et al*, 2002; Johnson & Onwuegbuzie, 2004; Oates, 2006; Oates, 2006; Saunders *et al*, 2007).

Many philosophers of science criticises that this research paradigm plays an important role in theory/ hypothesis conception but a highly structured research design imposes constraints on the results and may ignore other relevant findings (Popper, 1963; Mintzberg, 1979; Hirschheim, 1985; Klein & Lyytinen, 1985; Collis & Hussey, 2009).

4.2.2 Interpretive

Interpretive studies generally attempt to understand phenomena through the meanings that people assign to them. Interpretive methods of research in IS are aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context'. Walsham (1995).

Literarily, interpretive is the belief that social reality is subjective because it is socially constructed. As a result, each person has his or her own sense of reality and there are multiple realities. It is regarded as the philosophical paradigm that emerged after positivist to cover the inadequacies of methods applied to social science, which are only applicable to natural science. Scholars also argue that interpretivism approach could be used from the perspectives of participants directly involved with a particular phenomenon in order to understand the exploration of the phenomena. Since interpretive paradigm believes that social reality is not objective but in our minds and highly subjective, this is due to the fact that it is shaped by our perceptions. Thus it revolves around people perceptions of their world. (Lee, 1991; Irani *et al.*, 1999).

Interpretivism rests on the assumption that social reality is also multiple, and affected by the act of investigating it. There is the belief that social constructions such as language, shared meanings, perceptions, consciousness and understanding enable reality to be accessed and communicated to other individual or a group. Where research findings could not be generalised, interpretivism would allow the researcher to transfer and apply qualitative data to other similar perspectives (Lee 1991; Orlikowski & Baroudi 1991; Walsham 1993; Myers 1997; Easterby-Smith *et al* 2002; Myers & Avison 2002; Oates 2006; Ryan *et al*, 2007; Collis & Hussey, 2009).

This research study strives to identify and evaluate the opportunities and challenges impacting on e-Government implementation, from the institutional perspective. Therefore, interpretivism epistemological stance is considered the most appropriate approach for this research. In addition, interpretivists would enable the researcher to adopt a range of methods that 'seek to describe, translate and otherwise come to terms with the meaning, not the frequency of certain more or less natural occurring phenomena in the social world'

(Van Maanen, 1983). With the inductive process, interpretivism enables findings and specific instances used to arrive at overall generalisations.

4.2.3 Critical

Critical researchers assume that social reality is historically constituted and that it is produced and reproduced by people. Although people can consciously act to change their social and economic circumstances, critical researchers recognise that their ability to do so is constrained by various forms of social, cultural and political domination. The main task of critical research is seen as being one of social critique, whereby the restrictive and alienating conditions of the status quo are brought to light (Myers & Avison; 2002).

Although critical paradigm shares some of the ideas of interpretivism, it is mainly used philosophically to gain knowledge in respects of focusing on the oppositions, conflicts and contradictions in contemporary society. Whilst positivist and interpretive relate to explaining or predicting the status quo, academicians have argued that critical paradigm concerns attempt to criticise, analyse, evaluate, transform the social reality and modify the status quo (Orlikowski & Baroudi 1991; Myers 1997; ; Klein & Myers; 1999; Littlejohn, 2000; Myers & Avison 2002; Oates 2006).

Both positivist and critical paradigms are unsuitable for this research study, which aims to evaluate and investigate what principles should guide successful implementation of e-Government systems in the context of the developing countries. The objectives include developing conceptual theories or models and recommending how decision makers are able to address the change management issues in relation to e-Government implementation. Interpretivism would be most suitable approach for this thesis since it is qualitative, subjective, humanist and phenomenological (Collis & Hussey, 2009)

Table 4-1 below presents the epistemological stances involved in information systems research:

Taxonomy of Epistemological Stances		
Approach	Description	References
Positivist	Positivist studies tend to produce quantitative data as they presume reality as being accurately given. Relates to test theory, and hypothesis testing, formal quantifiable measures of variables and an attempt to increase the predictive understanding of phenomena. Also drawing of inferences about a phenomenon from the sample for a stated population., with data highly specific and precise	Orlikowski & Baroudi, 1991; Yin, 2003; Straub <i>et al.</i> 2004; 2005.
Interpretive	Interpretive studies generally seek to describ, understand and translate phenomena through meanings that people assign to them in order to comprehend the context of information system. Enables understanding of deeper structure of phenomenon within sultural and contextual situation. Interpretive studies tend to produce qualitative data and allows theories generation.	Walsham, 1995; Hussey & Hussey, 1997; Yin, 2003.
Critical	Critical studies are mainly used philosophically to gain knowledge in respects of focusing on the oppositions, conflicts and contradictions in contemporary society. Academicians have argued that critical paradigm concerns attempt to criticise, analyse, evaluate, transform the social reality and modify the status quo. Researchers also assume that social reality is historically constituted. The restrictive conditions of the status quo are brought to light with the main task seen as social critique,	Littlejohn, 2000; Myers & Avison 2002; Oates 2006.

Table 4-1) Taxonomy y of Epistemological Stances

4.3 Research Categories: Selecting Appropriate E-Government Implementation Approach

According to Patton (1990), the first undertaking is to decide which approach best identifies most appropriate solutions from which to draw suitable conclusions relating to the issues under investigation. Galliers (1994) however mentioned the selection of an appropriate research approach for Information Systems (IS) - related phenomenon is not an easy task. This is because IS enables researchers to choose a suitable method from different research approaches and strategies, as they are not related to single theoretical perspective (Morgan & Smircich, 1980; Evered & Louis, 1981; Luthans and Davis, 1982; Chua, 1986; Lee, 1989b; Orlikowski & Baroudi, 1991; Myers, 1997; Easterby-Smith *et al*, 2002; Myers & Avison, 2002; Saunders *et al*, 2007).

Because of the ability of researcher to choose a suitable method from various approaches, IS can adopt positivist paradigm, depending on the nature of knowledge, for research studies that is quantitative, objective scientific and traditionalist. For this research study that requires highly subjective opinions based on perceptions of the respondents and the researcher, interpretive is the most ideal. In selecting an appropriate research approach, scholars have suggested three main research methodologies – qualitative, quantitative and a mixture of both methods – Figure 4-1 below (Orlikowski & Baroudi, 1991; Stake, 1995; Harling, 2002; Creswell, 2009).

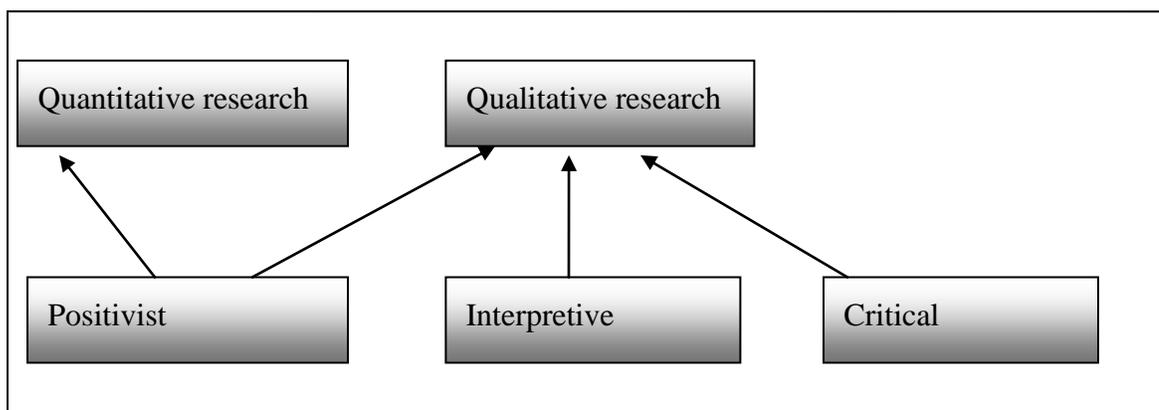


Figure 4-1) Epistemological Assumption for Qualitative and Quantitative Research

(Source: Adapted from Straub *et al.*, 2005)

4.3.1 Quantitative Analysis

It is widely believed that quantitative approach emerged as a result of investigating natural phenomena; therefore it is perceived to adopt objective and scientific approach in relation to positivism as illustrated in table 4.1 and figure 4.1 above. Quantitative analysis involves the interpretation of patterns in numeric data such as ordinal, interval or ratio. Examples are correlation measures like regression and comparison of means, using items of analysis such as graphs or diagrams. In addition, the results must be valid and reliable for accuracy and reliability. This explains why quantitative approach has the advantage of be considered to be an interdisciplinary field that uses a multi-method approach to research in order to understand human experiences (Kaplan, 1964; Bryman, 1984; Creswell, 1994; Janesick, 1998; Lincoln & Guba, 2000; Corbetta, 2003; Oates, 2006; Collis & Hussey, 2009).

Quantitative approach supports structured and open research strategy and focus is mainly to uses large samples, which are often anonymous to participants, and uses tests and formal instruments. The data are usually hard and reliable because of the emphasis on theory and hypothesis testing. However the researcher adopted the ordinal quantitative method to collect data through questionnaire as it allows for ordering and ranking of factors and characteristics (Creswell, 1994; Creswell, 1994; Creswell, 1994; Bouma & Atkinson, 1999; Naoum, 1999; McClure, 2002; Ebrahim, 2005; Oates 2006; Boeije, 2010).

4.3.2 Qualitative Analysis

Qualitative analysis, unlike quantitative, is useful for describing multiple realities, developing deep understanding, theory building, and capturing everyday life. Review of literature suggests that this research methodological approach tend to understand and translate phenomena through meanings that people assign to them thereby producing understanding of IS perspective and its influences on the environment. Qualitative approach is inductive with specific instances used to arrive at overall generalisations. The types of data collected include text, pictures or sounds since interpretation of its meaning is in text or images (Bogdan & Taylor, 1975; Nissen, 1985; Gaillers, 1992; Hussey & Hussey, 1997; Lee & Baskerville, 2003).

Scholars have described qualitative analysis as being subjective in nature since it underlines the meanings, experiences and description. Further, the research strategy is usually unstructured and open, as it allows for generalisation and to validation or check reliability of findings through verification. Data collection process is a social interaction that involves the researcher and the participants and they are analysed by using any or a combination of the research purpose – descriptive, exploratory, predictive, or analytical. This explains the need for interpersonal skills of the researchers to understand the importance of available information for this research methodology. Qualitative evidence sits alongside quantitative measurement in giving a full picture of outcomes; however it offers insights into the experiences of respondents and the effects on them that quantitative data cannot. In addition, Surveys and questionnaires are common ways of collecting qualitative data, and can also be used to generate qualitative data. The qualitative data to be analysed are anecdotal i.e. subjective in a general sense but not numerical. The researcher thus explores both interviews and questionnaire survey to explore e-Government implementation using multiple case studies (Creswell, 1994; Naoum, 1999; Saunders *et al.*, 2003).

4.3.3 Adoption of Qualitative Analysis Research Methods

The phenomenon of e-Government implementation is relatively new and there is little empirical research information available on its adoption in developing countries. Thus the researcher had to rely on reviewing literature, and weighing the strengths and weaknesses of both quantitative and qualitative research methods, in order to apply the most appropriate method efficiently and effectively. However due to the nature of the data required and the research focus for this study, qualitative approach is the preferred methodological. This would enable examination of full context and researcher would be able to interact with participants. Data would also be collected face-to-face with participants, with the opportunity of observation during the survey (Brewer & Hunter, 1989; Patton, 1990; Naoum, 1999; Johnson & Turner, 2002; Johnson & Christensen, 2004).

Scholars have emphasised there is no best methodology neither is there an ideal solution, but only series of compromises (Checkland, 1987; Patton, 1990). Since the research study is being carried out within the context of developing countries, this would require qualitative techniques research whereas quantitative techniques research concerns with

cause and effect relationship. In summary, the main reasons for opting for the qualitative approach are as follows:

- Few empirical research materials on e-Government implementation in developing countries within the context of government-to-employee (G2E), especially that e-Government is still relatively new. The qualitative approach would enable deeper understanding of the implementation process, which would allow for building of theories and introducing complexities of the implementation process
- Research approach fits perfectly into this research work since it is inductive, specific instances that could be used to arrive at overall generalisations. It would also play an important role in development of a conceptual framework – which is not suitable for quantitative approach where focus is on hypothesis testing.
- Since there are limited research materials in this area of study in developing countries, researcher would benefit from adopting the qualitative approach where the research strategy is unstructured and open. Qualitative research also allows ordinal use of questionnaire for natural ordering and ranking of qualitative data – which is not limited to only quantitative data (Lemanski & Overton, 2011)
- This approach is most suitable for a case study approach, which focuses e-Government implementation in a developing country like Nigeria. In addition, the data sources would include documentation, interview, questionnaire, and where necessary, observation. This is because e-Government implementation requires the close connection with the people and organisation, which would be most effective through interviewing and observation.
- The aim of qualitative approach, according to Collis and Hussey (2003), is to look for patterns, ideas or hypotheses, rather than testing or confirming hypothesis. Hence, the rationale behind this research work is to identify and evaluate factors that would enable the researcher employ research strategy and plan for developing theories and models for successfully implementing e-Government systems within IT/IS environment.

Based on the available facts and weighing the strengths and weakness of both methodologies, the researcher was satisfied that the qualitative approach was most appropriate. Table 4-2 below compares qualitative with quantitative research:

No	Characteristics	Qualitative Analysis	Quantitative Analysis
1	Approach	Inductive	Deductive
2	Purpose	Describing multiple realities, developing deep understanding, theory building, capturing everyday life.	Theory testing, prediction, establish facts, hypothesis, testing.
3	Research Focus	Examines full context, interact with participants, collects data face-to-face with participants, observation.	Isolate various, uses large samples, often anonymous to participants, uses tests and formal instruments.
4	Research Strategy	Unstructured and open	Structured and closed
5	Research Plan	Begins with initial idea that evolves as researcher learns more about participants and setting flexible, tentative proposal.	Developed before study is initiated, structured, formal proposal.
6	Research Methods	Action research, case study research and ethnography. Qualitative data sources include: Observation and participant, observation, interview and questionnaire, documents and texts, and researcher's impression and reaction.	Survey methods, laboratories, experiments, formal methods and numerical methods such as mathematical modelling.
7	Nature of Data	Rich, deep and complex	Hard, rigorous and reliable
8	Data Analysis	Mainly interpretive, descriptive	Mainly statistical, quantitative

Table 4-2) Comparison between Qualitative and Quantitative Research

4.4 Research Strategy

Research strategy is defined as a plan of action that gives direction to the researcher's efforts, enabling the research to conduct research systematically rather than haphazardly. Academicians have considered the determination of an appropriate research methodology to be an important element in a research study. Research strategy gives the overall direction of the research including the process by which the research is conducted. It is also regarded as the general plan of how the researcher will go about answering the research questions, or a general orientation to the conduct of research (Remenyi *et al*, 2003; Bryman, 2008; Saunders *et al*, 2009).

Orlikowski & Baroudi (1991) highlighted six research designs as: survey; case study; laboratory experiment; field experiment; action research and others – articles that are practitioner-oriented, non-experimental pieces, or descriptive / argumentative. However, Denscombe (2003) summarised four main research strategies that could be adopted in practice as: case study; historical research; survey research and experimental study (Galliers, 1991; Yin, 1994; Klein & Myers, 1999).

4.4.1 Case study

Case study is described as collection of considerable details, from multiple sources about a particular, contemporary phenomenon within its real-world setting, where the boundaries between the phenomenon have not been clearly evident. This type of research study generally uses detailed contextual analysis of a single individual, group and event to explore underlying principles. The case study inquiry usually relies on multiple sources of evidence (Yin, 2009).

4.4.2 Historical research

Historical research literarily means the method of systematically examining past events to give an account; it includes interpretation to recapture the nuances, personalities, and ideas

that influenced these events. Historical research is thus the act of researching the events that have happened in history or to communicate an understanding of past events. An advantage of this research type is that can display patterns which had occurred in the past and over time that can help in understanding where we came from and what kinds of solutions we have used in the past. Historical research is the process of systematically examining past and current events to discern the meaning of events (Leedy, 1997).

4.4.3 Survey research

Survey research is described as a method of sociological investigation that uses question-based or statistical survey to collect information about how people think and act. Survey research is useful for documenting existing community conditions, characteristics of a population, and community opinion. This type of research is one of the most important areas of measurement procedures that involve asking questions of respondents. Academicians have described it in many ways. For instance, Rates (2004) defines survey research as a means of determining and explaining practical phenomena.

Survey research has its origin from social survey carried out in is common in Victorian Britain by social reformers to collect information on poverty and working class life. Although it has been employed for studies such as health services, survey research still remain widely used in applied social research. T+he researcher makes use of questionnaires to simplify the questions to be answered and to consider the samples to be analysed, as part of survey research. This forms part of the multi-methods triangulation necessary for developing richer data analysis (McClure, 2002; Lemanski & Overton, 2011)

4.4.4 Experimental study

Experimental study includes both laboratory and field experiments. It applies a research activity under controlled conditions and environments to explain “cause and effect” relationships. Whilst the laboratory relates to studies carried out within a designed, controlled environment, and special treatments of different groups to contrast the precise

relationships among variables; Field experiments however are conducted in real-world situation, since the object of study is subjected to direct observation by the researcher. Overall, the experiment study endeavours to be responsible for the research situation through the study, and assuming certain input variables which are suspicious as the cause of whatever change has been taken place within the investigation design (Leedy, 1997; Klein & Myers, 1999; Walliman, 2001).

Saunders *et al* (2009) have argued that for any research study, its strategy has to be carefully selected based on the following: research questions and objectives, the extent of existing knowledge on the subject area to be researched, the amount of time and resources available, and the philosophical underpinnings of the researcher. In another vein, Yin (2003b) suggested three conditions for selection of appropriate research strategy; the type of research question, the extent of control an investigator has over actual behavioural events and the degree of focus on contemporary or historical events.

4.4.5 Justification of Adopting Case Study Research

In selecting the appropriate research strategy, the research has applied the conditions recommended by Yin (2003), which is based on the research questions to be addressed, as highlighted in Chapter 1) and the context of the research which is public sector organisations in the developing countries. Researcher is also aware that choosing an appropriate research approach for an Information System (IS) research is difficult since it has a multi-disciplinary field. However due to the research objectives and the type of data required for this research, which relate to development of conceptual framework for evaluating e-Government implementation process, in the developing countries context, the researcher intends to highlight the factors influencing e-Government implementation and identify the role and activities of the key actors involved at every stage of the development life cycle. As a result of the limited research in this area, and the need to be subjective, the case study strategy is the preferred strategy. In addition, case study research has been advocated as a valid research strategy in management information systems and as a distinctive evaluation tool with the ability to adapt to the availability of different types of evidence, and to assess outcomes and test casual and rival theories.

Researchers have used the case study research method for many years across a variety of disciplines. The research phenomenon is interpretive as it aims at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context. Case study is however the most appropriate research approach for studies that aim at addressing questions and where the research requires theory building such as;

‘What’ – what are the main factors influencing e-Government implementation in developing countries,

‘Why’ – Why do organisations not assess the impact of changes before proceeding to the next implementation stage in the development life cycle, and

‘How’ - How are decision-makers able to identify, and address any challenges arising from change management in respect of the successful implementation of e-Government system.

For this research study, the strategy adopted was case study of three public service organisations in Nigeria since the research purpose include, identification and analysis of role of main actors, and to develop and validate the conceptual framework. Attempts were made to review secondary data that already existed. Based on the analysis of the findings, researcher would be able to determine whether or not conclusions could be drawn, that would address some, if not all of the research questions. The outcome was useful in determining whether or not to use primary data. Irani *et al* (1999) have reported case study strategy to be necessary for establishing valid and reliable information, or research findings, which add to the accumulation of knowledge about processes within a business unit.

Table 4-3 below summarises the research approach in terms of the dimensions undertaken and the description of activities undertaken:

	Research Dimension	Description
1	Phenomenon - Phenology (Psychology)	<ul style="list-style-type: none"> • Attempts have been made to develop e-government systems to support and improve the effectiveness of government activities and to provide e-services for the citizens and external users. However some initiatives are still in infancy stages with little application to the developing countries. • There is no standardise methods for implementing e-government systems, as they vary from countries to countries and academicians have developed conceptual framework based on there IS/IT environment. These therefore make it difficult to have internationally accepted methodologies to measure and compare the principles and strategies for implementing e-government system.
2	Epistemological stance (Philosophy)	<ul style="list-style-type: none"> • Interpretive: Interpretive studies generally attempt to understand phenomena through the meanings that people assign to them. Interpretive methods of research in IS are ‘aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context’ (Walsham, 1995)
3	Research Questions	<ul style="list-style-type: none"> • What are the external and internal factors influencing e-Government implementation in public sector in the context of developing countries in order to bring about transparent and generally acceptable system? • How do these factors and characteristics – benefits, barriers and risks influence e-Government implementation and what implications may emerge from this implementation? How are we able to rank and map these factors/characteristics in order of priorities, and whether or not we are able to identify new factors/characteristics that have not been discussed in the review of literature? • Who are the key actors involved in e-Government implementation process, and what are their main activities throughout the development life cycle? How are decision-makers able to identify, and address any challenges arising implementation of e-Government systems including change management issues?

4	Research Aim	<ul style="list-style-type: none"> The aim of this research is to investigate what factors should guide successful implementation of e-Government system in ICT environment in the developing countries.
5	Theory	<ul style="list-style-type: none"> Institutional Theory: Institutional theorists assert that the institutional environment can strongly influence the development of formal structures in an organization, often more profoundly than market pressures. The net effect of institutional pressures is to increase the homogeneity of organizational structures in an institutional environment (DiMaggio & Powel, 1983; Currie, 2002) Kurt Lewin's Change Management Theory (Lewin, 1947)
6	Other Models	<ul style="list-style-type: none"> There are four identified comprehensive barriers to e-Services development projects as strategic, policy, technological and organisational [Comprehensive Barrier model; Lam (2005)] Benefits and barriers associated with e-Government should be considered as factors influencing the implementation process of e-Government [Driver-Barrier model; Hammed <i>et al</i> (2008a)] For any country's economic development, government, technologically-advanced countries, company and users have roles to play, with government having the major role [Three Quarter Moon model]
7	Unit of Analysis	<ul style="list-style-type: none"> Public Sectors organisations; context Government ministries, agencies and parastatal including IT departments Housing and Land department in government E-Government project team practices
8	Institutional Focus	<ul style="list-style-type: none"> Efficiency Transparency External legitimacy Behavioural irregularities

Table 4-3) Research Approach: Selection of e-Gov Implementation Systems

4.5 Research Methodology: Research Design

The researcher employed appropriate research design to collate data in order to address the methodological issues as identified in the research problem. Scholars have supported the use of research design, which is often viewed as a structured set of rational decision making choices or guidelines for generating valid and reliable research results, and for ensuring information is obtained through objective procedure and its relevance to the research problem. Thus research design is concerned with enabling a problem to be researchable by setting up a study in a way that will produce specific answers to specific questions (Hakim, 1987; Vogt, 1993; Straub *et al*, 2001; Cavana *et al*, 2001; Hamed, 2009; Alhujran, 2009).

Whilst literature identifies a number of interpretations of research design, researcher has concentrated on Oppenheim's (1992) by describing it as a strategy (or basic plan) of the research, and the rationale that enables the feasibility and validity of drawing broad conclusions from it. Therefore the current research problem tackles the implementation factors influencing e-Government systems in developing countries, using case study research approach focusing on Nigerian public sector organisations.

The research aim is to evaluate the principles that guide successful e-Government implementation within the context of developing countries. This will be achieved through development of a conceptual framework that will assist decision makers and implementer of changes in implementing e-Government systems in Nigeria. The conceptual model is also expected to serve as frame of reference for academicians and researchers to implement e-Government in other developing, as well as developed countries. (Yin, 1994; Saunders *et al*, 2003; Abdalla, 2012)

The research consists of the background theory which enables definition of the problem and review of relevant literature. The next research stage is the focal theory where theoretical analysis and conceptual framework are developed. Based on review of literature and research gaps identified, the researcher was able to develop and define the research questions; which are as follows:

- a) What are the external and internal factors influencing e-Government

implementation in public sector in the context of developing countries in order to bring about transparent and generally acceptable system?

- b) How do these factors and characteristics – benefits, barriers and risks influence e-Government implementation and what implications may emerge from this implementation? How are we able to rank and map these factors/characteristics in order of priorities, and whether or not we are able to identify new factors/characteristics that have not been discussed in the review of literature?
- c) Who are the key actors involved in e-Government implementation process, and what are their main activities throughout the development life cycle? How are decision-makers able to identify, and address any challenges arising implementation of e-Government systems including change management issues?

As explained in sub-section 4.2.2, the researcher was able to select interpretive approach since it enables the adoption of a range of methods. It is also inductive, thereby enabling findings and specific instances used to arrive at overall generalisations. As a result, the researcher adopted qualitative analytical method that supports development of deep understanding, theory building, and capturing everyday life. Thus qualitative analysis would play significant role in the development of conceptual framework for e-Government implementation in developing countries. The researcher was able to identify and develop suitable research methods and to collect data through interview, questionnaire and document analysis, collected from the case study research.

The data theory consists of analysis and interpretation of qualitative data. Data were successfully collected and collated through identification and development of suitable units of analysis. This involves conducting multiple case study interviews and triangulation through multiple sources. The data were analysed and interpreted by comparing primary research data to theoretical model and validating the conceptual framework that was developed. In drawing conclusion, the researcher was able to refine and develop model for e-Government implementation, and highlighting contribution to the theory and practice of e-Government implementation and body of knowledge in information system (IS). Figure 4-2 below shows the research design from background theory to research contribution:

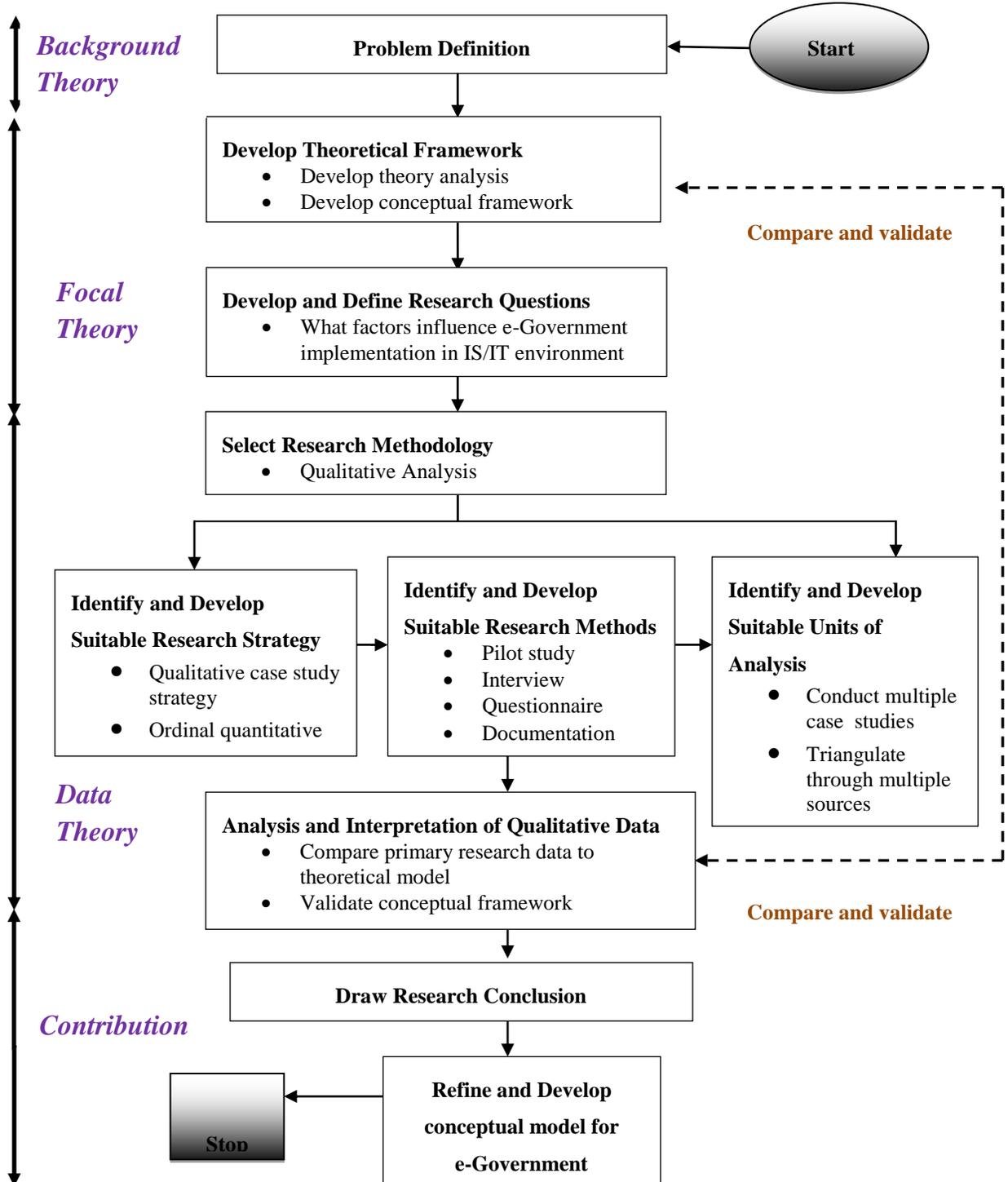


Figure 4-2) Research Design for E-Gov Implementation (in Developing Countries)

4.6 Research Collection Strategy

Based on the research objective of developing conceptual framework that would allow researcher to be able to identify the e-Government implementation factors and the role and key activities of the actors at every stage of the development life cycle, the case study strategy has been adopted. This research strategy generally provides the researcher with the opportunity to investigate the organisation's information systems in depth through a series of questionnaires, interviews, document analysis and observation. According to Galliers (1992), case study can be used to describe the relationship that exists in reality, usually within a single organisations or organizational grouping.

Primary and secondary data are the two types of data .Whilst primary data are raw data that could be collected through interviews, questionnaires, survey or observation, secondary data on the other hand are collected from review of documents such as books, periodicals, articles and on the internet. Secondary data can also be assembled faster than primary data, since the data are readily available in most instances. There are many techniques and methods for collection of data. However for this case study research, data could be collected through six main sources: Documentation, archival records, interviews, direct observation, participant-observation and physical relic (Yin, 1994; Zikmund, 2000; Saunders, 2003).

Table 4-4 below summarises the research methods used and their outcomes for this study, explaining along with the aim and objectives, techniques adopted, activities – data collection sources and outcomes.

	Aim and Objectives	Research Approach	Techniques	Activities	Outcomes
1	Review and analyse e-Government implementation literature	Qualitative	Secondary data	Books, Journals, Reports, CDs, website	Chapter two
2	Develop theoretical framework (a) Develop theory analysis (b) Develop conceptual framework	Qualitative / ordinal quantitative for questionnaire data collection	Secondary	Books, Journals, Reports, CDs, website	Chapter three
3	Investigate factors, benefits, barriers, and risks influencing e-Government implementation, and role of key actors involved in developing countries - Nigeria	Qualitative / ordinal quantitative for questionnaire data collection	Primary data	Interview, Questionnaire Documentation	Chapter five
4	Develop implementation frame of reference and good practice guidelines for e-Government at every phase of the development life cycle	Qualitative / ordinal quantitative for questionnaire data collection	Secondary / primary data	Books, Journals, Reports, Website, Interview, questionnaire Documentation	Chapter six
5	Develop models to assist e-Government implementation in developing countries	Qualitative / ordinal quantitative for questionnaire data collection	Secondary / primary data	Books, Journals, Reports, Website, Interview, questionnaire Documentation	Chapter six

Table 4-4) Research Method Techniques and Outcomes

4.6.1 Literature Review

The literature identifies a number of interpretations of research design. Set out below are the most significant and recognised views. It demonstrates the diversity of methodologies and research instruments available that can help with the generation of data and information relating to particular research topics.

The planned literature review and examination of feasibility and necessity of primary data in order to test the research questions mentioned in earlier section. This includes learning about the existing system in the chosen case study – Nigeria through reading and assessment of relevant e-Government services, to describe the current system. This was necessary to enable us propose e-Government implementation strategies for the government, other decision makers, and implementers of changes, to ensure successful implementation, particularly in the public sector organisations in developing countries.

The secondary data for the purposes of this research covers strands such as review of books, reports, publications and seminar reports focusing on the e-Government implementation factors and characteristics – benefits, risks and barriers, and drawing experiences from both developed and developing countries that are at advance stage compared to the case study - Nigeria.

Further, the research was conducted by applying a combination of theory and models such as exploring the institutional theory and considering Lam (2005)'s comprehensive framework for identifying barriers to implementing e-Government (strategic, policy, organisation and technology). These barriers are essential for provision for public services. Whilst this framework was also used in conjunction with driver-barrier model (postulated by Hamed *et al*, 2008.), the Three-Quarter Moon Model (Hamed, 2009) was also applied to identify the roles of key actors involved and their main activities at every stage of the development life cycle . The analysis enabled the proposition of e-Government implementation framework and proffering solution for improvement of e-Government systems in Nigeria.

4.6.2 Case Study

Researcher has explained in detail in sections 4.4.5 the justification for adopting case study research. It is the most common qualitative method that is particularly well suited to be used in information systems research, which relates to this research study in the area of identifying, and ranking in order of priority, e-Government implementation factors in government ministries, agencies and parastatal, as well as good practice guidelines at every stage of the development life cycle and parastatal, with emphasis on organizational/institutional context (Benbasat *et al*, 1987; Irani *et al.*, 1999; Orlikowski & Baroudi, 1991).

4.6.2.1 Single or Multiple Case Studies

Scholars have classified case studies into single, which is holistic in nature, or multiple unit of analysis, which is embedded. In single case study, data from one instance is enough to achieve the research objective, whereas comparative case study requires data from two or more instances to achieve the research objectives. Case study mainly relates to real life context, whilst experiment on the other hand is usually manipulated. There is no standard specification for selecting the number of fieldwork to be undertaken, neither is it straightforward to determine the fieldwork will be carried out. Thus the number of cases to be selected would depend largely on the type of concepts that are acknowledged; however some scholars have recommended one to three cases (Yin, 2009; Stuart *et al.*, 2002; Dul and Hak, 2008; Dyer and Wilkins, 1991).

The researcher has therefore selected three cases based on the fact that the proposed framework consists of more than one concept. Multiple case studies or single parallel case study will give the opportunity for better understanding of the concepts – external and internal factors, characteristics in terms of e-Government benefits, barriers and risks, as well as key actors and good practice guidelines for implementation throughout the development life cycle. The researcher therefore focused on different level of organisations consisting of small, medium and large, and determines what phase of development the organisation is in implementing e-Government services.

The case study research strategy enables the researcher to outline plans on how to answer the research question. Three public sector organisations in Nigeria – West Africa have been selected to test the proposed the developed conceptual framework in Chapter 3. The three organisations selected are government ministries and parastatal, with different organisational size and different level in terms of ICT implementation.

Attempts were made to look for secondary data that already existed. This helps in deciding whether or not, there would be any preliminary conclusions to be drawn (say for instance, that the implementation of electronic government systems in the chosen case study is in a mess or the role of key actors could not be clearly identified). The outcome was vital in deciding whether or not to use primary data.

4.6.2.2 Sampling

According to Saunders *et al* (2000), sampling is a technique that reduces the amount of data needed to collect by taking into consideration only data from a sub-group as opposed to all possible cases or elements. Judgmental sampling is often used in case study research because it enables judgment to be used to select the cases that will relate to the research objective sand address the questions. Although the research question and objectives are about e-Government implementation in Nigeria, difficulties were experienced in terms of time and cost involved in collection of data in Nigeria.

As a result of this, steps were taken to sample the senior managers, decision-makers and employees with different work experiences but with knowledge of ICT acted as representatives of the Nigerian context. The number of the sample is relatively small (30 interviewees), which could be considered as one of the limitations. This supports the need to use questionnaire response as back-up. However the targets were decision makers and implementer of changes and some junior officers as far as e-Government implementation is concern.

Having identified the key decision-makers for e-Government implementation in Nigeria, the researcher was able to highlight issues such as factors, benefits, risks, barriers and role of e-Government actors, consents were obtained from the respondents through the responsible authorities at these case study organisations.

4.6.2.3 Interviews

The interviewer also adopts the qualitative research interviews, as this technique enables the researcher to understand the meaning of what the interviewee says. It is central to most qualitative data collection efforts and flexible as interviewer can adapt the situations to each subject. Interviewer also has the benefit of following up on incomplete or unclear responses by asking additional probing questions and it has a high response rate since most people will agree to be interviewed (Lee, 1991; Kvale, 1996; Burns, 2000; Robson, 2002; Miller & Brewer, 2003, Gillham, 2005).

Scholars have classified three styles of conducting interviews: unstructured – open-ended questions, that allow researcher to observe the direction the interviewees take things in their response; unstructured interview is used where the interviewer is able to probe into answers and adapt to different interviewees and situations; semi-structured are focused interviews, having predetermined questions for all respondents to answer in similar way, with opportunity to complete open-ended questions (Merton & Kendal, 1946; Whipp, 1998; Naoum, 1999; Saunders *et al* 2003; Stewart & Cash, 2006).

In similar vein, McNamea (1999) emphasized interviews are useful particularly for obtaining the story behind a participant's experiences and they enable interviewer to pursue in-depth information around the topic. Kvale (1996) describes the types of interviews as: Informal, conversational interview – The interview type has no problem questions being asked to enable the interview to remain as open and adaptable.

General interview guide approach – This allows for the same general areas of information to be collected from each interviewee. This method allows some form of freedom and adaptability in obtaining the information from the interviewee, thus providing more focus than the conversational method.

Standardised, open-ended interview – Interviewee asks the same open-ended questions to all the interviewees, thus making the interview to be quicker and more easily analysed and compared.

Closed, fixed-response interview - This interview format is good for those not practiced in interviews as it enables all the interviewees to ask the same questions, and choose the answers from among the same set of alternatives (Naoum, 1999; Stewart & Cash, 2006).

The researcher however conducted a semi-structured interview, consisting of both closed and open-ended questions approach. These were necessary to collect valid (credible) and reliable (dependable) data that would allow verification of the research questions and objectives. The researcher interviewed the participants at their respective office, most of whom either have knowledge of e-Government systems or are decision-makers. Also interviewed are participants who are implementer of changes. Although there are no standard samples to be used for case study research, researcher was able to interview 27 respondents despite planning for 30 interviews. There were no tape recording, as the same set of questionnaires were used for all the interviewees, since the questionnaire was semi-structured, containing both closed and open-ended questions.

Table below 4-5 highlights the organisations initially selected for interviews for this research work whilst table 4-7 analysis the role of respondents interviewed in the three case study organisations:

No	Abbreviation	Organisation	Survey Conducted	Remarks
1	NeGSt	National E-Government Strategies	No	Organisation going through complete re-structure
2	FMLHUD	Federal Ministry of Lands, Housing and Urban Development	Yes	Case study: survey conducted with staff and managers at the Cadastral Survey Unit), under the Office of the Surveyor-General of the Federation
3	FELIS	Federal Land Information System (Programme under Lands & Housing Dept)	Yes	Questionnaire survey with Senior officer
4	NITDA	National Information Technology Development Agency	No	Staff and managers on overseas training
5	NESREA	National Environmental Standards and Regulations Enforcement Agency (Parastatal under Federal Ministry of Environment)	Yes	Case study: Face-to-face interview plus questionnaire, conducted with junior, middle and senior staff
6	SLG	Sagamu Local Government	Yes	Case study: Face-to-face interview plus questionnaire survey conducted with senior managers and Junior staff
7	NCAA	Nigerian Civil Aviation Authority	Yes	Face-to-face interview plus questionnaire

Table 4-5) List of Organisations for Case Study Research and Outcome

4.6.2.4 Questionnaire

Questionnaire was invented by Sir Francis Galton, as a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. It was initially designed for statistical analysis but is now being used for other types of analysis. It has the advantage of flexibility in collecting data for both scientific investigations and as an economic method. Questionnaires are used to measure attitudes, facts, or values held by individuals. It is the right technique for obtaining data in relation to institution's perception of e-Government implementation in the context of government to employee (G2E). Thus qualitative data are collected through closed and open-ended sets of questions in the questionnaire (Root & Draper, 1983; Walliman, 2001; McClure, 2002; Zaharias & Poylymenakou, 2009).

The questionnaire was developed based on the literature and it was modified by reviewing the case studies. Because it is a self-reporting data collection instrument that enables the respondents to complete as part of the research study. The essence of the questionnaires was to collect relevant information about the respondents' thoughts, feelings, attitudes, belief, values, perceptions, personality, and behavioural intentions; and to measure many different kinds of characteristics. The questionnaire is completely dependent on the response of the respondents (Bell, 2001; Ghauri & Gronhaug, 2002; Johnson & Christensen, 2004).

For the purpose of this research study, the primary analysis was conducted by using questionnaires as tool to gather organisation data from respondents who were asked to fill in the questionnaire in English language. The factor considered for adopting questionnaire for qualitative (and quantitative) research is ordinal, having natural ordering that allows general ranking of e-Government implementation characteristics and factors – say from scale 1 to 10 (See Appendix 3 & 4) In addition to the paper-form, web-based questionnaires were produced through a company known as Survey Monkey, and they were sent to respondents online. This is to enable the respondents to complete the questions using this user-friendly and safer method and return to the form through the online system

for easy completion and the questionnaire would take about 20 to 25 minutes to complete whilst their privacy and confidentiality was guaranteed. Each case study organisation was to complete 50 questionnaire. Other research instruments were interviews, and documents collection. The research work was carried out in approximately four to eight weeks, due to available resources (McClure, 2002; Lemanski & Overton, 2011).

4.6.2.5 Pilot Test

Pilot study is a technique used to test the design or instrument prior to carrying out a research. It involves pre-testing a research tool such as new data collection, or testing an idea of hypothesis. The advantage is that it increases the likelihood of success in the main study. Thus they are used as feasibility studies for making sure research ideas or methods are sound.

For the purpose of this research study, a pilot test of the questionnaire was conducted using both online ‘web-based’ and paper-form in order to check if there is need to refine it and to ensure the questions capture the research questions and objectives (Ghuri & Gronhaug, 2002; Saunders *et al.*, 2003; Lewis-Beck *et al.*, 2004; Brace, 2004).

The pilot testing provided the researcher the opportunity to identify and make corrections on a wide range of potential problems with the research questionnaire. These problems included refining questions that the respondents could not understand. The web-form questionnaire was completed and returned by two directors and two middle managers at NESREA. This enabled the researcher to revise the questionnaire and make it more user-friendly, with some open-ended questions that would enable the respondent give their opinion and thoughts on the current issues impacting on e-Government implementation in their organisations. Some of the questions relating to land administration systems were deleted as it was difficult to collect information from the government departments and agencies that deal with land administration.

4.6.2.6 Documentation Analysis

Document analysis is a social research method and is an important research tool in its own right and is an invaluable part of most schemes of triangulation. The detailed examination of documents produced across a wide range of social practices, taking a variety of forms from the written word to the visual image. Documentation is important because of its location in the historical circumstances and a wide range available for social research purposes. According to Oates (2006), documents could be classified as found documents (already existing documents in organisations such as personnel or public records) or research-generated document (created by the researcher for the purposes of the research such as notes and images).

Documentary works are useful for verification of the correct spelling and titles or names and structure of the organisation. It usually involves reading lots of written material that relates to some aspect of the social world. Academicians have described the common source of documents as public records, the media, private papers, biography and visual documents. However for this research study, researcher's emphasis is on working papers, archival records, e-Government strategic plan and progress reports, including other documents that provide information in respect of the background of the case study organisations. Archival records include public use documents, service records, maps, charts and survey data (Jankowicz, 2000; Sekaran, 2000; Yin, 2003; 2009).

4.6.3 Selection of organisations

In selecting the appropriate organisation suitable for this survey, the researcher considered the size of the organisation, which would enable determination of the implementation phase of their e-Government serves during the development life cycle. Approvals were received from appropriate authorities within the institution and the selected organisations (see Appendices 1, 2 & 3).

For this research three public sector organisations were chosen. The first organisation selected was the Federal Ministry of Housing, Land and Urban Development in the Federal

Capital Territory, Abuja since it would fit into the level of intervention – institutional perspective in terms of Government –to-Employee (G2E). The large size of the federal ministry would enable researcher to study the relationships between the employers and the employee especially before, during, and after the implementation of e-Government systems. The ministry also has various departments that use ICT systems on regular basis, whilst some of these departments have the knowledge and experience of e-Government implementation. These include Federal Land Information Systems (FELIS) and Office of the Surveyor-General of the Federation. FELIS uses a system that captures information on federal government lands throughout the country in a functional digital format. The Office of the Surveyor-General use geographical information systems (GIS) as a mapping tool to collect data, store, manage, analyse and produce useful information.

The second organisation selected for this research work is the National Environmental Standards and Regulations Enforcement Agency (NESREA) because during the pilot study, the researcher was able access information and communicate effectively with the staff and managers in the agency. NESREA is a governmental agency based in Abuja, that was us as a small to medium scale organisation and it role of the organisation is to ensure the country is environmental friendly. NESREA is responsible for enforcing all environmental laws, guidelines, policies, standards and regulations in Nigeria, as well as enforcing compliance with provisions of international agreements, protocols, conventions and treaties on the environment to which Nigeria is a signatory.

As a result, the organisation work closely with and make regular use of ICT infrastructure with other governmental agencies and parastatal such as the Nigerian Customs, Federal Airport Authority of Nigeria (FAAN) and Nigerian Seaport Authority to track and combat illicit goods and services brought into the country.

Sagamu Local Government was the preferred medium scale organisations due to the size of the organization and accessibility to relevant literature and human resources. However, research method initially adopted was the use of questionnaire as it was very difficult to carry out face-to-face interviews with the staff and senior officers who were busy with their

daily functions. The researcher eventually interviewed some of the junior and senior staff after going back to the Chairman of the local government.

Table 4-6 below outlines the selection criteria for determining appropriate organisations chosen for case study research.

Selection of Organisation			
1.	Level of intervention	Government to Employee (G2E)	
2.	Organisational size	Large	Federal Ministry of Housing, Land, and Urban Development
		Medium	Sagamu Local Government
		Small	National Environmental Standards and Regulations Enforcement Agency (NESREA), Abuja
3.	E-Government Development Phases	Phase 1	Pre-Implementation Stage
		Phase 2	During Implementation
		Phase 3	Post-Implementation

Table 4-6) Criteria for Selection of Organisations for Case Study Research

4.6.4 Research Visits

In addition to the online survey conducted through the use of web-form questionnaire, the researcher conducted field trip to the organisations chosen for case studies. The researcher was unable to conduct survey in some of the targeted organisations due to the reasons explained in table 4.6 above. As a result the research case study was focused on the three main organisations – Federal Ministry of Housing, Land and Urban Development, Abuja; National Environmental Standards and Regulations Agency, Abuja and Sagamu Local Government, Sagamu, Ogun State.

However research visits were successfully carried out in three public sector organisations, as described in table 4.6. At the Federal Ministry of Housing Land and Development, the researcher was able to conduct 8 face-to-face interviews with the respondents who were chosen across the staff-management level. The director at the Office of accountants General of the Federation gave the researcher the permission to conduct the face-to-face interviews and questionnaire responses. Two directors and two chief officers were interviewed whilst two middle managers and two junior staff members were also interviewed. In addition, 23 responses were received from a combination of online and paper-form questionnaire completion from the ministry (only 4 questionnaires were completed online).

NESREA was chosen due to easy accessibility and flexibility of the staff. The senior officers were very supportive, friendly and were able to provide information and literature required. In summary, 34 questionnaires were completed by the staff and managers, of which only 6 were web-form. The researcher was also able to conduct face-to-face interviews with junior and senior officers of the organisations in both NESREA.

The researcher initially had difficulties receiving the questionnaires back from the respondents from Sagamu local government. After constant chasing up, the feedback was received from the respondents as the researcher had to liaise directly with the Chairman of the local government – who had given the permission to carry out the survey. 10 staff and managers were interviewed whilst there were 28 paper-form questionnaires obtained; there was no web-form questionnaire completed by any staff of the local government.

As a back-up, the researcher conducted face-to-face interviews with
Table 4-7 briefly illustrates the research visits and number of participants:

	Place of visit	Date of Research Visit	Respondents Role	Face-to-face Interviews		Questionnaire Response	
				Planned	Conducted	Sent	Recv'd
1.	Federal Ministry of Housing, Land and Urban Development	21 st – 25 th February 2013	* 2 X Director * 2 x Chief Officer * 2 x Middle Manager * 2 x Junior staff	10	8	50	23 (4 from web-form)
2.	National Environmental Standards and Regulations Enforcement Agency (NESREA)	25 th February – 1 st March 2013	* 2 x Director *4 x Deputy Director * 2 x Head of Departments *3 x Programme Manager/officer	10	9	50	34 (4 from web-form)
3.	Sagamu Local Government	4 th – 8 th March 2013	* 1 x Chairman * 2 x Special Adviser * 3 x Head of Department * 4 x Junior Staff	10	10	50	28 (Nil from web-form)
4.	Others: National Civil Aviation Authority (NCAA)	27 th – 28 th February 2013	* 1 x Head of Department	5	2	15	6 (Nil from web-form)

**Table 4-7) Research Visits to the Multiple Case Study Organisations
(in Nigeria)**

4.7 Data Collection

Data Collection is an important aspect of qualitative research study, as it involves the process of gathering and measuring information on variables of interest, in an established systematic fashion. This would enable the researcher to answer the research questions, test hypothesis and evaluate outcomes. Scholars have argued that data collection would make a case study research to be more rigorous and increase its power of interpretation is when it is addressed properly; and when researchers their fieldwork very well, they will be able to strategically question participants and take notes systematically of their qualitative research. It would also enable researcher to increase the rigour and reliability of this case study research since inaccurate data collection can impact the results of a study and ultimately lead to invalid results (Parikh, 2002: Bachman & Schutt, 2008).

Another benefit of data collection is that it consists of secondary data research, which would enable the researcher use conceptual model to appraise and analyse various factors and barriers in the study area as well as for primary data collection. Data collection approaches for qualitative research usually involves: Direct interaction with individuals on a one to one basis or direct interaction with individuals in a group setting. Since qualitative research data collection methods are time consuming, the research expects data to be collected from a smaller sample than would be the case for quantitative approaches, where large samples are collected. The benefits of the qualitative approach are that the information is richer and has a deeper insight into the phenomenon under research study.

Scholars have also argued that surveys and questionnaires are common ways of collecting qualitative data. Multiple methods were used for data collection by adopting ordinal quantitative analytical method to collect questionnaire data, which allows for natural ordering - general ranking of e-Government implementation factors and concepts. Since there were no statistical analyses conducted on any large samples, the researcher made use of Excel spreadsheets to analyse the research data gathered from the questionnaires. In addition, the focus of this research is to make general sense and not based on numerical or statistical data. As a result, tables and diagrams were deemed the most effective way to present the data collected through questionnaire and face-to-face interview.

Data were collected using combination of questionnaire survey and face-to-face interview from three government agencies and parastatal – Federal Ministry of Housing, Land & Urban Development (Office of the Surveyor-General of the Federation) and National Environmental Standards and Regulations Enforcement agency (NESREA), both based in Abuja, the Federal Capital Territory of Nigeria. The third public organisation was Sagamu Local Government, in the South Western part of Nigeria. The survey was carried out amongst staff and managers from low to high-level decision makers across the government agencies. The respondents were chosen randomly through lead contacts from individual organisations. The researcher applied multiple data sources as data and methodological triangulation within each case study is to preserve the reliability and validity of findings.

As mentioned in sub-section 4.6.4 above, the researcher had to choose fieldwork approach to enable gathering of in- depth information and seize the opportunities to learn about the research subject and to determine the field that would be more accessible and effective for the study (Boeije, 2010). The research visits were carried out between February 2013 and March 2013 as part of the initial stage for collecting data. The researcher was able to meet the Director of the Office of the Surveyor-General of the federation to seek his permission. A Chief Officer was then delegated to take responsibility of the survey, which was conducted using both face-to-face interviews and questionnaire survey. During this period, a total of 8 staff and manager were interviewed, which consists of 2 X Director, 2 x Chief Officer, 2 x Middle Manager and 2 x Junior staff. 23 questionnaires were fully completed most of which were collected by hand. One of the limitations experience during the study was that most of the respondents prefer completing the paper-form questionnaire to the web-form, which meant the physical presence of the researcher was very necessary to ensure good quality and volume of response were satisfactory. The researcher found out that most of the employees interviewed at the Office of the Surveyor-General of the Federation has vast knowledge of ICT and have usage of e-Government systems, especially in its application with geographical information systems (GIS).

The researcher also carried out face-to-face interviews with 9 junior and senior staff at NESREA - 2 x Director, 4 x Deputy Director, 2 x Head of Departments, and 1 x Programme Manager, and 2 x Programme Officers. The researcher discovered during the research visits that NESREA has a few e-Government programme is progress, one of which

was development of centralised database systems with the Nigerian Customs which is the advanced stage. Unfortunately because of time and the bureaucratic way of obtaining consent from larger size public organisation, the researcher was unable to have access to this e-Government initiative. More so, the Nigerian Customs was the lead for the programme on track and the information was not readily available. The researcher was able to gather information from respondents at Sagamu Local Government, after initially receiving resistance in terms of the staff not having time available for face-to-face and/or paper-form completion. In fact, none of the staff completed the web-form questionnaires that were sent to them in advance through the Chairman of the local government who had given the permission to carry out the survey. A total of 10 face-to-face interviews were conducted - 1 x Chairman, 2 x Special Adviser, 3 x Head of Department, 4 x Junior Staff, and 28 paper-form questionnaires were completed. Additionally, 2 staff were interviewed whilst 6 questionnaire responses were received from NCAA.

Data was collected using conceptual models of framework relating to use of e-Government implementation., and comparing conceptual models with the reality observed in the investigation ‘on the ground’, based on the system analysis of the implementation issues and evaluation of e-Government services in public sector organisations. The factors were ranked in order of priority, whilst attempt were made to try to identify new factors in terms of benefits, risks, barriers and good practice guidelines of e-Government at different phases of the development life cycle – at pre-implementation, during implementation and at post-implementation phases.

4.8 Data Triangulation in this Research: Case Study

Case study is known as a triangulated research strategy. Triangulation is a tool by which data can be validated, and they are the protocols used to ensure accuracy and alternative explanations. Triangulation arises as an ethical need to confirm the validity of the processes and to overcome the potential bias. Triangulation is a standard for data collection in case study research, which consists of the combined use of different methods to carry out study on the same phenomenon in order to substantiate the theory. Action research supports the employment of the use of questionnaires especially where it is impossible to interview every respondent.

Triangulation could either be a combination of qualitative and quantitative approaches within a single method, or a method that is neither purely qualitative nor purely quantitative. Multi-methods are useful when developing analysis that results in a richer data. McClure (2002) has identified interviews, observation, and questionnaires as three effective strategies to use in qualitative studies especially when appraising technical and operational training programs. It is argued that an appropriate application and evaluation of information collected using these three methods would result in effective outcomes, within the context of evaluating e-Government implementation process. As a result, multiple methods were adopted for collection of data for this research to ensure the research analysis, findings, recommendations and conclusions were consistent, valid (credible) and reliable (dependable). The multi-methods include: questionnaire, interviews, documentation, archival records, physical artifacts, and observations. (Patton, 1987; Flick, 2002; McClure, 2002; Yin, 2003, Johnson & Turner 2003)

A case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context especially when the boundaries between phenomenon and context cannot be drawn clearly or unambiguously. Multiple case studies were chosen using three public sector organisations. This is due to the following criteria:

- They are accessible
- They have established e-Government strategies in place
- They have a political commitment to environmental issues;
- They have hierarchical structures for decision making process.

The multiple case studies are embedded on studying various units within identifiable cases, and holistic - not comparing cases in their totality. The researcher has chosen this research strategy since the evidence from more case studies is more coercive. In addition, despite the fact that single case study allows rich description of primary data, full analysis and identification of the phenomena structure, it is believed to limit the generalisation of the conclusion or any model or theory developed, and could be seen as exaggeration of the available data (Lee, 1989a; Irani *et al*, 1999). Thus the researcher has adopted multiple case studies, using three public sector organisations, in support of the notions from some of the academicians that the number of sites or organisations ideal for case studies research should be between one and three. Although some scholars have argued that it could even be

between four and ten, depending on the number of critical casual variables proposed. (Eisenhardt, 1989; Stuart *et al*, 2002).

Table 4-8 illustrates methodological triangulation within each case study and interviewee level to sustain the dependability (reliability) and credibility (validity) of findings.

	Case Organisation	Triangulation Type	Sources	
1.	Federal Ministry of Environment, Housing, Land and Urban Development	Data	Progress reports/ strategic plan; Information leaflets	
		Methodological	Mutli-methods: Interviews & Questionnaire; Document analysis; Observation	
		Interviewee Level	High-level Management	Deputy Director
			Medium-level Management	Chief & principal Officers
Low-level Management	Junior Staff			
2.	National Environmental Standards and Regulations Enforcement Agency (NESREA)	Data	Pilot study; Information leaflets	
		Methodological	Mutli-methods: Interviews & Questionnaire; Document analysis; Observation	
		Interviewee Level	High-level Management	Directors Deputy Directors
			Medium-level Management	Head of Departments Programme Manager
Low-level Management	IT Analysts Junior Staff			
3.	Sagamu Local Government	Data	Interviews; Progress Reports; Observation	
		Methodological	Mutli-methods: Interviews & Questionnaire; Document analysis; Observations	
		Interviewee Level	High-level Management	Chairman Directors
			Medium-level Management	Special Advisors Head of Departments
Low-level	Junior Officers			

Table 4-8) Types of Triangulation Used in this Research

4.9 Case Study Protocol: Research Objectives and Schedules

A case study protocol is described as a formal document capturing the entire set of procedures involved in data collection for a case study. It is a tool that acts as an action plan with more than the survey instrument, thereby setting procedural rules and regulations for gathering of data. The protocol, amongst other functions, outlines the subject to be covered, highlights the questions to be addressed, and identifies the relevant data that are required during an interview. Thus the set of questions to be used in interviews is considered the core of the case study protocol.

A complete protocol will include the following:

- (a) The procedures for contacting key informants and making field work arrangements;
- (b) Explicit language and reminders for implementing and enforcing the rules for protecting human subjects;
- (c) A detailed line of questions, or a mental agenda to be addressed throughout the data collection, including suggestions about the relevant sources of data; and
- (d) A preliminary outline for the final case study report. The desired protocol should cover the range of behaviours to be followed by case study investigators throughout their field work and their interactions with those being studied.

For this multiple case studies research, it is essential a case study protocol is created before reaching the data collection stage as it would guide the researcher on how to collect the data. It would also allow other investigators to repeat the same case study in order to arrive at the same findings or results, and conclusions, thus having the ability to increase the reliability of case study research (Tellis, 1997; Remenyi *et al.*, 1998; Voss *et al.*, 2002; Lubbe, 2003; Yin, 2003; Al-Rashidi, 2012).

The protocol followed for the data collection was as follows: in the first instance, the researcher approached senior officers and directors in public sector organisations. The researcher approached two departments in the Federal Ministry of Environment, Housing,

Land and Urban Development – Director at the Office of the Surveyor General of the Federation and a Deputy Director at the Federal land Information System (FELIS).

The researcher also approached the Deputy General of the National Environmental Standards and Regulations Enforcement Agency (NESREA) who then delegated the activity to a Deputy Director. Further, the Chairman of Sagamu Local Government was approached who gave delegated responsibility to the Head of IT Departments.

A pilot study was initially conducted through web-based questionnaire. This was completed by four respondents – two Directors and two middle managers at NESREA before the questionnaire was refined and the final version used for the fieldwork survey. The questionnaire was completed using both web-form and paper-form whilst the respondents were selected mainly by the main contact at each of the case studies, comprising of senior, middle and junior staff across the public sector organisations, as explained in sub-section 4.7 and Table 4-7. Distribution of the questionnaire made use of the researcher’s wide network of professional contacts, which enabled seeking consent and assistance in the administration of questionnaires to the selected government officials.

Questionnaire was also distributed to some government agencies such as National Civil Aviation Authority (NCAA) and Central Bank of Nigeria (CBN) to complete and return. Whilst respondents completed and returned the questionnaires through paper form with a few through web-form, the researcher had to conduct face-to-face interviews with some of the respondents due to time constraint. It was only staff of NCAA who responded and no member of staff from CBN participated in either interviews or questionnaire survey. More so, the researcher had to respect their opinion as the respondents were not under any compulsion to complete all the sections of the questionnaire.

For the purpose of this research, the study would follow the protocol outline proposed by Yin (2003; 2009), which states that protocol is a key element for affirming the reliability of the case study research and should be in the following format:

- (a) Case study overview – investigated: objectives, issues, topics;

- (b) Fieldwork research procedures – credentials and access to sites, sources of information;
- (c) Research questions to be addressed – questions to be considered during data collection;
- (d) Case study research output – report or outline, format. This outline helped the researcher to map the key tasks as well as procedures that would take place during the case studies research. This would therefore provide guidelines for mapping the data collection in well-organised and consistent manner.

4.9.1 Case Study Overview

Scholars and practitioners have mentioned that case study overview should cover the background information about the research topic, objectives and questions; to assist anyone who may be interested in the research (Remenyi *et al*, 1998; Yin, 2009). The overview will enable the researcher to collect only the data required since it will only provide details of the research, which is the study of e-Government implementation in the public sector organisations. It will also enable researcher to concentrate on the main questions during the interviews, which have been summarised into the following issues:

- To identify the e-Government implementation process of that occurs in the case study organisations.
- To identify the key actors and activities involved during the implementation of e-Government stages.
- To identify the external and internal factors influencing e-Government implementation, and identify their validity with the conceptual framework for e-Government implementation (refer to Chapter 3).
- To identify the characteristics that would encourage (benefits), delay (barriers) or threaten (risks) the e-Government implementation.
- To identify the role of the decision makers (and stakeholders) at every phase of development and how they would address change management issues

- To prioritise the importance of these e-Government implementation factors and the key actors including the activities at every phase of the development life cycle – from pre- to post- implementation.

4.9.2 Fieldwork Research Procedures

Fieldwork is a process of social research in which the investigator attempts to enter into the universe of meanings and participate in the moral system of the host community. The approaches and methods used in field research vary across disciplines. The researcher is expected to have clear and well-planned process in place for handling unforeseen circumstances or events. For instance, where a respondent fails to continue with the interview or where relevant documents are not readily available or political or bureaucratic reasons precluding data required to be collected (Wax & Wax, 1980; Remenyi *et al*, 1998; Yin, 2003; 2009).

The fieldwork research procedures are highlighted as follows:

- Selecting appropriate case study organisation and defining who should be interviewed: The researcher attempted to scope the interviews within decision makers and implementers of changes in respect of IT in general, and e-Government in particular. The researcher ensures that senior staff were the first point of contact for each of the case study organisations to guarantee accessibility. The same sets of questions were asked all the interviewees, including their demography background in order to verify the data validation of the research.
- Identify appropriate data gathering research methods: Although questionnaires were given to the respondent, face-to-face interviews were conducted using semi-structure format. The same set of questions were available for the interviewees and the respondents completing both web-form and paper-form questionnaires
- Having adequate resources while in fieldwork: Researcher ensured that writing materials like note pads and pens were available in jotting down the important comments and when requesting for clarifications about certain observation during the field work. The respondents were not confident enough to allow recording,

which was one of the reason for using the same questions in the questionnaires for the interviews.

- Develop an interview schedule: The researcher had made priori arrangements for conducting the interviews. The date and time were set, although some of the dates and times were shifted, as requested by the interviewees due to other important commitments, but the researcher was able to work around this as the researcher had made arrangements for stand-by employees and made time slots available for re-scheduled appointments.

The researcher had to set the scene by first assuring the interviewees the issue of confidentiality and privacy, guaranteeing them the interviews were for academic purposes only, before commencing the interviews. The researcher starts the interview by trying to understand the interviewees' roles and responsibilities and their knowledge of ICT in general, before going into depth of the interview. This was necessary to make the interviewees feel relax and to gain their support and confidence throughout the interview process.

4.9.3 Research Questions to be addressed

The research question is often stated in the context of some theory that has been advanced to address the problem. The reason for developing and maintaining a set of questions as vital part of the case study protocol is to reflect the inquiry of the research. These protocol questions are to be used by the researcher to concentrate on the key issues the interview should reflect. It would also enable researcher to properly structure the interview questions and focus on the relevant data that needs to be collected from the government staff and senior officers from the case studies (Remenyi *et al*, 1998; Lubbe, 2004; Yin, 2009).

It is imperative that decision makers and implementers of changes understand the development process of implementing e-Government, as well as the roles of key actors and the main activities throughout the life cycle, from pre-implementation to post-implementation phases. The researcher therefore adopted these protocol questions are key

questions to be generally addressed during interviews with all respondents at the case studies – the three public sector organisations.

Table 4-9 highlights the issues and questions that the researcher intends to address, and make practical and theoretical contributions, whilst the samples of the interview questions are in Appendix 4.

Research Issues	Question No (RQ)	Research Questions
E-Government Implementation Factors: Literature	RQ1	What are the external and internal factors influencing e-Government implementation in public sector in the context of developing countries in order to bring about transparent and generally acceptable system?
Mapping of E-Government Implementation Factors: Benefits, Risks, Barriers	RQ2	How do these factors and characteristics – benefits, barriers and risks influence e-Government implementation and what implications may emerge from this implementation? How are we able to rank and map these factors/characteristics in order of priorities, and whether or not we are able to identify new factors/characteristics that have not been discussed in the review of literature?
Mapping of E-Government Actors: Role, Activities & Change Management issues	RQ3	Who are the key actors involved in e-Government implementation process, and what are their main activities throughout the development life cycle? How are decision-makers able to identify, and address any challenges arising implementation of e-Government systems including change management issues?

Table 4-9) Questions Addressed by Empirical Inquiry

4.9.4 Research Output Format

According to Lubbe, 2004, an outline of the case study output format is considered to be one of the important and challenging parts within the case study protocol. Yin, 2003a&9b also believes that the researcher should give utmost priority to identifying at the early stage of the process, the audience for which the case study is intended.

Thus the next chapter, Chapter 5 is designed to present and report on the background to the case studies organisations and the empirical data analysis of these case studies. Since case studies often produce large volume of data and documentation, it was necessary for the researcher to improve the quality and quantity of the data by planning to produce an annotated bibliography; and to embed each of the crucial questions within the interview agenda.

4.10 Ethical Consideration

An ethical consideration refers to the ethical principles that are used when tackling a particular issue. Ethics are codes or rules which govern those practices of a profession. It dictates how information and client's relationships should be managed. Ethical considerations occur when a researcher is required to use these rules to better serve the participants. Research ethics is significant as it relates to the behaving in appropriate manner when embarking on research study bearing in mind the rights of those who become the subject of research work or are affected by the work.

The standards in ethics require that participants must be respected and given maximum protection, especially where the participants refuse to answer any part of the questions. For example, where a participant wishes to end the interview before the researcher was able to ask all the relevant questions, their decision should be respected. This is particularly relevant with qualitative research rather than quantitative research of primary data collection, which involve questionnaires and interviews as collection methods. In addition, the researcher clearly explains to the participants the aim, purpose and objectives of the research study; this would enable them decide whether or not they are willing to participate, as transparency is often observed as vital part of validating any collection of data from the respondents (Ghuri & Gronhaug, 2002; Saunders *et al.*, 2003; Yin, 2009).

4.11 Conclusions

The aim of this chapter is to set out and described the research purpose design and approach, and the analytical techniques adopted and to propose a rationale for an appropriate methodology for this thesis. In order to find suitable and valid response to the research questions, qualitative research methodology was used since it would enable development of conceptual framework and case study research approach and to describe the presentation of the data analysed.

The researcher also discusses the research categories and the approach used in selecting appropriate information system by adopting interpretive epistemological stance, hence qualitative analytical methodology. However ordinal quantitative method was used for data collection through the use of questionnaire since not all respondents participated in the interview. More so, the case study organisations did not allow the use of recording system. This chapter also explains the need for research design as a structured set of rational decision making choices or guidelines for generating valid and reliable research results. The research design makes clear of the appropriate method and techniques used in collecting and analysing data using case study research. The background theory consists of defining the problem, review of literature whilst the focal theory allows the development of theoretical and conceptual framework and defining the research questions to be addressed based on the identified gaps and the aim and objectives.

In this chapter, the researcher also discusses how organisations and selected and the outcome of the research visits conducted as part of the fieldwork survey. This enabled data triangulation. Triangulation is a tool by which data can be validated, and they are the protocols used to ensure accuracy and alternative explanation. Case study research strategy was hence adopted. Qualitative research data collection method was used because of its benefit of consisting of secondary data research that enables researcher to use conceptual model to appraise and analyse various factors and barriers in the study area as well as for primary data collection.

The researcher also discusses the case study protocol, which is usually used as a tool for an action plan with more than the survey instrument, thereby setting procedural rules and regulations for gathering of data. In justifying how multiple case study research is the most suitable approach in meeting the research objectives and schedules, the researcher was able explain the need to consider the set of questions to be used in interviews as the core of the case study protocol. For reliability, the researcher thus followed the research protocol outlined by Yin (2003, 2009) - Case study overview; fieldwork research procedures; research questions to be addressed; and research output format.

Finally, the researcher discusses evidence to justify the use of questionnaires and interview research methods, and the consideration given to ethical issues in sub-section 4.10. Ethical consideration however relates to the principles that are used when tackling a particular issue. Scholars have argued that research ethics is significant as it relates to the behaving in appropriate manner embarking on research study bearing in mind the rights of those who become the subject of research work or are affected by the work.

The next chapter presents the case study background and case studies research findings

Chapter 5 Data Analysis

5.1 Introduction

This chapter describes the research data that was used to validate and test the proposed framework for e-Government implementation. This chapter also presents the case study background and the findings of the study conducted in Nigeria to establish the implementation of e-Government in the country. Case study interviews were adopted, which covered all Information and Communication Technology area from the institutional perspectives including decision makers and implementer of changes in public sector organisations. This chapter offers an analysis of different case studies' perspectives that describes the major aspect of this research - Implementation process; characteristics in terms of benefits, risks and barriers; the role of key actors and crucial activities in addressing issues such like change management; and good practice guidelines at every phase of the development lifecycle to ensure successful and effective e-Government implementation.

The overview of this chapter is as follows: Section 5.1 introduces the chapter whilst 5.2 present the country's background, choice of case study, emergence of ICT in the country and structural description of the case study. The next section, 5.3 discusses about the structure of the case study organisations – Federal Ministry of Lands, Housing and Urban Development (FMLHUD), National Environmental Standards and Regulations Enforcement Agency (NESREA) and Sagamu Local Government (SLG).

In section 5.4, the research presents the findings from research survey and how data were analysed using Exel spreadsheets. The data include e-Government factors – External and internal. Section 5.5 relates to the e-Government characteristics in relation to benefits, barriers and risks. The researcher was able to rank the factors and characteristics in order of priority. Further, in this chapter, the researcher analysis the change management issues in e-Government implementation in Nigeria. The findings are based on change management – resistance to change, approaches and requirements. Finally, the researcher then summarises all the findings in tabular form.

5.2 Case Study

5.2.1 Nigeria – Geography and Regions

The Federal Republic of Nigeria is located in the Sub-Sahara Africa and regarded as developing only and the largest black nation in Africa, with a population of 168 million (UN, 2011). The federal capital territory is Abuja and Lagos is the largest city. Nigeria is regarded as the single largest geographical unit in West Africa and occupies an area of 923,768 sq. km (356,669 sq. miles) situated between longitude 0 and 150 East, and latitude 40 and 140 North; Nigeria shares its border with the Republic of Benin on the west and Cameroon on the east. The northern part border is shared with the Niger republic as well as Chad republic on the North-West border. The southern border is shared with the Gulf of Guinea and the Barkasi peninsula with Cameroon.

Nigeria gained her independence from the British Colony on 01 October 1960, the major languages are: English (official), Yoruba, Ibo, and Hausa. The major religions are Islam, Christianity, indigenous beliefs. The citizens have life expectancy of 52 years (men) and 53 years (women). The monetary unit is 1 Nigerian naira = 100 kobo (CBN, 2000; UN, 2010).

Nigeria's main exports are petroleum, petroleum products, cocoa, and rubber. The GDP is \$262.6 billion and GNI per capita is US \$1,180 (World Bank, 2012) with majority of the population on lower middle income level. The major party, People's Democratic Party (PDP) has dominated since the return to civilian rule in 1999. In terms of economy, Nigeria is Africa's leading oil producer; more than half of its people live in poverty.

Internationally, Nigeria plays a prominent role in African affairs; has withdrawn troops from oil-rich Bakasi peninsula to settle border dispute with Cameroon. Nigeria however has a long history of military coups, often inspired by the appetite and wish to loot the states' resources, which have poor institutional structures and accountability. The country is however ranked among the most corrupt countries in the world because of its political instability, corruption, and poor macroeconomic management. The current leadership in Nigeria has however recognized the need for a change in service provisions to its citizens,

hence the support for e-government initiatives in the country (Ifinedo, 1996; Idowu, 1998; Hofsted, 2001; CIA: Worlds Factbook, 2005). Table 5-1 below shows the average GNI per capita, population, GDP and life expectancy at birth from year 2010 to 2012.

	2010	2011	2012
GNI per capita, PPP (current international \$)	2,150	2,270	2,420
Population, total	159,707,780	164,192,925	168,833,776
GDP (current US \$)	228,637,855,749	243,985,812,280	262,605,908,770
GDP growth (annual %)	8	7	7
Life expectancy at birth, total (years)	51	52	...

Table 5-1) Nigeria GNI, GDP, Population Life Expectancy (2010-12)

(Source: World Development Indicator, World Data Bank, The World Bank 2012)

5.2.2 Map of Nigeria

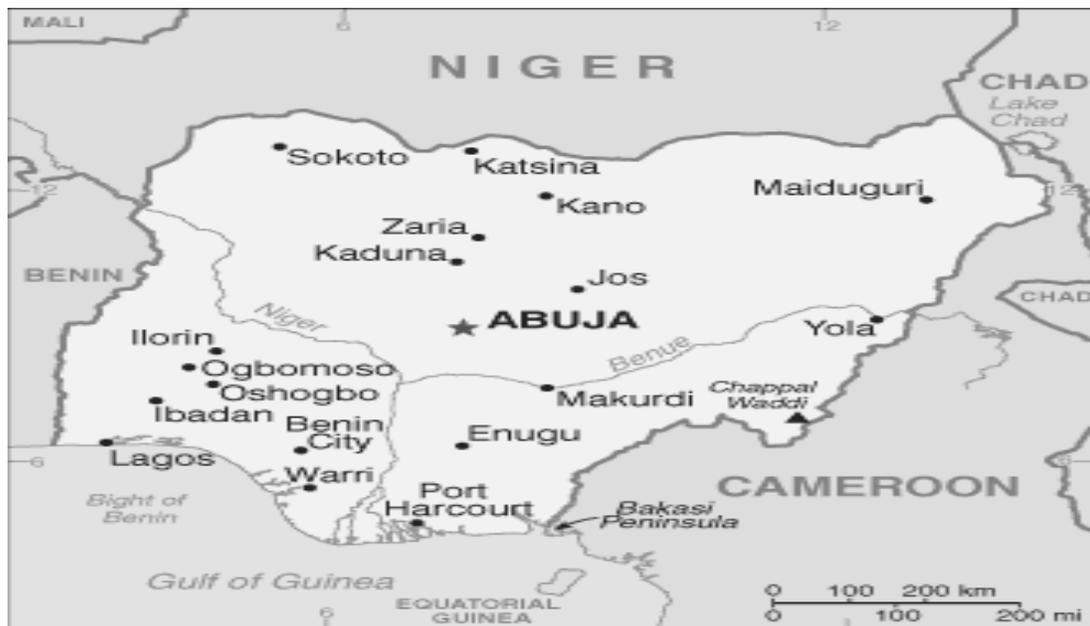


Figure 5-1) The Map of Nigeria

(Source: CIA: World Fact book, 2005)

5.2.3 Background of Case Study

E-Government is a concept that has no standard methodology or definition. This is because it is often defined based on how it has been subjected to a number of explanations of how the government intends to use its policy and practice to bring the citizens closer, for effective and efficient service provision.

Nigeria is among the developing countries that have the approval for adoption and implementation of e-Government, having observed its opportunities in terms of efficient and transparent service delivery, and the ability to transform relations with citizens, business and other arms of government. As the researcher puts it, e-Government is basically the use and transformation of government information online, for the interest of the government, business and citizens. Scholars have argued as well that e-government has already arrived in Africa, even though its concepts are based on imported designs.

The Nigerian government, having endorsed e-Government programmes, have been organising series of lectures, seminars and conferences to raise awareness and for networking purposes, since e-Readiness is an issue in the country, especially in the aspect of collaborative working with stakeholders, information security, transparency and national strategy. The government have also realised the need to use e-Government to support public sector reforms and for good governance through the introduction of innovative and sustainable applications of ICT both within government administrations and in their interaction with citizens and the private sector.

Thus, e-Government can transform the existing government system and consolidate the establishment of an inclusive governance system through digital means that is capable of exercising its powers and functions efficiently and effectively. Whilst there are similarities between many African countries in respect of cultural, historical and geo-political issues, there are great differences that exist as researchers and practitioners have argued that careful attention must be given to the design-reality gaps that exist in e-Government projects in Africa, including Nigeria; otherwise, this could lead to stereotypes of similarities and

differences in the context of design and implementation of e-government (Heeks, 2002; UNDESA, 2002; Yusuf, 2006).

5.2.4 Choice of Case Study

The researcher selected the Federal Republic of Nigeria to obtain empirical data from three case studies. This is due to the fact that Nigeria is one of the fastest growing developing countries in Africa in terms of ICT market and productive telecommunication. Public sector organisations were selected in order to understand the different phases of development and e-Government implementation, as research has shown that e-Government systems vary from country to country and from locality to locality.

It has been generally observed that e-Government could help tackle issues of bribery and corruption that is often common in public services in Nigeria. Thus the researcher believes the choice of these case studies would help validate this notion, to some extent, and would enable recommendations be made that would allow for transparency and efficiency. Issue of ICT literacy level would also be addressed.

The case study organisations include:

- a) Federal Ministry of Housing, Land and Urban Development in the Federal Capital Territory, Abuja - Large-scale organisation that have many departments. The researcher was able collect data from two departments within the ministry - Federal Land Information Systems (FELIS) and Office of the Surveyor-General of the Federation.
- b) National Environmental Standards and Regulations Enforcement Agency (NESREA) is a small to medium scale governmental agency. Data was collected from both senior and junior staff, who were selected and administered by the nominated senior manager – Director of Planning and Policy Analysis.
- c) Sagamu Local Government was the preferred medium scale organisation where data was obtained from staff and managers who have knowledge of ICT in general, and awareness of e-Government systems.

5.2.5 E-Readiness and E-Government Ranking: Nigeria

E-Readiness is defined as, *'the degree to which a community is prepared to participate in the information age (networked world). It is measured by assessing a community's relative advancement in the areas that are most critical for ICT adoption and the most important applications of ICT.'* (Zaied *et al*, 2007, pp. 78).

Although e-Government is an essential concept based on imported designs, scholars have argued that it has already arrived in Africa. Due to lack of e-Readiness and strategy of implementation, e-Government is slowly diffusion within developing countries in Africa, but this could be overcome by strategic building of national infrastructure (Heeks, 2002; Akhter, 2007).

E-Readiness is defined by different studies as the preparedness of a country for e-Government in terms of its technological infrastructure, human resource development, and telecommunication infrastructure. E-Readiness is the capacity to participate in and benefit from the global digital economy; preconditions necessary for e-Government, e-Commerce, and e-Development; degree to which a community or organization, is prepared to participate in the Networked world. It has become amply prevalent as a perception to bring about variations. This is due to the fact that Nigeria, like other African countries, has far less money to spend on ICTs compared to the developed countries, in terms of outright and per capita.

Therefore the government would need to encourage the citizens to participate in e-Government and to support the e-Government legal and regulatory framework available for the end-users, through technological development in order to improve the quality of life for the citizens. Thus assessment of the country's e-Readiness have enabled effective managers in government and non-governmental organisations (NGOs) to measure and prepare for ICT integration (UN, 2005; Bagchi *et al*, 2006).

According to the World Bank, a country must be 'e-Ready' in terms of infrastructure, the accessibility of ICT to the population at large, and the effect of the legal and regulatory framework on ICT use. These are pre-requisites to effective usage of the country's ICT.

Thus e-Readiness assessments enable the following:

- a) Actualisation of e-Government goals
- b) Benchmarking progress
- c) Collaborations
- d) Determining vision, strategy, priorities, and easy wins, and
- e) Endorsement and expansion.

Figure 5-2 below shows the e-Government readiness of different continents, where Africa has been observed to be far behind other regions like Europe, which has the highest rating, in terms of e-Government e-readiness. Table 5.2 however highlights the assessments of e-Readiness in Nigeria, based on the following 5 attributes - connectivity; e-Leadership; information security; human capital; and e-Business climate (Dockett, 2005).

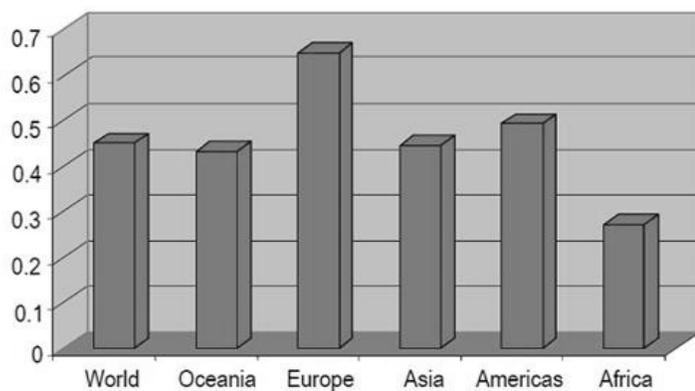


Figure 5-2) Regional Average of e-Gov Readiness (UN, 2005)

E-Readiness in Nigeria: Indicators and Measurement Sampling						
		High Levels	Medium-High Levels	Medium Levels	Low-Medium Levels	Low Levels
Connectivity	Access: Penetration					*
	Quality: Bandwidth			*		
E-Leadership	Vision & Planning: National Strategy					*
	Usage: Government Web Pages		*			
Information Security	Systems: Secured Servers					*
	Collaboration: Membership to First					*
Human Capital	Education: Gross Enrolment Ratio					*
	Workforce: IT students in Tertiary Education	*				
E-Climate	Competitive Environment: High Tech Exports				*	
	Transparency: Efficiency Perceptions					*

Table 5-2) E-Readiness in Nigeria; sampling of indicators & measurement

(Source: Docktor, 2005. 'Accelerating E-Government: E-Readiness at Work' E-Africa)

5.3 Structure for Description of Case Study

This research studies was based on findings from three main public sector organisations: Federal Ministry of Housing, Lands and Urban Development, Abuja; National Environmental Standards and Regulations Agency (NESREA), Abuja and Sagamu Local Governments, Sagamu, Ogun State as the core case studies. Data was randomly collected from staff and managers at another public organisation that is meant to be used as back-up case study for the research survey and analysis. This includes National Civil Aviation Authority (NCAA), Abuja.

5.3.1 Case Study 1: Federal Ministry of Lands, Housing and Urban Development (FMLHUD) - General Description

The Federal Ministry of Lands, Housing and Urban Development (FMLHUD) was established in April 2010 as the umbrella arm of federal government, charge with the responsibility of facilitating the provision of adequate and sustainable housing, and to address the urban renewal issues and slum upgrading in Nigeria. Hence, the Nigerian State is enjoined by Section 16(1) (d) of the 1999 Constitution under the Fundamental Objectives and Directive Principles of State Policy “to provide suitable and adequate shelter for all Citizens’.

Under the Transformation Agenda and Vision 20: 2020, the provision of accessible and affordable housing is one of the strategic national imperatives for guaranteeing the well-being and productivity of the citizenry. Moreover, the housing sector provides one of the most potent platforms for job creation. In view of the huge capital outlay for housing development which cannot adequately be met through public sector funding, Government policy focus has shifted to the mobilisation of private sector funds

One of the functions of the ministry is to establish data bank for housing needs in the country. The ministry is headed by the Honourable Minister, Ms. Amal I. Pepple, CFR and the organisational structure of the ministry is shown in Figure 5-3.

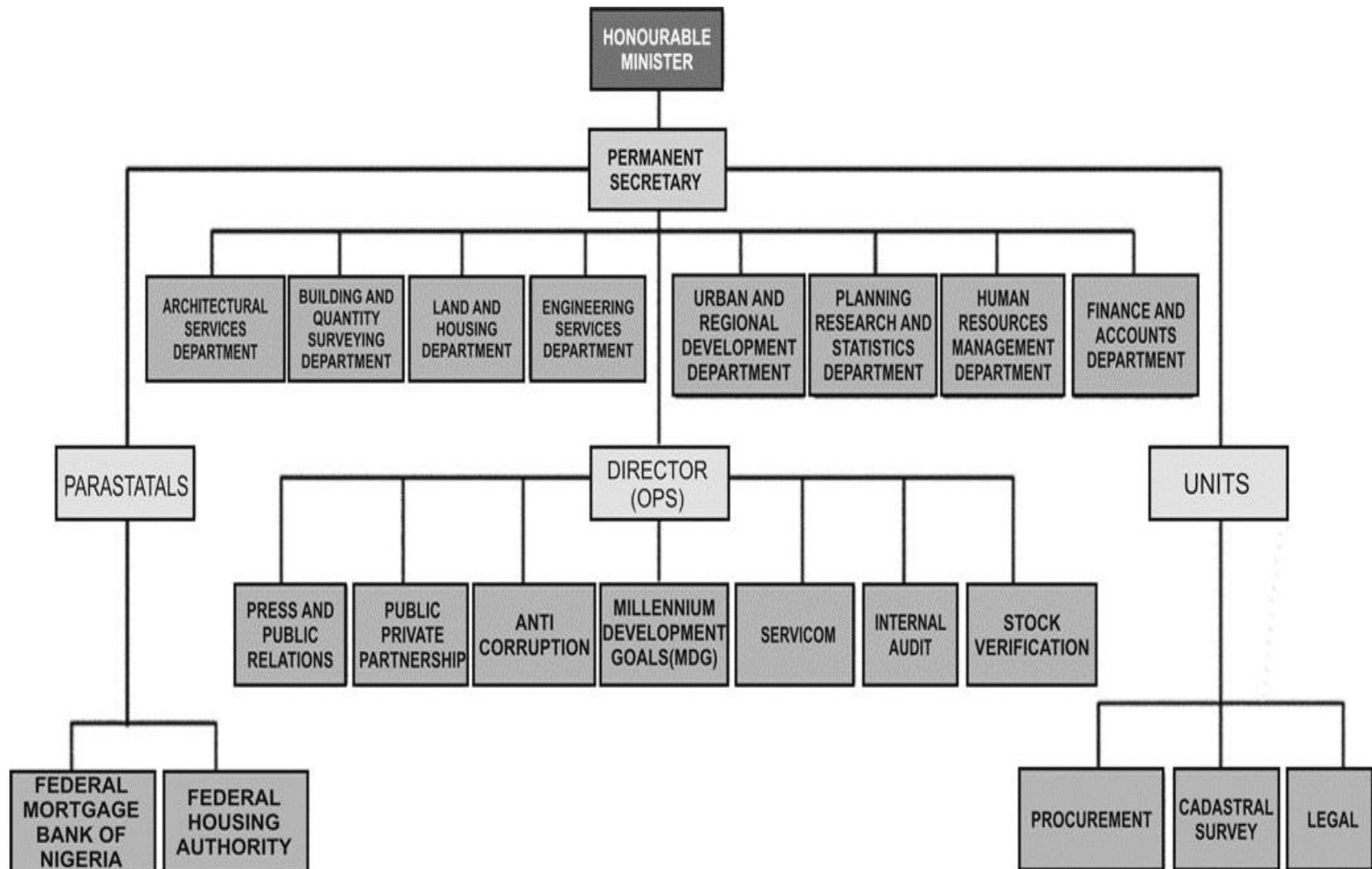


Figure 5-3) Organisational Structure of the FMLHUD

(Source: FMLHUD website)

5.3.1.1 Cadastral - Surveying Unit, Office of the Surveyor-General of the Federation

The Cadastral Survey Unit is a pool of the Office of the Surveyor-General of the Federation (OSGOF), which came into being following the upgrading of the defunct Federal Survey Department to an Extra-Ministerial status. The primary mandate of the Unit is to ensure that all towns and cities in Nigeria are mapped at an appropriate Cadastral Scale. In addition, the Unit is to make available real time large-scale (Cadastral) data, maps and map substitutes that will facilitate National development in all sectors. The Unit has the duty to do large and medium scale town mapping as well as build Digital Cadastral Database. The Unit discharges its mandate and duties through two (2) Divisions, namely: Cadastral Survey Division and Cadastral Legal Survey Division. The Acting Director is Surveyor George Takerhi, whom the researcher had sought permission from before conducting the interview and questionnaire survey.

5.3.1.2 Federal Land Information System (FELIS) Division

The Lands and Housing Development Department is within the Federal Ministry of Lands, Housing and Urban Development and consists of eight (8) Divisions, namely: Land Acquisition and Compensation; Federal Land Registry; Land Administration; Land Valuation; Housing Development; Housing Finance and Mortgage Services; Estate Management Services; and Property & Asset Valuation Divisions. It also undertakes the implementation of the Federal Lands Information System (FELIS) programme, and serves as the Secretariat of the Land Use and Allocation Committee (LUAC). The department is headed by the Acting Director, Mrs M.M.U. Okolo-Ebube.

The researcher carried out survey at Federal Land Information System (FELIS) office since the division deals with information system. FELIS – now under the Lands and Housing Development department - was launched after the decision of the present government to reform national land administration through the modernisation and computerisation of its

operations. The FELIS project was embarked upon by the Federal Ministry of Works & Housing (now Federal Ministry of Lands, Housing and Urban Development).

FELIS is a system that captures information on federal government lands throughout the country in a functional digital format. It is a more flexible system of recording and administering land information against the hitherto the manual system. The greatest beauty is that it is designed as a single database linked to other centres to send and receive information about transactions on federal government land nationwide via the internet. The target is that the project would eventually entail networking with individual State Lands Registries to provide online information on property ownership nationwide, with the ultimate desire to establishing a National Land Repository.

FELIS major function is to register ownership of land in Nigeria and subsequent legal dealings in such land, and aims at facilitating easy search for records of every government land in any part of the country, as well as the state land after the envisioned networking. As a way forward, all the 36 states of the federation including the federal capital territory (FCT), Abuja have established Centres for Data entry or search for federal land records in respective states with the archive system based in Lagos. The system is been expanded and developed gradually, enabling easier access to data and better service to the public.

As part of e-Government implementation, the land recording system in the country is being modernised through FELIS, to enable transparency and easy access to land, land records and title deeds. This should unlock Dead Capital tied up in unregistered interests and encourage direct foreign investments influx.

5.3.2 Case Study 2: National Environmental Standards and Regulations Enforcement Agency (NESREA) - General Description

The National Environmental Standards and regulations Enforcement Agency (NESREA) is a government parastatal of the Federal Ministry of Environment, which was established by NESREA (Establishment) Act, 2007, thus repealing the Federal Environmental Protection Agency Act Cap F 10 LFN 2004. The Act was later signed into law and published in the Federal Republic of Nigeria Official Gazette No. 92. Vol. 94 of 31st July, 2007.

The vision of NESREA is ‘to ensure a cleaner and healthier environment for Nigerians’ whilst its mission is “to inspire personal and collective responsibility in building an environmentally conscious society for the achievement of sustainable development in Nigeria.”

NESREA among other things is empowered to enforce all environmental laws, guidelines, policies, standards and regulations in Nigeria, as well as enforcing compliance with the provisions of all international agreements, protocols, conventions and treaties on the environment to which Nigeria is a signatory. NESREA is currently headed by Dr. (Mrs) Ngeri S. Benebom (whom permission was sought from in order to carry out face-to-face interview and questionnaire survey at the organisation).

Figure 5-4 shows the organisational structure of NESREA.

THE ORGANOGRAM OF THE AGENCY (NESREA)

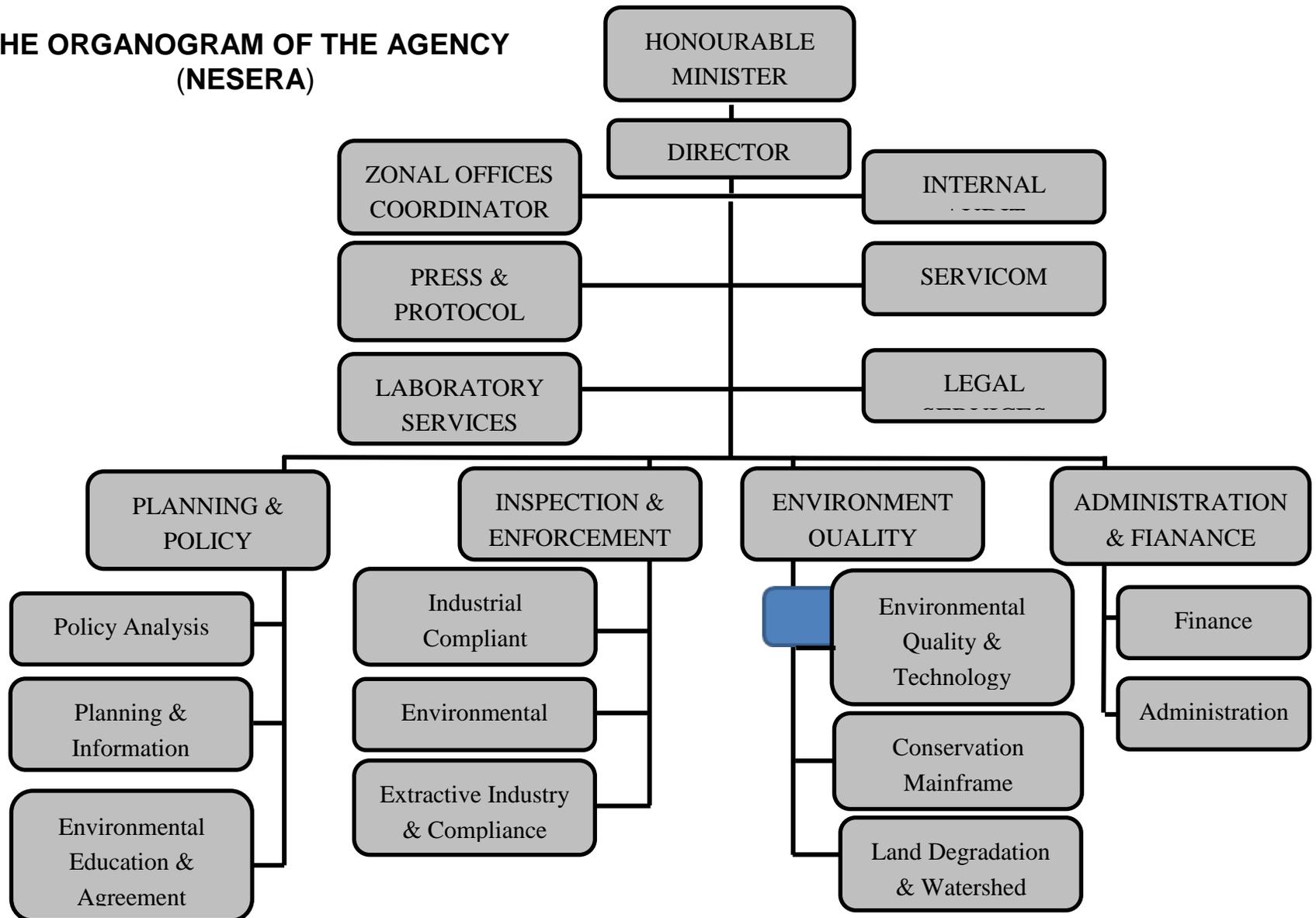


Figure 5-4) Organisational Structure of NESREA

(Source: NESREA website)

NESREA's strategies for ensuring effective implementation of her mandate include amongst other: Monitoring of the state of the Nigerian environment on a continuous basis and publish regular reports to guide policy formulation and decision-making; developing environmental awareness programmes for nationwide implementation, and; promote the development of local technologies for compliance monitoring and enforcement. In order to implement its partnership strategy, NESREA have Zonal Headquarters in the six Geopolitical Zones and Offices in all the States of the Federation. The agency also requests for some office support system and operational vehicles.

E-Government Initiatives that are currently undertaken by NESEA include:

- a) Registration of importers of Used Electrical/Electronic Equipment (UEEE), which allows citizen to register online.
- b) Online documentation of guide for Electrical Electronic Equipment Import (EEE)
- c) Environmental permit online application
- d) Online registration forms for the following
 - a. NESREA Accredited Environmental Consultants
 - b. UEEE registered importers
 - c. Civil Society Organisation
 - d. Green Corp Registration
 - e. Electrical Electronic Equipment (EEE)
 - f. Business and industries

5.3.3 Case Study 3: Sagamu Local Government - General Description

Sagamu Local Government is one of the local governments situated in Ogun State, which is on the Western part of Nigeria. The local government was created on 23rd September, 1991, as it was carved out of the old Remo Local Government. The tribe in the local government is Remo dialect, part of Yoruba that is the main local language. The Sabo area of offin, Sagamu, can be mistaken for any typical northern town for language, culture and setting. Sagamu covers a land area of 68.03sq km, with a population of 203,350 and

bounded by Odogbolu Local Government, Lagos State, Ikenne Local Government and Obafemi Owode Local Government in the east, north and west respectively. For administrative and political convenience, the local government consist of 15 wards (1997 Census figure).

In terms of agriculture and prospect, majority of the citizens are farmers, as proven by provision of the Best Farmer of the Year 1993 at both state and national levels. More so, the local government has majority of her people as Kola-nut farmers, with food crop such as cassava, melon maize and yam as supplement.

5.4 E-Government Implementation Process: Factors Influencing E-Government Implementation in Nigeria

Yusuf (2006) argues that there is little evidence or research to suggest that a clear framework for the adoption of e-Government, although some scholars have mentioned the implementation has already started in the country.

As the World Bank puts it, there are a number of trends that usually influence the way e-Government is implemented and applied. Public Private Partnerships will continue to gain importance to employ the knowledge and financial contribution of the private sector. The technologies governments should invest in are:

- a) Shared infrastructure and services and Open Source software – the decades of insular proprietary software development are over. Software will increasingly be understood as a service
 - b) Service Oriented Architecture and the use of Business Process Modelling (BPM)
 - c) New technologies such as Web 2.0 –This may be a challenging prospect in a political, rather than a technological sense, but holds chances to better governance, closer to citizens
 - d) Mobile platforms and new infrastructure technologies (such as Wimax)
- (Source: Heeks, 2003).

Despite these trends, a number of problems have been highlighted as influence e-Government (and web) in Nigeria, just as in many other African nations. These factors are:

- a) Maturity of governmental processes and lack of other physical infrastructure:
- b) Electricity supply – Unless alternative source of power like solar power is sought, e-Government implementation would have adverse effects, since the citizens and companies are operation in low electricity generation. In fact, there is a high dependency on generating plants to produce electricity
- c) Teledensity – Because of the increasing number of mobile phone users in Nigeria, e-Government implementation would be greatly encouraged; as the teledensity increased from 0.73 in 2001 to 47.98 in 2009.
- d) Internet diffusion – With the advent of internet usage in the country in the early 21st century, the number of users have increasing tremendously, as a handful also access online information through their mobile phones. Thus the internet diffusion level has critical role to play in e-Government implementation.
- e) Adult literacy rate – The current literacy rate for adults is very encouraging and a key implementation factor. It is anticipated the number will increase due to the government initiatives such as the Universal Basic Education (UBE) scheme, to guarantee free education for children up to the age of 15 years.
- f) Unemployment rate – There number of citizens unemployed is very high in the country; unless the government can implement appropriate policies unemployment would eventually have undesirable impact on e-Government application in Nigeria (Ayo & Ekong, 2008).

Following the research visits to the case studies organisations to conduct face to face interviews, in addition to the web- and paper-form questionnaire survey, the respondents were asked to identify and rank the implementation factors they believe influence e-Government systems in their organisation and based on their IT knowledge and/or applications ICT systems. The researcher, in exploring the institutional theory and based on review of literature, lists the environmental factors, both external and internal, influencing e-Government implementation as in Table 5-3 below:

E-Government Implementation Factors	
External Factors	Internal Factors
Organisational	Leadership / Management Capability
Political	Financial Matter
Economics	Goals / Objectives
Legal/Legislation	Attitude
Critical Mass	Network Collaboration

Table 5-3) E-Government Implementation Factors

5.4.1 Case Studies: External Factors

Analysis of the survey carried out, through face-to-face interview and questionnaires reveal that nearly all the respondents believe that organisational and political factors are two of the most important factors to be considered, which are external to the implementers or decision makers of e-Government.

5.4.1.1 Organisational

The findings presented in Table 5-4 also support DiMaggio & Powell's (1983) assertion that public service organisation are likely to implement e-Government because of the pressures from regulation and competition environment. In exploring institutional theory, it was apparent from the case studies that public sector organisations are often influenced by varied pressures from external environment factors (as well as internal) and organisations have become similar because of similar pressures they face, which are reflected by the valid processes of co-ercive /regulatory, mimetic / cognitive and normative forces.

Agunloye (2007) has also emphasised the need for government to be properly organised in implementing and monitoring policies that are formulated including strong political will, in

order to ensure successful e-Government implementation. Some of the organisational benefits include: Improved efficiency; improved access to information and transparency.

E-Government Implementation: External Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)		
		Very important	Important	Moderate	Less important	Very important	Moderate			Less important
Case Study (CS)		Very important	Important	Moderate	Less important	Very important	Moderate	Less important	Average score	Ranking
Organisational	CS 1: FMLHUD	(14) 61%	(9) 39%	(0) 0%	(0) 0%	(6) 75%	(2) 25%	(0) 0%	68%	2
	CS 2: NESREA	(27) 69.4%	(7) 20.6%	(0) 0%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	85%	1
	CS 3: SLG	(15) 53.6%	(13) 46.4%	(0) 0%	(0) 0%	(8) 80%	(2) 20%	(0) 0%	66.8%	3
	Others: NCAA	(6) 100%	(0) 0%	(0) 0%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	100%	1
	Overall Ranking									

Table 5-4) External Factors: Organisational

5.4.1.2 Political

One of the reasons is that Nigeria has faced political instability for the past two decades where there have been at least several military coups. More so, Nigeria elects his democratic government every 4 years and depending on the part that is successful, most contracts from the previous governments are usually abandoned whilst new and different contract are awarded by the new regime, due to corruption amongst other challenges. As a result, most respondents believe that political will of the government would influence e-Government implementation (see Table 5-5 below).

E-Government Implementation: External Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)	
		Very important	Moderate	Less important	Very important	Moderate	Less important	Average score	Ranking
Political	CS 1: FMLHUD	10 43.5%	(13) 56.5%	(0) 0%	(3) 37.5%	(4) 50%	(1) 12.5%	54% Moderate	3
	CS 2: NESREA	(24) 70.6%	(10) 29.4%	(0) 0%	(8) 89%	(1) 11%	(0) 0%	80% More important	2
	CS 3: SLG	(20) 71.4%	(8) 28.6%	(0) 0%	(10) 100%	(0) 0%	(0) 0%	85.7% More important	1
	Others: NCAA	(4) 67%	(2) 33%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.5% More important	2
	Overall Ranking								2

Table 5-5) External Factors: Political

5.4.1.3 Economic

The findings in Table 5-6 also show that, although economic factors are very crucial in terms of government or its agencies and parastatal implementing e-Government systems the fact remain that organisational and political factors are more important in a developing country like Nigeria. Most project re-engineering rely heaving on sponsorship or funding from external parties. As such, any delay in funding would have adverse effect. The economic structure often consists of education, agriculture, industry or service. A director at NESREA responded that there have been instances where project costs have been underestimated, therefore leading to the project being abandoned. Citing examples of an e-Government initiative recently implemented in one of the government departments in Abuja, a chief officer at Cadastral office stated the project lacked recurring expenditure, which has now led to high maintenance.

E-Government Implementation: External Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)	Ranking
		Very important	Moderate	Less important	Very important	Moderate	Less important		
Economical	CS 1: FMLHUD	(11) 48%	(10) 43%	(2) 9%	(7) 88%	(1) 12%	(0) 0%	68% More important	1
	CS 2: NESREA	(15) 44.1%	(19) 55.9%	(0) 0%	(4) 44.4%	(5) 55.6%	(0) 0%	55.8% Moderate	3
	CS 3: SLG	(18) 64.3%	(10) 35.7%	(0) 0%	(7) 70%	(3) 30%	(0) 0%	67.2% More important	2
	Others: NCAA	(2) 33%	(4) 67%	(0) 0%	(1) 50%	(1) 50%	(0) 0%	58.5% Moderate	4
	Overall Ranking								3

Table 5-6) External Factors: Economical

5.4.1.4 Legal/Legislation

The need for adequate legal framework was considered to be necessary, although this is not as significant as political or economic, as stated by the respondents. The senior officers at NESREA believed the advent of simple legislative procedures and policies introduced by the government has been very helpful, mentioning NITDA and NeGSt has playing vibrant roles in ensuring there are policy framework for implementing e-Government projects in the country. Any legal risk as a result of technology is likely to expose public agencies to serious liabilities (Watts, 2001). Table 5-7 presents the findings on legal issues.

E-Government Implementation: External Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number Percentage)			+ Questionnaire Interviews (%)	Ranking
		Very important	Moderate	Less important	Very important	Moderate	Less important	Average score	
Legal	CS 1: FMLHUD	(7) 30.4%	(10) 43.5%	(6) 26.1%	(2) 25%	(4) 50%	(2) 25%	47% Moderate	4
	CS 2: NESREA	(11) 32.3%	(14) 41.2%	(9) 26.5%	(4) 44.4%	(5) 55.6%	(0) 0%	48.4% Moderate	4
	CS 3: SLG	(11) 39.3%	(17) 60.7%	(0) 0%	(4) 40%	(5) 50%	(1) 10%	55.35% Moderate	4
	Others: NCAA	(2) 33%	(4) 67%	(0) 0%	(0) 0%	(1) 50%	(1) 50%	58.5% Moderate	3
	Overall Ranking								4

Table 5-7) External Factors: Legal

5.4.1.5 Critical Mass

Critical mass in this research relates to the ability of the organisation to have knowledge about other agencies participating in the same initiative. Most of the respondents agree that critical mass is useful since it would enable organisations to study one another and possible sharing of ideas and good practice, however the respondents interviewed at Cadastral Office and NESREA, for instance felt critical mass had little or no impact on their organisations decision to implement or consider implementing e-Government initiatives – see Table 5-8. What they consider most important external factor organisational, political and economic factors.

E-Government Implementation: External Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)	Ranking
		Very important	Moderate	Less important	Very important	Moderate	Less important		
Critical Mass	CS 1: FMLHUD	(1) 4.3%	(6) 26.1%	(16) 69.6%	(0) 0%	(0) 0%	(8) 100%	85% Less important	5
	CS 2: NESREA	(8) 23.5%	(10) 29.4%	(16) 47.1%	(1) 11.1%	(3) 33.3%	(5) 55.6%	51.4% Less important	5
	CS 3: SLG	(1) 3.6%	(7) 25%	(20) 71.4%	(1) 10%	(3) 30%	(6) 60%	54.7% Less important	5
	Others: NCAA	(0) 0%	(1) 17%	(5) 83%	(0) 0%	(1) 50%	(1) 50%	66.5% Less important	5
	Overall Ranking								5

Table 5-8) External Factors: Critical Mass

Tables 5-4 to 5-8 presents the analyses of the e-Government implementation external factors – organisational, political, economical, legal and critical mass. These are based on outcome of the interviews conducted and questionnaire responses from the staff and managers, both junior and senior officers at the three case studies. Information was also collected from NCAA as an additional case study organisation which, despite not forming part of the core case studies, data obtained have been useful in analysing findings.

5.4.2 Case Studies: Internal Factors

In validating the conceptual framework, the researcher asked the respondents about their view regarding the key factors highlighted as internal influences to e-Government implementation. These are factors, which are within the control of the organisations are: leadership/management capability, financial matter, goals/objective attitude and network collaboration/trust. They have been analysed based on case studies findings, as shown in Table 5-9 to 5-13.

5.4.2.1 Leadership

For any e-Government to be successfully implemented, top management support is vital. All the respondents in the case studies organization who participated in the survey agree that leadership is the most important factor to be considered. Research findings suggest the need for strong leadership in order to avoid most challenges. These findings presented in Table 5-9 validated the importance of leadership as a factor in implementing e-Government services. Leadership is closely linked with political issues since it depends on which political party governs the country at the time of e-Government implementation. Some of the respondents at NESREA mentioned that good leadership entails having clear vision and being creative. Thus innovative leaders provide innovative solutions for citizens and businesses (Jaeger & Thompson, 2003; Hunter & Jupp, 2001).

E-Government Implementation: Internal Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)	Ranking
		Very important	Important	Moderate	Less important	Very important	Moderate		
Leadership	CS 1: FMLHUD	(13) 56.5%	(10) 43.5%	(0) 0%	(7) 87.5%	(1) 12.5%	(0) 0%	72% More important	1
	CS 2: NESREA	(26) 76.5%	(8) 23.5%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	82.7% More important	1
	CS 3: SLG	(20) 71.4%	(8) 28.6%	(0) 0%	(9) 90%	(1) 10%	(0) 0%	66.8% More important	1
	Others: NCAA	(6) 100%	(0) 0%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	100% More important	1
	Overall Ranking								1

Table 5-9) Internal Factors: Leadership

5.4.2.2 Financial Matter

All the respondents rated funding and financial matters as the second most important factor after leadership. Since most e-Government projects are long term, they would require adequate financial support to cover this period as costs were increasing whereas the online service provision was being implemented at a slow pace. The findings presented in Tale 5-10 are consistent with the findings in review of literature (Heeks, 2003). One of the issues mention by a head of service at Sagamu Local Government is that projects have failed in the past because of improper planning and budgeting for the projects, taking inflation amongst other factors into account. They however believed that having the experienced

managers in strategic placed will influence e-Government implementation, learning from experience of past projects.

E-Government Implementation: Internal Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)	Ranking
		Very important	Moderate	Less important	Very important	Moderate	Less important		
Financial Matter	CS 1: FMLHUD	12 52%	(11) 48%	(0) 0%	(5) 62.5%	(3) 37.5%	(0) 0%	57.3% More important	2
	CS 2: NESREA	(25) 73.5%	(9) 26.5%	(0) 0%	(7) 77.8%	(2) 22.2%	(0) 0%	75.7% More important	2
	CS 3: SLG	(11) 39.3%	(17) 60.7%	(0) 0%	(4) 40%	(5) 50%	(1) 10%	55.35% More important	4
	Others: NCAA	(6) 100%	(0) 0%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	100% More important	2
	Overall Ranking								2

Table 5-10) Internal Factors: Financial Matter

5.4.2.3 Goals / Objectives

The findings presented in Table 5-11 also reveal that all the respondents after leadership and funding, setting of proper goals and objectives should be the next important factor e-Government implementers must consider, which are within their control. In addition, this factor would enable the decision makers to map out strategies for implementation and have project plan and priority system for their services. E-Government visions such as alleviating governmental failures by improving quality of citizens' lives have been advised by respondents to be clearly stated so that specific objectives and strategies can be set up for future purposes. This notion confirms UNESCO recommendation for e-government in developing countries (Song, 2006).

E-Government Implementation: Internal Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)	Ranking
		Very important	Important	Moderate	Less important	Very important	Moderate		
Goals / Objectives	CS 1: FMLHUD	(11) 48%	(11) 48%	(1) 4%	(1) 12.5%	(7) 87.5%	(0) 0%	67.8% Moderate	3
	CS 2: NESREA	(16) 47%	(18) 53%	(0) 0%	(3) 44.4%	(6) 55.6%	(0) 0%	54.3% Moderate	3
	CS 3: SLG	(12) 42.9%	(16) 57.1%	(0) 0%	(4) 40%	(6) 60%	(0) 0%	58.9% Moderate	3
	Others: NCAA	(4) 67%	(2) 33%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.5% More important	3
	Overall Ranking								3

Table 5-11) Internal Factors: Goals / Objectives

5.4.2.4 Attitude

Table 5.12 presents the findings of this research, which provide evidence that attitude of staff at all levels could influence the implementation of e-Government services either positively or adversely. Whilst behavioural intention has been observed to have significant effect on implementation and technology usage, some of the public servants are often resistant to changes. Apart from being a cultural issue, some of the respondents believe they are often of the view that introduction of modern technology would lead to streamlining their services, and eventually take away their jobs from them. The findings thus validate Lam (2005) findings, as observed in literature review that resistance to change often leads to project failure.

E-Government Implementation: Internal Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire Interviews (%)	Ranking
		Very important	Moderate	Less important	Very important	Moderate	Less important	Average score	
Attitude	CS 1: FMLHUD	(7) 30.4%	(13) 56.5 %	(3) 13.1 %	(1) 12.5%	(5) 62.5 %	(2) 25%	59.5% Moderate	4
	CS 2: NESREA	(8) 23.5%	(11) 32.4 %	(15) 44.1 %	(0) 0%	(4) 44.4 %	(5) 55.6 %	49.9% Less important	5
	CS 3: SLG	(9) 32.15%	(10) 35.7 %	(9) 32.1 5%	(4) 40%	(6) 60%	(0) 0%	47.85% Moderate	5
	Others: NCAA	(1) 17%	(5) 83%	(0) 0%	(1) 50%	(1) 50%	(0) 0%	66.5% Moderate	4
	Overall Ranking								5

Table 5-12) Internal Factors: Attitude

5.4.2.5 Network Collaboration / Trust

Network collaboration refers to the relationship among the agencies and departments and how trusts amongst staff and managers would have significant impact in their relationships in the implementation of e-Government services. The empirical data indicate that collaboration or trust is not as important as others such as leadership or attitude of the staff and managers, in implementing e-Government initiatives. Although the findings supports Ndou (2004)'s claim that collaboration is an important factor for e-Government implementation, there is the need for public-private partnership as suggested by the Director of Admin and Finance at NESRA.

These findings in Table 5-13 validate Agunloye's (2010) statement that government agencies and parastatal must adopt the Nigerian public-private partnership (PPP) model developed by NeGSt in order to implement e-Government influences on government's

economic and civil service reform processes as well as having programme that would encourage the private sector. Most of the staffs interviewed have mentioned they would distrust their employer or senior management where there is no transparency and this may lead to problems in terms of data and information flow and knowledge sharing.

Apart from validating the five internal factors through the empirical data – leadership, financial, goals/objectives, attitude and network collaboration, there are no additional internal factors identified by the respondents. All the respondents believe these factors are crucial for e-Government implementation as the employer or decision maker would need to take overall responsibility in ensuring effective and efficient service delivery.

E-Government Implementation: Internal Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)	Ranking
		Very important	Important	Moderate	Less important	Very important	Moderate		
Case Study (CS)									
Network Collaboration / Trust	CS 1: FMLHUD	(0) 0%	(7) 30.4%	(16) 69.6%	(0) 0%	(1) 12.5%	(7) 87.5%	78.6% Less important	5
	CS 2: NESREA	(8) 23.5%	(16) 47.1%	(10) 29.4%	(0) 0%	(6) 55.6%	(3) 33.3%	51.4% Moderate	4
	CS 3: SLG	(19) 67.9%	(3) 10.7%	(6) 21.4%	(6) 60%	(1) 10%	(3) 30%	63.95.7% More important	2
	Others: NCAA	(1) 17%	(2) 33%	(3) 50%	(0) 0%	(1) 50%	(1) 50%	50% Less important	5
	Overall Ranking								

Table 5-13) Internal Factors: Network Collaboration / Trust

5.4.3 Business Process Factors

The respondents were also asked to confirm whether or not their organisations have been forced to change their business process in order to implement e-Government services. As illustrated in Table 5-14, whilst majority of respondents at Cadastral office and the Assistant Director (senior officer) at FELIS did affirm they have been forced to change their business process in past projects, none of the respondents at NESREA agree to this. This is due to the fact that they have never been forced to change their business processes as part of implementing e-Government services. The researcher could not come to a conclusion whether or not; changing business process of an organisation is an important factor that could impact on the implementation of e-Government initiatives. It appears decision makers tend to decide on this issue depending on their objectives, amongst other implementation factors.

E-Government Implementation: Business Process Factors		Questionnaire Responses (No / %)			Face-to-face Interviews (No / %)			Questionnaire + Interviews (Percentage)
Question:								
Have you been forced to change your business process in order to implement E-Government services within and/or with other agencies?								
Case Study (CS)								
CASE STUDIES		Yes	No	Others: I don't know	Yes	No	Others: I don't know	Average score
	CS1: FMLHUD	(18) 78.3%	(0) 0%	(5) 21.7%	(4) 50%	(2) 25%	(2) 25%	42.8% Yes
	CS2: NESREA	(0) 0%	(27) 79.4%	(7) 20.6%	(0) 0%	(7) 77.8%	(2) 22.2%	78.6% No
	CS3: SAGAMU LG	(16) 46.4%	(8) 53.6%	(4) 0%	(4) 40%	(3) 30%	(3) 30%	43.2% Yes
	Others: NCAA	(1) 0%	(2) 83.3%	(3) 16.7%	(0) 0%	(2) 100%	(0) 0%	91.7% No

Table 5-14) Business Process Factors

5.4.4 Electronic Information Sharing

Another question the respondents were asked during the research survey relates to information sharing electronically. All the respondents across the case studies organisation agree to the following statement:

‘Electronic information sharing requires a transformation not just in the technical aspect of the information systems which are in used in an organisation, but also change in decision making policies and in mindset of the employees. Therefore, changes in processes and functions and the new way of management, especially in public sector, should be considered as a key issue.’

Whilst most of the respondents at NESREA ‘agree to a large extent’ on the above statements, all the respondents at Cadastral office and FELIS, both of the Federal Ministry of Lands, Housing and urban Development ‘agree – extremely’ to the statement. The research findings show that electronic information sharing is vital and should be seriously taken into consideration when implementing e-Government services, particularly in public sector organisations in Nigeria.

Table 5-15 below presents analyses of the findings from the three case study organisations including the back-up case study – NCAA:

E-Government Implementation: Electronic Information Sharing		Questionnaire Responses (No / %)			Face-to-face Interviews (No / %)			Questionnaire + Interviews (%)
Question:								
Electronic information Sharing requires a transformation in technical aspect of information systems and change in decision making policies and midset of employees.								
Response:		Extremely	To a large extent	Modelately	Extremely	To a large extent	Modelately	Average score
CASE STUDY ONE: FMLHUD	Agree	(0) 0%	(14) 61%	(7) 30%	(1) 12.5%	(5) 62.5%	(2) 25%	61.75% Agree – To a large extent
	Diasgree	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	N/A
	I am not sure	(0) 0%	(0) 0%	(2) 9%	(0) 0%	(0) 0%	(0) 0%	9% I am not sure
CASE STUDY TWO: NESREA	Agree	(34) 100%	(0) 0%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	100% Agree - Extremely
	Diasgree	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	N/A
	I am not sure	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	N/A
CASE STUDY THREE: SAGAMU LG	Agree	(13) 46.4%	(15) 53.6%	(0) 0%	(1) 10%	(8) 80%	(1) 10%	66.8% Agree – To a large extent
	Diasgree	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	N/A
	I am not sure	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	N/A
OTHERS: NCAA	Agree	(0) 0%	(5) 83.3%	(1) 16.7%	(0) 0%	(1) 50%	(1) 50%	66.7% Agree – To a large extent
	Diasgree	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	N/A
	I am not sure	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%	N/A

Table 5-15) Electronic Information Sharinge

5.4.5 Ranking of E-Government Implementation Factors

The researcher mapped the implementation factors, both internal and internal, in order to validate the conceptual framework for e-government process. These factors were also ranked in order or priority and important as analysed from the research findings. This ranking is illustrated in Table 5-16 below. The researcher has attempted to map the data from the case studies organisations and make informed judgment based on analysis (and ranking) of the data collected through face-to-face interviews and questionnaire survey.

From analysis of the external factors, the findings show that apart from Federal Ministry of Lands, Housing and Urban Development offices – Cadastral and FELIS – where organizational factor was ranked as second to economic factors, other respondents at NESREA and Sagamu Local government agree that organisational to be the most important external factor decision makers must consider when implementing e-Government initiatives. On the contrary, Critical Mass is the least significant factor amongst the other listed factors, as authenticated by the respondents from the case studies organisational. The research was able to endorse the external factors highlighted in the conceptual framework and they have been ranked in order of priority, the same as the researcher had proposed framework for e-Government implementation. Thus these external factors are: a) Organisational; b) Politics; c) Economic; d) Legal/Legislation; and e) Critical Mass.

The research findings also confirm the ranking of the internal factors influencing e-Government implementation as follows: a) Leadership/Management Capability; b) Financial Matters; c) Goals/Objective; d) Attitude; and e) Network Collaboration/Trust. The findings from the respondents are consistent with the conceptual framework proposed by the researcher. All the respondents from the case studies organisations agree that these factors are vital to e-Government implementation. In fact, their rankings in terms of priority correlate with that highlighted in the proposed framework.

The expectation is that these factors could be generalized and extended to other developing (and even some of the developed) countries as there seem to be some factors that are

common to e-Government implementation, be it internal or external; although there may be other factors peculiar to other countries. Since there are limited theories or models for implementing e-Government, particularly in the developing countries, the researcher anticipates that the conceptual framework, which has been validated through the findings from the public sector organisations used as case studies in Nigeria, will be a starting point in terms of having a developed and verified framework for the implementation of e-government systems. Mores so, the findings have identified electronic information sharing, changes in processes and functions and the new way of management, especially in public sector, should be considered as a key issue for decision makers and implementers of e-Government.

Factors Influencing E-Government Implementation in Nigeria: Rankings		FMLHUD	NESREA	Sagamu LG	Others: NCAA	Overall Ranking
External Factors	Organisational	2	1	3	1	1
	Politics	3	2	1	2	2
	Economics	1	3	2	4	3
	Legal/Legislation	4	4	4	3	4
	Critical Mass	5	5	5	5	5
Internal Factors	Leadership / Management Capability	1	1	1	1	1
	Financial Matter	2	2	4	2	2
	Goals/Objective	3	3	3	3	3
	Attitude	4	5	5	4	5
	Network Collaboration/Trust	5	4	2	5	4
Business P F	Forced to change business process	Yes	No	Yes		Yes
	E-information sharing requires transformation	Yes	Yes	Yes		Yes

Table 5-16) Ranking of E-Government Implementation Factors

5.5 Key Drivers and Enablers of E-Government Implementation in Nigeria

5.5.1 E-Government Implementation Benefits

Dode (2007) emphasised that Nigeria as a nation cannot delight in the difficulties of being left behind in a globalizing world, thereby proposing a significant relationship between a country's technological, political and bureaucratic advancement and a successful e-Governance practice.

Analysing the research finding, suggest that most of the respondents were in support of the benefits identified by academicians and professionals, as reviewed in the literature. For instance, improving productivity and increasing capacity of government as well as improving the quality of service delivery and business and customer were believed to be the most important benefits. Other respondents such like a deputy director at NESREA and an Assistant Chief officer at the Office of the Surveyor-general of the Federation Ministry of Housing, Land & Urban Development, both in Abuja believe that implementing e-Government systems in an information ICT environment would surely improve accountability and transparency as well as reduce corruption in the public services.

Although improving the organization's business process and benefits of networking and community cohesion as some of the values for e-Government implementation, most of the respondents also argue these they are not as vital as the need for reducing intra- and inter-agency paperwork or workflow and improving the quality of decision and policy making. From the research survey, whilst a female Deputy Director at NESREA highlighted that e-Government implementation enables information sharing to be quicker and prompt, the Director of Administration and finance strongly believes that it often leads to increased productivity in governance.

From the findings, the respondents agree to the lists of benefits from literature. For instance, apart from benefits such as: promote the use of ICT in other sectors of the society;

improving transparency; and reducing data collection, the respondents consistently agree to other highlighted benefits as key to e-Government implementation. Whilst forcing organisations to change their business processes was mentioned as a crucial factor by respondents at Cadastral and FELIS offices at FMLHUD, respondents from NESREA and Sagamu Local Government do not believe business process change would have any effect, neither would it be considered as benefits to organisations when implementing e-Government systems.

In terms of ranking these benefits, respondents agree differently as the rankings do not follow the order as listed by the respondents. For example – most of the respondents do believe improving productivity and quality of services were the two most important benefits of e-Government, as highlighted by the questionnaire. Analysis has shown that reducing data collection, processes and storage cohesion are ranked the lowest in respect of the benefits of e-government implementation.

Respondents from the case studies organisations were however able to identify additional benefits, which were not included in the survey questions. A female deputy director at NESREA mentioned other drivers for e-government implementation as:

- Well-equipped offices to enhance productivity, and
- Information sharing is quick and prompt.

In a similar vein the Director of Admin and Finance at NESREA acknowledged that e-government implementation would lead to increased productivity in governance. The participants from the two offices at the Federal Ministry of Lands, housing and Urban Development – Cadastral and FELIS, however were not able to identify any supplementary benefits, the same with respondents from Sagamu Local Government. From the analysis, it is clear that the benefits are enormous as the researcher was able to validate these questions. Table 5-17 & 5-18 and Figure 5-.5 below present analyses of the findings on e-Government implementation benefits in the case study organisations in Nigeria, which represents a developing country.

E-Government Implementation Benefits (Rankings)	
1	Improve productivity and increase capacity of government
2	Improve quality of service delivery and business and customer
3	Reduce the overall costs of the organisation and efficiency gains
4	Reduce intra- and inter-agency paperwork/ paper flow
5	Improve quality of decision and policy making
6	Improve accountability, transparency and anti-corruption
7	Promote the use of ICT in other sectors of the society
8	Improve collaboration among different department
9	Reduce data collection, process and storage
10	Improve the organisation's business process
11	Network and community cohesion
Additional Benefits identified	
12	Well-equipped offices to enhance productivity
13	Information sharing is quick and prompt
14	Speed the process of work and quality of decision-making.
15	Increased productivity in governance

Table 5-17) E-Government Implementation Benefits

Table 5.18 shows analyses of the face-to-face interviews and questionnaire survey based on the data collected from the case study organisations. Most of the respondents had agree to the each of the benefits listed, which enabled the researcher to rank them in order of priority. For instance, only 7 (53.8%) out of 13 respondents who completed the questionnaire at FMLHUD had agreed that e-Government improves transparency whereas only 37.5% of the numbers interviewed (8) agreed on the same issue. In NESREA, 9 (47.4%) of the 19 questionnaire respondents had agree that e-Government implementation improves transparency. Similarly, 56.25% and 66.7% of the respondents from NESREA and NCAA respectively agreed to 'improving transparency' as a significant drive.

Analyses from the face-to-face interviews and questionnaire responses reveal that 'improve transparency' was ranked 9th in order of priority for e-Government implementation and by FMLHUD staff. However, the same benefit was ranked as the 8th most important benefit by respondents from NESREA. This finding is different from that of responses from both questionnaire survey and face-to-face interview responses from SLG and NCAA where 'improve transparency' was respectively ranked as the 5th most important benefit.

	E-Government Implementation: Benefits			Questionnaire Responses (No / %)			Face-to-face Interviews (No / %)			Questionnaire + Interviews Average score (%)	Ranking
	Very important	Moderate	Less important	Very important	Moderate	Less important	Very important	Moderate	Less important		
CASE STUDY ONE: FMLHUD	Improve productivity	(12) 52.2%	(11) 47.8%	(0) 0%	(6) 75%	(2) 25%	(0) 0%	63.6%	1		
	Improve service quality	(12) 52.2%	(11) 48%	(0) 0%	(5) 62.5%	(3) 37.5%	(0) 0%	57.4%	2		
	Reduce overall costs	(11) 57.9%	(8) 42.1%	(0) 0%	(4) 50%	(3) 37.5%	(1) 12.5%	54%	3		
	Reduce paperwork	(10) 71.4%	(4) 28.6%	(0) 0%	(3) 37.5%	(3) 37.5%	(2) 25%	54%	4		
	Improve quality of decision	(10) 55.6%	(8) 44.4%	(0) 0%	(4) 50%	(3) 37.5%	(1) 12.5%	52.8%	5		
	Improve transparency	(7) 53.8%	(6) 46.2%	(0) 0%	(3) 37.5%	(3) 37.5%	(2) 25%	45.7%	9		
	Promote ICT usage	(7) 50%	(5) 35.7%	(2) 14.3%	(3) 37.5%	(3) 37.5%	(2) 25%	43.8%	10		

	Improve collaboration	(9) 47.4%	(8) 42.1%	(2) 10.5%	(4) 50%	(4) 50%	(0) 0%	48.7%	8
	Reduce data collection	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11
	Improve business process	(10) 55.55%	(7) 38.9%	(1) 5.55%	(4) 50%	(4) 50%	(0) 0%	52.8%	6
	Network & cohesion	(10) 52.6%	6 31.6%	(3) 15.8%	(4) 50%	(4) 50%	(0) 0%	51.3	7
	Others	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
CASE STUDY TWO: NESREA	Improve productivity	(12) 54.5%	(10) 45.5%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	71.7%	1
	Improve service quality	(12) 52.2%	(11) 48%	(0) 0%	(7) 77.8%	(2) 32.2%	(0) 0%	65%	2
	Reduce overall costs	(11) 57.9%	(6) 31.6%	(2) 10.5%	(6) 66.7%	(3) 33.3%	(0) 0%	62.3%	3
	Reduce paperwork	(10) 62.5%	(5) 31.25%	(1) 6.25%	(5) 55.6%	(4) 44.4%	(0) 0%	59.1%	4
	Improve quality of decision	(10) 55.6%	(6) 33.3%	(2) 11.1%	(5) 55.6%	(3) 33.3%	(1) 11.2%	55.6%	5
	Improve transparency	(9) 47.4%	(8) 42.1%	(2) 10.5%	(5) 55.6%	(4) 50%	(0) 0%	51.5%	8
	Promote ICT usage	(7) 50%	(5) 35.7%	(2) 14.3%	(4) 44.4%	(3) 33.3%	(2) 22.2%	47.2%	9
	Improve collaboration	(9) 50%	(7) 42.1%	(2) 10.5%	(5) 55.6%	(3) 33.3%	(1) 11.1%	52.8%	7
	Reduce data collection	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10
	Improve business process	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11

	Network & cohesion	(9) 53%	7 41.1%	(1) 5.9%	(5) 55.6%	(2) 22.2%	(2) 22.2%	54.3%	6
	Others	3	N/A	N/A	N/A	N/A	N/A	N/A	
CASE STUDY THREE: SAGAMULG	Improve productivity	(14) 58.3%	(10) 47.8%	(0) 0%	(10) 100%	(0) 0%	(0) 0%	79.2%	1
	Improve service quality	(13) 56.5%	(9) 39.1%	(1) 4.3%	(8) 80%	(2) 20%	(0) 0%	68.3%	2
	Reduce overall costs	(10) 58.8%	(7) 41.2%	(0) 0%	(7) 70%	(2) 20%	(1) 10%	64.4%	3
	Reduce paperwork	(12) 66.7	(6) 33.3%	(0) 0%	(6) 60%	(4) 37.5%	(0) 0%	63.4%	4
	Improve quality of decision	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7
	Improve transparency	(9) 56.25%	(6) 37.5%	(1) 6.25%	(5) 50%	(4) 40%	(1) 10%	53.1%	5
	Promote ICT usage	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8
	Improve collaboration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9
	Reduce data collection	(13) 52%	(10) 40%	(2) 8%	(5) 50%	(3) 30%	(2) 20%	51%	6
	Improve business process	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10
	Network & cohesion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11
	Others	1	N/A	N/A	N/A	N/A	N/A	N/A	
OTHERS: NCAA	Improve productivity	(5) 83.3%	(1) 16.7%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	91.7%	1
	Improve service quality	(4) 66.7%	(2) 33.3%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.3%	2

Reduce overall costs	(4) 66.7%	(2) 33.3%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.3%	3
Reduce paperwork	(3) 50%	(3) 50%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	75%	4
Improve quality of decision	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7
Improve transparency	(4) 66.7%	(2) 33.3%	(0) 0%	(1) 50%	(1) 50%	(0) 0%	58.4%	5
Promote ICT usage	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8
Improve collaboration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9
Reduce data collection	(3) 50%	(3) 50%	(0) 0%	(1) 50%	(1) 50%	(0) 0%	50%	6
Improve business process	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10
Network & cohesion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11
Others	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Table 5-18) Analysis of E-Government Implementation Benefits

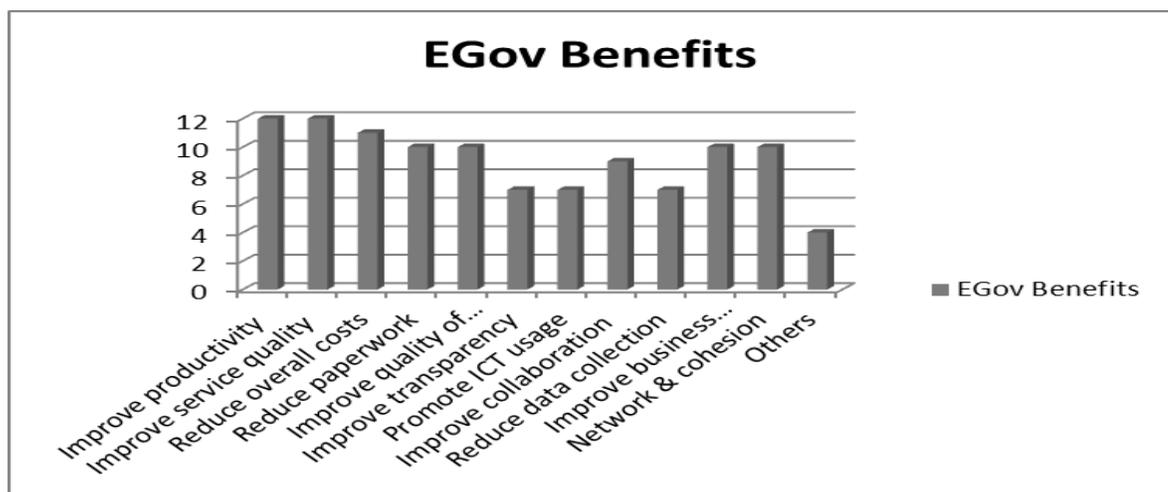


Figure 5-5) E-Government Implementation Benefits

5.5.2 E-Government Implementation Barriers

Nigeria is said to be facing a number of challenges in the introduction of e-Government in the country. Apart from the problem of overcoming uncoordinated activities within the federal, state and local governments and within agencies of the same ministry or within ministries that have similar functions or responsibilities; Some leaders still need to understand the relationship between e-Government and effective governance.

Scholars have also argued that due to the current poor state of social infrastructure including the power supply and road network in a country like Nigeria, the practice of e-Government is most likely to be negatively impact upon. Thus the diffusion of ICT into the country has been at slow speed, which has otherwise extended the gap between information-rich developed countries and Nigeria. Most importantly, the rate of citizens who are ICT compliant or literate is very low.

Other challenges include: political issues; attitude of the public servants towards change when e-Government and IT systems generally are being introduced; understanding and meeting citizen expectations; privacy and security, which often make the users feel reluctant to use the service; and issue regarding accessibility since e-Government is basically restricted to the urban areas, thereby calling for the urgent need to extend reasonable access to the rural areas since the rural dwellers are yet to fully utilize the potentials of the internet and the technical know-how of using the computer (Backus, 2001; Lau, 2003; Heek,2003; Ndou, 2004; Dode, 2007; Ajayi, 2007; Opara & Ituen , 2009).

Opara & Ituen (2009) had argued that the major obstacle is the limited access to Internet and other ICT tool since use of computer is limited to the urban areas. However the ICT literacy level of the rural dwellers is very high compared to the urban areas. One of the reasons is that people in rural arrears are key-board-shy, thus struggling to fully utilize the potentials of the Internet (Ajayi; 2007).

The researcher however asked a few questions from the respondents about the barriers to e-Government implementation in Nigeria, and they all agreed there many obstacles to e-

Government in the country. However government’s involvement was mentioned as critical to alleviating these challenges and as this would assist in setting up the necessary infrastructure needed for successful implementation of e-Government. Apart from ICT infrastructure, other barriers were argued; these include high level of investment required, education, training and set up costs and high level of knowledge among employees.

As these barriers were identified in order of priorities, the following were also argued to challenges, as identified in literature: cultural awareness, Complexity in understanding processes and systems, resistance to change among different departments, partnership and collaboration, and leadership role. Other barriers include strategy in terms of vision, mission and lack of ownership, security issues and privacy of citizens and lack of legislative support or formal policy. The survey analysis reveals implementation policy as a newly identified barrier besides those discussed in review of literature. These barriers are highlighted in the Table 5.19 below:

E-Government Implementation Barriers / Challenges (Rankings)	
1	ICT infrastructure
2	High level of investment required
3	Education, training and set-up costs
4	High level of knowledge among employees required
5	Cultural awareness
6	Complexity in understanding processes and systems
7	Resistance to change among different departments
8	Partnership and collaboration
9	Leadership role
10	Strategy (vision, mission & lack of ownership)
11	Security issues and privacy of citizens
12	Lack of legislative support / Formal policy
Additional Barriers identified	
13	Implementation policy

Table 5-19) Barriers to E-Government Implementation

The bar chart below (Figure 5.6) indicates that transformation was ICT identified as the major barrier for e-government implementation in Nigeria. Other key barriers are training, investment and knowledge.

For any e-Government implementation in a developing country like Nigeria, respondents believe legislative supports, security and other barrier such as implementation policy as important as resistance to change among different departments and leadership role.

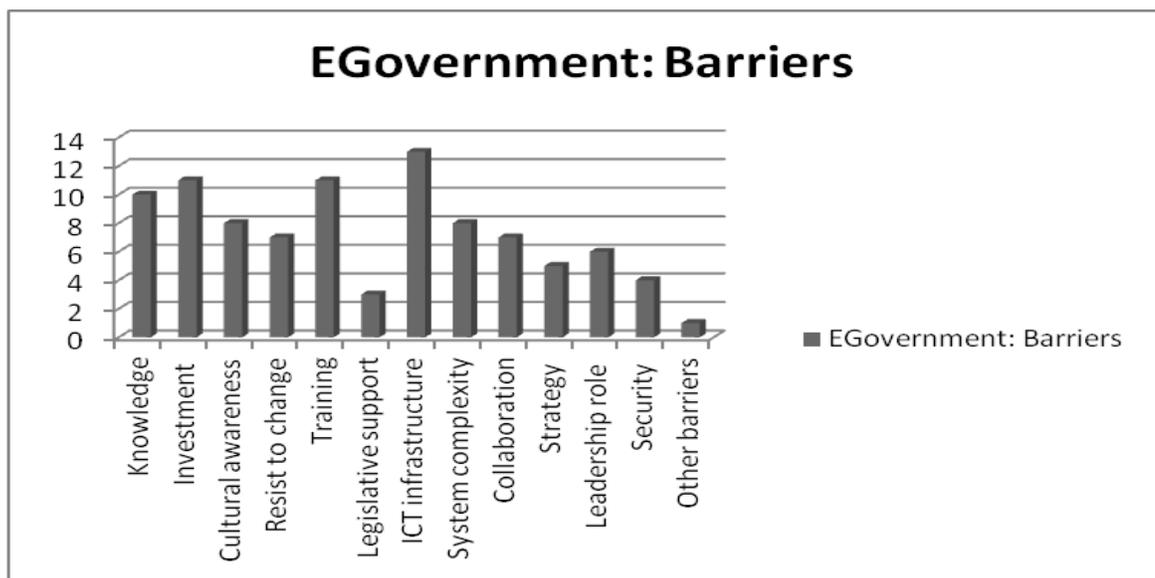


Figure 5-6) Barriers to E-Government Implementation

The illustration from the bar chart in Figure 5.6 shows that ICT infrastructure is the major constraints impact on e-Government implementation in the country and ranked 1st. This is consistent with the review of literature where scholars have argued the use and diffusion of ICT infrastructure as one of the key barriers (Ndou, 2004; Dode, 2007; Ajayi, 2007).

Legislative support was however mentioned to be the least barrier as the respondents at FMHLUD and NESREA and did not complete this question. Only 43.7% of respondents at SLG agree that legislative support is a vital barrier. Respondents from NCAA who were interviewed had actually believed the legislative support was moderate in terms of being considered a barrier. Table 5.20 presents the findings from cases studies on e-Government barriers.

	E-Government Implementation: Barriers	Questionnaire Responses (Number / Percentage)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (%)	Ranking
		Very important	Moderate	Less important	Very important	Moderate	Less important	Average score	
CASE STUDY ONE: FMLHUD	ICT infrastructure	(12) 52.2%	(11) 47.8%	(0) 0%	(6) 75%	(2) 25%	(0) 0%	63.6%	1
	High level of investment required	(12) 52.2%	(11) 48%	(0) 0%	(5) 62.5%	(3) 37.5%	(0) 0%	57.4%	2
	Education, training and set-up costs	(11) 57.9%	(8) 42.1%	(0) 0%	(4) 50%	(3) 37.5%	(1) 12.5%	54%	3
	High level of knowledge among employees required	(10) 71.4%	(4) 28.6%	(0) 0%	(3) 37.5%	(3) 37.5%	(2) 25%	54%	4
	Cultural awareness	(10) 55.6%	(8) 44.4%	(0) 0%	(4) 50%	(3) 37.5%	(1) 12.5%	52.8%	5
	Complexity in understanding processes and systems	(7) 53.8%	(6) 46.2%	(0) 0%	(3) 37.5%	(3) 37.5%	(2) 25%	45.7%	9
	Resistance to change among different departments	(7) 50%	(5) 35.7%	(2) 14.3%	(3) 37.5%	(3) 37.5%	(2) 25%	43.8%	10
	Partnership and collaboration	(9) 47.4%	(8) 42.1%	(2) 10.5%	(4) 50%	(4) 50%	(0) 0%	48.7%	8
	Leadership role	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

	Strategy (vision, mission & lack of ownership)	(10) 55.55 %	(7) 38.9%	(1) 5.55 %	(4) 50%	(4) 50%	(0) 0%	52.8%	6
	Security issues and privacy of citizens	(10) 52.6%	6 31.6%	(3) 15.8 %	(4) 50%	(4) 50%	(0) 0%	51.3	7
	Lack of legislative support / Formal policy								
	Others	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
CASE STUDY TWO: NESREA	ICT infrastructure	(12) 54.5%	(10) 45.5%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	71.7%	1
	High level of investment required	(12) 52.2%	(11) 48%	(0) 0%	(7) 77.8%	(2) 32.2%	(0) 0%	65%	2
	Education, training and set-up costs	(11) 57.9%	(6) 31.6%	(2) 10.5 %	(6) 66.7%	(3) 33.3%	(0) 0%	62.3%	3
	High level of knowledge among employees required	(10) 62.5%	(5) 31.25%	(1) 6.25 %	(5) 55.6%	(4) 44.4%	(0) 0%	59.1%	4
	Cultural awareness	(10) 55.6%	(6) 33.3%	(2) 11.1 %	(5) 55.6%	(3) 33.3%	(1) 11.2%	55.6%	5
	Complexity in understanding processes and systems	(9) 47.4%	(8) 42.1%	(2) 10.5 %	(5) 55.6%	(4) 50%	(0) 0%	51.5%	8
	Resistance to change among different departments	(7) 50%	(5) 35.7%	(2) 14.3 %	(4) 44.4%	(3) 33.3%	(2) 22.2%	47.2%	9
	Partnership and collaboration	(9) 50%	(7) 42.1%	(2) 10.5 %	(5) 55.6%	(3) 33.3%	(1) 11.1%	52.8%	7
	Leadership role	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10
	Strategy (vision, mission & lack of ownership)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11

	Security issues and privacy of citizens	(9) 53%	7 41.1%	(1) 5.9 %	(5) 55.6%	(2) 22.2%	(2) 22.2%	54.3%	6
	Lack of legislative support / Formal policy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12
	Others	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
OT CASE STUDY THREE: SAGAMU LG	ICT infrastructure	(14) 58.3%	(10) 47.8%	(0) 0%	(10) 100%	(0) 0%	(0) 0%	79.2%	1
	High level of investment required	(13) 56.5%	(9) 39.1%	(1) 4.3 %	(8) 80%	(2) 20%	(0) 0%	68.3%	2
	Education, training and set-up costs	(10) 58.8%	(7) 41.2%	(0) 0%	(7) 70%	(2) 20%	(1) 10%	64.4%	3
	High level of knowledge among employees required	(12) 66.7	(6) 33.3%	(0) 0%	(6) 60%	(4) 37.5%	(0) 0%	63.4%	4
	Cultural awareness	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7
	Complexity in understanding processes and systems	(9) 56.25 %	(6) 37.5%	(1) 6.25 %	(5) 50%	(4) 40%	(1) 10%	53.1%	5
	Resistance to change among different departments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8
	Partnership and collaboration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9
	Leadership role	(13) 52%	(10) 40%	(2) 8%	(5) 50%	(3) 30%	(2) 20%	51%	6
	Strategy (vision, mission & lack of ownership)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10
	Security issues and privacy of citizens	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11
	Lack of legislative support / Formal policy	(8) 47.4%	(8) 47.4%	(1) 5.2 %	(5) 50%	(4) 40%	(1) 10%	43.7%	12
	Others	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	ICT infrastructure	(5)	(1)	(0)	(2)	(0)	(0)	91.7%	1

		83.3%	16.7%	0%	100%	0%	0%		
High level of investment required	(4) 66.7%	(2) 33.3%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.3%	2	
Education, training and set-up costs	(4) 66.7%	(2) 33.3%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.3%	3	
High level of knowledge among employees required	(3) 50%	(3) 50%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	75%	4	
Cultural awareness	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	
Complexity in understanding processes and systems	(4) 66.7%	(2) 33.3%	(0) 0%	(1) 50%	(1) 50%	(0) 0%	58.4%	5	
Resistance to change among different departments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	
Partnership and collaboration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	
Leadership role	(3) 50%	(3) 50%	(0) 0%	(1) 50%	(1) 50%	(0) 0%	50%	6	
Strategy (vision, mission & lack of ownership)	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Security issues and privacy of citizens	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Lack of legislative support / Formal policy	(0) 0%	(3) 50%	(3) 50%	(0) 0%	(1) 50%	(1) 50%	50% Moderate	12	
Others	1	N/A	N/A	N/A	N/A	N/A	N/A		

Table 5-20) Analysis of E-Government Implementation Barriers

Findings also reveal that one additional barrier was identified, which was not included in the research survey. A director at NESREA stated that implementation policy, from his experience is a key obstruction to implementing e-Government initiatives.

5.5.3 E-Government Implementation Risks

From the research findings, three new risk factors were identified, which were not discussed in the review of literature or by researchers and academicians who have carried out previous studies of the Nigerian e-Government systems.

A director at NEREA, like many other respondents believe that accessibility of information by other agencies, including information sharing is the most ranked risk for e-Government implementation in Nigeria. This is compared to risks such as misuse of e-Government services and increased criticism by other agencies and citizens. He further argued that the following risks should also be considered, which were not previously identified during review of literature:

- Reduction in manpower, and
- Increase in unemployment

To buttress his point, the Assistant Director at FELIS in Abuja also identified a risk factor based on his experience of implementing e-Governments systems in land administration in Nigeria. Thus he mentioned that unstable power supply poses risk to e-Government implementation since Nigeria does not have regular supply of electricity across the country, despite being one of the petroleum exporting countries, who belongs to the Organisation of Petroleum Exporting Countries (OPEC).

Most of the staff and senior officers interviewed at the Federal Ministry of Housing, land and urban Development (Office of the Surveyor-General of the Federation) and National Civil Aviation Authority (NCAA) supported the notion that accessing information and security in terms of identity theft were major risks to be considered. Other risks identified were control over information and the fear of inferior quality service or delayed service.

However, only a minority of the respondents across the public sectors surveyed believes that misuse of e-Government services and increased criticisms by other agencies and citizens post higher risks. In terms of ranking, accessibility of information was validated by respondents as the most vital risks to e-Government implementation. Apart from technological risks, respondents, mainly NESREA and NCAA agree that information

security such as identity thefts do pose significant risks towards implementing e-Government systems. This supports Evangelidis *et al* (2002) description of potential risks area for e-Government, which they listed as – Technological/implementation, Social / human, security, financial and legal risk. The respondents affirm to the belief that increase criticism by other agencies and citizens should be the least important risk to be considered. Table 5-21 lists the risks identified with implementing e-Government systems in an IS environment, this is also illustrated using the bar chart in figure 5.7, which shows that accessing of information by other agencies as one of the significant risks that could impact on successful implementation of e-Government.

E-Government Implementation Risks (Rankings)	
1	Accessibility of info by other agencies
2	Environmental info' security e.g. identify theft
3	Reducing full control over information
4	Inferior service quality e.g. delayed service
5	Relational privacy e.g. background checks
6	Misinterpretation and misuse of e-government services
7	Increase criticisms by other agencies and citizens
Additional Risks identified	
8	Reduction in manpower
9	Increase in unemployment
10	Unstable power supply

Table 5-21) Risks to E-Government Implementation

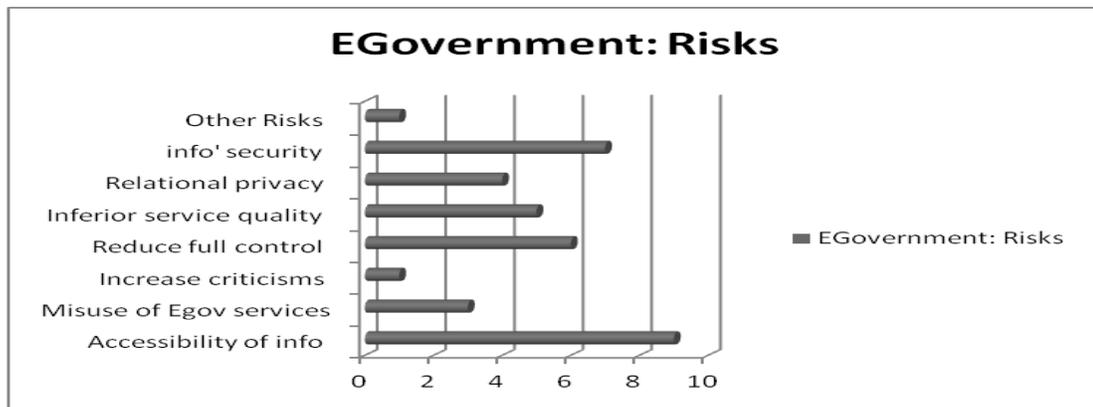


Figure 5-7) Risks to E-Government Implementation

	E-Government Implementation: Risks	Questionnaire Responses (No/ %)			Face-to-face Interviews (No/ %)			Questionnaire + Interviews (%)	Ranking
		Very important	Moderate	Less important	Very important	Moderate	Less important		
CASE STUDY ONE: FMLHUD	Accessibility of informaton by other agencies	(13) 56.5%	(10) 43.5%	(0) 0%	(8) 100%	(0) 0%	(0) 0%	78.3%	1
	Environmental information security	(12) 52.2%	(10) 43.5%	(1) 4.3%	(6) 75%	(2) 25%	(0) 0%	63.6%	3
	Reducing full control over information	(11) 47.8%	(11) 47.8%	(1) 4.4%	(6) 75%	(2) 25%	(0) 0%	61.4%	4
	Inferior service quality	(12) 52.2%	(11) 48%	(0) 0%	(7) 87.5%	(1) 37.5%	(0) 0%	69.9%	2
	Relational privacy	(11) 47.8%	(10) 43.5%	(2) 8.7%	(5) 62.5%	(2) 25%	(1) 12.5%	55.2%	5
	Misinterpretation and mis-use of e-Goernmentv services	(10) 43.5%	(10) 43.5%	(3) 13%	(4) 50%	(3) 37.5%	(1) 12.5%	46.8%	6
	Increase criticisms by other agencies and citizens	(9) 39.1%	(9) 39.1%	(5) 21.7%	(3) 37.5%	(2) 25%	(3) 37.5%	38.3%	7
	Others: Unstable power supply				(1) 100%	(0) 0%	(0) 0%		
CASE STUDY TWO:	Accessibility of informaton by other agencies	(12) 52.2%	(11) 48%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	76.1%	1
	Environmental information security	(12) 52.2%	(10) 43.5%	(1) 4.3%	(8) 88.9%	(1) 11.2%	(0) 0%	70.6%	2

	Reducing full control over information	(10) 62.6%	(7) 36.8%	(2) 10.5%	(7) 77.8%	(2) 32.2%	(0) 0%	70.2%	3
	Inferior service quality	(12) 63.15%	(6) 31.6%	(1) 5.25%	(6) 66.7%	(3) 33.3%	(0) 0%	64.9%	4
	Relational privacy	(9) 47.4%	(9) 47.4%	(1) 5.2%	(5) 55.6%	(4) 44.4%	(0) 0%	51.5%	5
	Misinterpretation and mis-use of e-Government services	(8) 42.1%	(8) 42.1%	(3) 15.8%	(5) 55.6%	(3) 33.3%	(1) 11.2%	48.9%	6
	Increase criticisms by other agencies and citizens	(8) 50%	(5) 31.25%	(3) 18.75%	(4) 44.4%	(3) 33.3%	(2) 22.2%	47.2%	7
	Others: Reduction in manpower Increase in unemployment				(2) 100%	(0) 0%	(0) 0%	52.8%	
CASE STUDY THREE: SAGAMU LG	Accessibility of information by other agencies	(16) 61.5%	(10) 38.5%	(0) 0%	(10) 100%	(0) 0%	(0) 0%	80.8%	1
	Environmental information security	(13) 56.5%	(10) 53.5%	(0) 0%	(9) 90%	(1) 10%	(0) 0%	73.3%	2
	Reducing full control over information	(12) 66.7%	(6) 33.3%	(0) 0%	(4) 44.4%	(4) 44.4%	(1) 11.1%	55.6%	6
	Inferior service quality	(11) 61.1%	(5) 27.8%	(2) 11.1%	(4) 44.4%	(3) 33.3%	(2) 22.2%	52.8%	7
	Relational privacy	(10) 58.8%	(7) 41.2%	(0) 0%	(7) 70%	(2) 20%	(1) 10%	64.4%	3
	Misinterpretation and mis-use of e-Government services	(11) 61.1%	(5) 27.8%	(2) 11.1%	(6) 60%	(3) 30%	(1) 10%	60.6%	4
	Increase criticisms by other agencies and citizens	(10) 58.8%	(6) 35.3%	(1) 5.9%	(6) 60%	(2) 20%	(2) 20%	59.4%	5
	Others: Unstable power supply				(1) 100%				
OTHERS:	Accessibility of information by other agencies	(6) 100%	(0) 0%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	100%	1

Environmental information security	(5) 83.3%	(1) 16.7%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	91.7%	2
Reducing full control over information	(4) 66.7%	(2) 33.3%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.3%	3
Inferior service quality	(4) 66.7%	(1) 16.7%	(1) 16.7%	(2) 100%	(0) 0%	(0) 0%	83.3%	4
Relational privacy	(3) 50%	(2) 33.3%	(1) 16.7%	(2) 100%	(0) 0%	(0) 0%	75%	5
Misinterpretation and mis-use of e-Government services	(4) 66.7%	(1) 16.7%	(1) 16.7%	(1) 50%	(1) 50%	(0) 0%	58.4%	6
Increase criticisms by other agencies and citizens	(3) 50%	(1) 16.7%	(2) 33.3%	(1) 50%	(1) 50%	(0) 0%	50%	7
Others	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Table 5-22) Analysis of E-Government Implementation Risks

As illustrated in the bar chart in Figure 5.7 above and rankings in Table 5-22 below, most of the respondents who participated in questionnaire and interviews agreed that accessibility of information is a crucial risk (FMHLUD – 78.3%; NESREA – 76.1%; NESRE - 80.8%; NCAA – 100%), thus ranking accessibility as overall 1st, compared to risks of inferior service quality, which was ranked overall 4th.

Whilst a male Deputy Director at NESREA who participated in the face-to-face interview identified two new risks factors that were not part of the risks listed by the researcher as reviewed from literature - reduction in manpower and increase in unemployment. Similarly, the Head of IT department in NESREA, and an Admin Officer I at Sagamu Local Government both pinpointed unstable power supply as additional factor to be considered as significant. Despite not listed as a risk factor in the survey, electricity supply has been described by scholars as factor significant factor implementing e-Government implementation in Nigeria (Ayo and Ekong, 2008).

Table 5-22 presents the findings from case study research on e-Government implementation risks whilst Table 5-23 illustrates the overall ranking of the risks from all the case study organisations.

Factors Influencing E-Government Implementation Risks		FMLHUD	NESREA	Sagamu LG	Others: NCAA	Overall Ranking
E-Government Implementation Risks	Accessibility of info by other agencies	1	1	1	1	1
	Environmental info' security e.g. identify theft	3	2	2	2	2
	Reducing full control over information	4	3	6	3	3
	Inferior service quality e.g. delayed service	2	4	7	4	4
	Relational privacy e.g. background checks	5	5	3	5	5
	Misinterpretation and misuse of eGov services	6	6	4	6	6
	Increase criticisms by other agencies and citizens	7	7	5	7	7
	Additional risks identified:					
	Reduction in manpower		*			
	Increase in unemployment		*			
	Unstable power supply	*		*		

Table 5-23) Ranking of E-Government Implementation Risks

5.6 Change Management in the E-Government Programme in Nigeria

Change management should not be confused with project management. Whilst project management relates to application of knowledge, skills, tools and techniques to project activities to meet project requirements, change managers has been describes as the process, tools and techniques to manage the people-side of change to achieve the required business outcome.

Change management thus incorporates the organisational tools that can be utilised to help individuals make successful personal transitions resulting in the adoption and realisation of change. Change management is one of the challenges discussed by academicians and practitioners as facing e-Government implementation in Nigeria (Azenabor *et al*, 2012).

Previous research has shown that effective leadership stimulated by management is a key enabler that provides the vision and the rationales for change. As a result, organisations would need to take management action needed to improve the acceptance levels of change among all employees, to enable e-government initiatives to be successfully implemented.

More so, management would benefit from gaining the confidence of their employees if they embrace a more participative approach that would ensure all stakeholders are involved right from the decision-making stage to the implementation and administration of the change process. This way it will win the support of all those who are likely to be affected by the change and ensure that employees own the change processes, defend it and guard against its failure. Furthermore, greater participation in the change process is likely to eliminate the fear, cynicism and aloofness that have characterized management staff in particular.

Thus change management is a more effective way of changing the behavior of employees. Organisations are expected to manage change that is seeking change, initiate it, and keep looking for something new to do since rapid change is highly valued in this evolving business environment (Inyang, 2004; Lawler & Worley, 2008; Thom-Otuya & Thom-Otuya, 2013).

The researcher interviewed some staff and managers at the case studies organisations about their views on reasons for resistance to change especially when implementing e-Government services. Based on the findings of this study, the researcher was able to validate the reasons stated as motivating change. More so, respondents contributed richly by identifying additional challenges of change management, with emphasis on resistance to change.

As shown in Table 5-24 and 5-25 below, all the respondents strongly agree that the major reason for resistance to change in e-Government implementation is the concern of employees with implication of change for self, and not the effects of the change on the organisations. Some of the reasons attributed to this are consistent with past literature where staffs believe e-Government implementation would eventually take away their jobs. More so, the cultural issues in relation to norms and values often make most public servants not to support any planned changes. They prefer to remain in their 'comfort zone'. All the respondents agree to the four reasons mentioned in survey as the key to challenges to change management.

The respondents contributed immensely by identifying a few reasons, which are additions to the ones already recognised. Whilst the researcher gave key reasons for resistance to change, respondents were able to identify 11 additional reasons they believe tend to lead to resistance to change by employees. For instance both the Assistant Director at FELIS and a Deputy Director at NESREA acknowledged 'fear of the unknown' as a key reason for employees resisting change.

Other new reasons mentioned by the respondents are: Cultural believe; bureaucracy; lack of 'Can-do' positive attitude of staff, lack of motivation; too much familiarity with the current system; security of job and finance; leadership qualities; not practicing what leaders are preaching. In general, the reasons for resistance to change from findings affirm some the assertions made by scholars are academicians, thus validating Lam (2005)'s view that resistance to change often leads to project failure.

5.5.4 Challenges of Change Management: Key reasons for resistance to change

Challenges of Change Management: Key reasons for resistance to change	
1	Concern with implication of change for self, not effects on organisation success
2	Misunderstanding - Communication problem
3	Low tolerance to change
4	Different assessment of the situation
Other reasons identified:	
5	Cultural believe
6	Bureaucracy
7	Lack of 'Can-do' positive attitude of staff
8	Lack of motivation
9	Fear of the unknown
10	Lack of trust in management
11	Too much familiarity with the current system, thereby feeling it's a burden to brace the new system
12	Security of job
13	Finance
14	Leadership qualities of your organisation
15	Not practicing what leaders are preaching

Table 5-24) Challenges of Change Management: Key reasons for resistance to change

Whilst table 5.24 highlights the challenges of change management with reference to key reasons for resistance to change, table 5.25 however presents the overall ranking from the findings from the case study organisations in the Nigerian public sector. Appendix 5a shows the analysis of the findings and the number of respondents who were interviewed and those who completed the questionnaire survey.

Challenges for Change Management: Key Reasons for Resistance to Change		FMLHUD	NESREA	Sagamu LG	Others: NCAA
Change Management Challenges: Resistance to Change	Concern with implication of change for self	1	1	1	1
	Misunderstanding - Communication problem	2	2	2	2
	Low tolerance to change	3	3	3	3
	Different assessment of the situation	4	4	4	4
	Other reasons identified:				
	Cultural believe				*
	Bureaucracy				*
	Lack of 'Can-do' positive attitude of staff				*
	Lack of motivation		*		
	Fear of the unknown	*	*	*	
	Lack of trust in management		*		
	Too much familiarity with the current system		*	*	
	Security of job	*			
	Finance	*			
	Leadership qualities of your organization	*			
	Not practicing what leaders are preaching	*			

Table 5-25) Challenges of Change Management: Key reasons for resistance to change

5.5.5 How change is managed

The researcher was able to ask the respondents about how change is managed in their organisations. As illustrated in Table 5-26 below, the respondents were consistent in the information they provided about change management in their respective organisations.

Whilst change is managed at the Federal Ministry of Lands, Housing and Urban Developments by allowing teams or departments within the organisation to deal with change incrementally and separately. In fact all the respondents who participated in the survey are Cadastral and FELIS offices provided the same view.

However, research findings reveal that change evolves through long periods of stability with some bursts of fundamental change at both NESREA and Sagamu Local Government, although a female Deputy Director at NESREA disagrees with other colleagues. In her views, the organisation is constantly undergoing small changes. Other participants from NCAA believed change is managed differently from the other organisations described above. The findings suggest that there is no standard way to manage changes; it depends on the organisations' strategies for change management.

The study on the reasons for the differences in how change is managed by these public sector organisations is beyond the scope of this study, perhaps could be explored further by future researchers.

Whilst table 5-26 presents the findings from the case study organisations, Appendix 5b shows detailed analysis on how each of these organisations manage change, as and when required.

Change Management: How change is managed		FMLHUD	NESREA	Sagamu LG	Others: NCAA /CBN	Overall Ranking
CM: How Change is Managed	Teams/departments within organisation deal with change incrementally and separately	*				*
	Evolves through long periods of stability with some bursts of fundamental change		*	*		*
	Constantly undergoing small changes		*			*
	Exists in a state of rapid and continuous change				*	*

Table 5-26) Taxonomy of how change is managed from case study organisations

5.5.6 Change Management Approaches

The researcher also conducted survey about the approaches to change management. This was necessary to understand how these case studies organisations tend to deal with change management and which approach (es) they consider to be more important than others. In carrying out this research study, the researcher has been able to rank these approaches in order priority and interestingly, new approaches were identified by some of the respondents based on their knowledge and expertise.

From the findings, all the respondents from case studies organisations ‘strongly agree’ that education and communication is the most important step towards managing change in

organisations. This explains why education and communication were ranked as the number 1 priority, as observed in Table 5.27 and 5.28 respectively. Analysis of the questionnaire shows that 79.4% of the 34 respondents at NESREA including a Deputy Director had agreed that participation and involvement should be the second most important change management approach, for any organisation in a developing country like Nigeria; all the respondents who were interviewed across the case study organisations ‘strongly agree’ that participation and involvement are the next vital approach to managing change.

However, most of the respondents did not fully agree that explicit and implicit coercion was very significant; thus it was ranked the lowest - 6th approach (FMLHUD - 38.3%; NESREA – Not completed; SLG – 36.5%; NCA – 41.7%). In responding to the research survey, additional approaches were identified as crucial determinants for change management by one of the Deputy Directors at NESREA.

According to her, other methods for effective change management include the following:

- a) Change is necessary and very productive if handled sincerely and truthfully
- b) Change is resisted sometimes for selfish reasons, and not in the interest of the organization
- c) Change is also resisted when it becomes too frequent with little or no value added to the organisation.

The researcher has argued that these three additional approaches could otherwise be classified as reasons for managing change, rather than change management approach. The findings have however been able to authenticate the six change management approaches through the face-to-face interviews and questionnaire survey carried out at the case studies organisations. This is in support of the notions of scholars and practitioners that management would benefit from gaining the confidence of their employees by adopting a more participative approach to involve all stakeholders across all levels of implementation from pre- to post implementation stage of the change process, especially when executing e-Government projects.

Whilst change management has been widely acknowledged as a challenge facing e-Government implementation in Nigeria, organisations are advised to effectively manage change that is seeking change by giving high value to their staff and adopting the change management approaches in order of priority.

The researcher also emphasises on the need for organisations to carefully review its process in order to determine how change is managed. Findings have authenticated that it could evolve through long periods of stability with some bursts of fundamental change or it could exist in a state of rapid and continuous change.

Another way could be teams or departments within the organisation to deal with change incrementally and separately, as revealed at the FMLHUD where case studies were carried out at two different offices/departments within the organisation (Azenabor *et al*, 2012).

Change Management Methods/Approaches (Rankings)	
1	Education and Communication
2	Participation and Involvement
3	Facilitation and Support
4	Negotiation and Agreement
5	Manipulation and Co-option (Not very important)
6	Explicit and Implicit Coercion
Other Approached Identified	
7	Change is necessary and very productive if handled sincerely and truthfully
8	Change is resisted sometimes for selfish reasons, and not in the interest of the organisation
9	Change is also resisted when it becomes too frequent with little or no value added to the organisation; necessary for improved standard of living.

Table 5-27) Ranking of Change Management Approaches

Whilst Tables 5-28) shows the overall ranking, Appendix 5c presents detailed analysis of the findings from both questionnaire survey and face-to-face interview.

Change Management: Approaches		FMLHUD	NESREA	Sagamu LG	Others: NCAA /CBN	Overall Ranking
Change Management Approaches	Education and Communication	1	1	1	1	1
	Participation and Involvement	2	2	2	2	2
	Facilitation and Support	3	3	3	3	3
	Negotiation and Agreement	4	4	4	4	4
	Manipulation ad Co-option	5		5	5	5
	Explicit and Implicit Coercion	6		6	6	6
	Other Approaches identified:					
	Change is necessary and very productive if handled sincerely and truthfully		*			
	Change is resisted sometimes for selfish reasons, and not in the interest of the organisation		*			
	Change is also resisted when it becomes too frequent with little or no value added to the organisation; necessary for improved standard of living.		*	*		

Table 5-28) Taxonomy of Change Management Approaches from Case study organisations

5.5.7 Change Management Requirement in E-Government

The researcher has also asked the respondents to ascertain whether or not the change management requirements listed in Table 5-29 have any importance on e-Government. A higher number of the respondents who completed this section of the survey were from NESREA whilst the remaining were completed by staff and managers from the Cadastral

Office (FMLHUD) and SLG. As a result, the ranking was analysed based on the findings with emphasis on the organisations with the largest respondent, as in Table 5.18.

Whilst the findings reveal the need to understanding why change is happening and why change management requirement is to be duly considered when implementing e-Government, there is the feeling that everyone is focused on the same goals and objectives, and having assistance from the project owners, project infrastructure and training specialist have been ranked low by respondents from both organisations. Because the number of respondents who participated in this part of the survey was mainly from NESREA, the researcher had to form a judgment based on the number of responses and not the organisational type since the case study research approach is to evaluate the findings and not necessarily comparison analysis.

Change Management Requirement in E-Government Implementation (Rankings)	
1	Understanding why change is happening and why.
2	Recognise the project is being implemented by people with necessary core skills.
3	Appreciation of how change will take place and be effectively communicated.
4	People, process and infrastructure) Knowing the project recognises organisation wide dependencies.
5	Being able to take ownership and influence details of the change.
6	Awareness of who is ultimately responsible for the project.
7	Conscious that key individuals are involved in the project.
8	Feeling that everyone is focused on the same goals and objectives.
9	Having assistance from the project owners, project infrastructure & training specialist

Table 5-29) Change Management Requirement in E-Government

Table 5-30 highlights the summary of findings from case study organisations regarding change management requirements in e-Government, ranked in order of priority.

Change Management: Requirements in E-Government		FMLHUD	NESREA	Sagamu LG	Others: NCAA /CBN	Overall Ranking
Change management Requirements in E-Government	Understanding why change is happening and why.	2	1	1		1
	Recognise the project is being implemented by people with necessary core skills.	3	2	2		2
	Appreciation of how change will take place and be effectively communicated.	4	3	3		3
	People, process and infrastructure - Knowing the project recognises organisation wide dependencies.	1	4	5		4
	Being able to take ownership and influence details of the change.	5	5	4		5
	Awareness of who is ultimately responsible for the project.	6	6	7		6
	Conscious that key individuals are involved in the project.	7	7	6		7
	Feeling that everyone is focused on the same goals and objectives.	9	8	9		8
	Having assistance from the project owners, project infrastructure & training specialist	8	9	8		9

Table 5-30) Ranking of Change Management: Requirements in E-Government

5.7 Implementation Approach: E-Government Strategies in Nigeria

The researcher had attempted to ask all the respondents on their thoughts as regards the E-Government strategies in place in their organisations. In response, it was shown that all the case studies organisations have e-Government strategies in place. This confirms the organisations seriousness and how they plan for e-Government implementation in their respective institutions.

5.7.1 E-Government Good Practice Guidelines: Pre-Implementation stage

In evaluating the good practice guidelines for e-government systems at every phase of the development life cycle, from pre-implementation through to post-implementation; the researcher received feedback from mostly from the staff and managers at NESREA as respondents from other case studies organisations were unwilling to participate in this session. This is because some do not have knowledge of e-Government implementation or have not been directly involved with such implementations before.

To ensure respect for privacy, the researcher had to respect their decisions, basing the analysis on the information supplied by the participants from NESREA through face-to-face and interviews survey.

Table 5-31 shows the rankings of the good practice guidelines following the analysis of the research whilst Table 5-32 summarises the findings from the case study organisations, on what they believe are the important good practice guidelines and if they are able to identify additional factors. Appendix 5c presents analysis of the questionnaire and face-to-face interviews based on the number of responses across the case study organisations.

Good Practice Guidelines – Pre-Implementation (Rankings)	
1	Strong political support from the PG
2	Good understanding and support from the executive agency
3	Strong commitment by the PG
4	A simple project with a clear development objective
5	A strong user
6	A strong case for selection of technology
7	Interest by the private sector
Additional Factor identified	
8	None

Table 5-31) E-Gov GP Guidelines: Pre-Implementation

E-Government Good Practice Guidelines: Pre-Implementation		FMLHUD	NESREA	Sagamu LG	Others: NCAA	Overall's Ranking
E-Gov GPG: Pre-Implementation	Strong political support from the project group (PG)		1	2		1
	Good understanding and support from the executive agency		2	1		2
	Strong commitment by the PG		3	4		3
	A simple project with a clear development objective		4	3		4
	A strong user		5	7		5
	A strong case for selection of technology		6	6		6
	Interest by the private sector		7	8		7

Table 5-32) Analysis of E-Gov GP Guidelines - Pre-Implementation

From the findings, strong political support from the project group (PG) was mentioned to be the most significant factor to be considered as good practice guideline. The program analyst at NESREA attributed his history for identifying strong political support from the project group as the most crucial to the assertion the country is currently being governed under political rulers who were democratically elected government, and this explains the reason why political will is an external factor that impact e-Government implementation.

As highlighted in Tables 5-31 and 5-32, apart from the political support, there is the need for strong commitment from the project group. This explains why the respondents ranked commitment from PG as the third most important good practice guideline.

However, interest by the private sector was ranked the lowest amongst the list of good practice guidelines. When asked why private sector involvement was the least to be considered at this stage, most of the respondents mentioned that was e-government relates to provision of ICT and online services to the citizens and this is different from e-Commerce that is more of commercial or private venture. They clarified issue relating to public-private-partnership (PPP) as advised by Agunloye (2007) as not being relevant at this stage. Agunloye (2007) had argued that PPP enables quick take-off of projects through private sector funds, drive, financial discipline and innovation and e-Commerce; and believing that e-commerce opens advances that are driven from within and outside of Nigeria.

5.7.2 E-Government Good Practice Guidelines: Implementation stage

The section was completed by respondents from NESREA and the Assistance Chief Officer at the Cadastral Office, FMLHUD. All the respondents supported the notion that focus on sustainability was the most important factor decision makers and implementers of change must first consider as good practice guideline. Findings reveal over 80% of the respondents believe that ensuring that operations are transparent, equitable and fair are the second most important good practice guidelines to take into consideration.

Whilst maintaining per unit costs and minimising costs per unit were ranked third and fifth overall respectively based on the findings, respondents were of the view that the stage of implementing e-Government initiatives, creating opportunities for stakeholders and liaising with other government departments in simplifying legal and procedural requirements are not as significant as ensuring high structural completeness and operation efficiency is achieved. This is due to the fact that emphases at the implementation stage would be delivering the project effectively and efficiently to maximise resources and minimize costs.

Table 5-33 lists the e-Government good practice guidelines during the implementation stage of the project development life cycle whilst Table 5-34 shows the findings from case study organisations in order to rank and validate these factors. Interestingly, no additional factor was identified by any of the respondents. Appendix 5e presents a detailed analysis of the findings.

Good Practice Guidelines – During Implementation (Rankings)	
1	Focus on sustainability Strong commitment by the project group (PG)
2	Ensuring that operations are transparent, equitable and fair
3	Maintaining per unit costs
4	Achieve high structural completeness and operational efficiency
5	Minimising per unit costs
6	Creating opportunities for all stakeholders
7	Liaising with other government departments in simplifying legal and procedural requirements
Additional Factor identified	
8	None

Table 5-33) E-Gov G P Guidelines: During Implementation

E-Government Good Practice Guidelines: During Implementation		FMLHUD	NESREA	Sagamu LG	Others: NCAA	Overall Ranking
E-Gov GPG: During Implementation	Focus on sustainability	1	1	2		1
	Ensuring that operations are transparent, equitable and fair	2	2	3		2
	Maintaining per unit costs	4	3	1		3
	Achieve high structural completeness and operational efficiency	3	4	4		4
	Minimising per unit cost	5	5	5		5
	Creating opportunities for all stakeholders	6	6	6		6
	Liaising with other government departments	7	7	7		7

Table 5-34) Analysis of E-Gov G P Guidelines – During Implementation

5.7.3 E-Government Good Practice Guidelines: Post-Implementation stage

The findings from the research survey, as responded by the Assistant Chief Officer at Cadastral Office and NESREA staff and managers, indicate that demand and commitment from the project group and other key stakeholders involved are pre-requisites to ensuring good practice guidelines during the post-implementation phase. This stage is often regarded as the monitoring and evaluation stage, following the successful implementation of the project.

Over 70% (FMLHUD - 80.7%; NESREA - 83.4%; SLG - 75.7%) of the respondents ticked the need for structure and standard as the second most significant factor that would ensure good practice guideline at the post-implementation stage. This is to ensure there is a proper structure in place as well as set policies and procedures for sustainability.

At the post-implementation stage, all the respondents including the Assistant Chief Officer at cadastral office agree that training and capability building are essential for all staff and managers. This would improve their ICT literacy level and encourage them to buy into or support the newly implemented systems. It would also enable them to cascade relevant information necessary for operating the systems.

The above findings validate the views of some of the scholars that e-Government is already in existence in Nigeria. Although e-Government is perceived to be at various stages, its effective implementation depends on the political will, as well as technological and organisational factors. The findings have revealed that e-Literacy and capacity building will improve the ICT literacy level of the organisation especially after the implementation of the e-Government systems. Similarly, focusing on sustainability and implementation costs is significant, especially during the implementation stage.

Thus the supports of decision-makers including the politicians are very essential in e-Government implementation and this should be done at the initiation and planning stage. Otherwise, it could impact on the implementation process which scholars are significant part of good practice guidelines (Yusuf, 2006; Dode, 2007; Agunloye, 2007; Ayo & Ekong, 2008).

Table 5.35 highlights the rankings of good practice guidelines at post-implementation stage of e-Government project development whilst Table 5.36 presents the findings from case studies organisations regarding their views on post-implementation good practice guidelines. For detailed analysis and breakdown of the research findings, please refer to Appendix 5f.

Good Practice Guidelines – Post-Implementation (Rankings)	
1	Demand and commitment
2	Structure and standard
3	Technology
4	Benefit assessment (e.g. demography, gender, etc.)
5	Training and capacity building
6	Policy and regulation
7	Budget and financial support
8	Services
9	Staffing
10	Executing agency
Additional Factor identified	
11	None

Table 5-35) E-Govt G P Guidelines: Post-Implementation

E-Government Good Practice Guidelines: Post-Implementation		FMLHUD	NESREA	Sagamu LG	Others: NCAA /CBN	Overall Ranking
E-Gov GPG: Post-Implementation	Demand and commitment	1	1	1		1
	Structure and standard	2	2	2		2
	Technology	6	3	3		3
	Benefit assessment (demography, gender)	4	4	5		4
	Training and capacity building	5	5	4		5
	Policy and regulation	3	6	7		6
	Budget and financial support	8	7	6		7
	Services	7	8	8		8
	Staffing	9	9	10		9
	Executing agency	10	10	9		10

Table 5-36) Analysis of E-Gov G P Guidelines – Post- Implementation

5.8 E-Government Implementation: Key Actors and Main Activities

5.8.1 Pre-Implementation Phase

The researcher evaluated the findings from the case studies research survey in order to validate them. As part of the research questions, the key actors and their roles in terms of key activities are to be determined at every phase of the development life cycle. The key actors identified by the researcher, which was embraced from the Three-Quarter Moon model, postulated by Hammed (2009) for e-commerce adoption in Jordan and later proposed for general application, are as follows: Government, Technologically-advanced countries, Companies and E-Government Users.

5.8.1.1 Case Study One: Cadastral Office and FELIS (FMLHUD) Key Actors and Main Activities: Pre-Implementation Phase

Respondents from Cadastral and FELIS departments at the Federal Ministry of Lands, Housing and Urban Development in Abuja agree that all the four actors - government, technologically-advanced countries, companies and users are vital for e-Government implementation within the context of developing country such as Nigeria.

As illustrated in Table 5.37 (and Appendix 5g), the respondents stated the government should be involved in all the pre-implementation activities. For instance, a principal surveyor at Cadastral office argued that the government has the sole responsibility of ensuring proper legislations and regulations have been put in place at the initiation stage. This is in support of Agunloye (2007)'s proposition of government role in ensuring sustainability by ensuring policies are formulated. In addition, the Assistant Director – AGM at FELIS did support the need for government to initiative policies that would remove barriers from foreign investments at the pre-implementation stage. This is because

there have already been several initiatives to hastening e-Government development in Nigeria through the technological platform.

Key Actors & Main Activities: Pre-Implementation (Case Study 1: FMLHUD)		Government	Technological ly-advanced	Companies	Users	Other actors (please
E-Government Key Actors & Activities: Pre-Implementation	Legislation and regulations	*				
	Telecommunication infrastructure	*	*	*		
	Postal infrastructure	*	*			
	International trade	*	*			
	Establish an e-Government department	*	*	*	*	
	Payment system	*			*	
	Removing barriers for foreign investments	*				
	E-Government strategy	*	*	*		
	Low cost hardware and software	*	*	*		
	Education and labour training	*	*	*	*	
	Lowering taxations	*				
	Culture, religion and values	*	*	*	*	
	Others (please specify)					
	None identified					

**Table 5-37) CS1:E-Gov Key Actors and Main Activities: Pre-Implementation Stage
Case Study 1: Federal Ministry of Lands, Housing and Urban Development (FMLHUD)**

Research findings also indicate that all the four key actors have major role to play in the aspect of establishment of e-Government department in the organisations as proper planning and co-ordination is necessary to ensure successful implementation. The other activities that the roles of all the four key actors are required are – education, labour and training; and culture, religion and value. Scholars and practitioners have often maintained that employees’ resistance to change is sometimes due to the norm and cultural belief as public servants do not always support change in business process re-engineering.

Another key role of the government, as analysed from the finding is the ability to lower taxation. This will encourage foreign investors to capitalise on investments in Nigeria. More so, it would enable the technologically-advanced countries to be able to transact with companies and governments more interactively. This will also encouraged the clearing and forwarding of machinery and equipment for e-government services at cheaper costs.

5.8.1.2 Case Study Two: NESREA Key Actors and Main Activities Pre-Implementation Phase

The respondents at NESREA were asked to identify who the key players are at the pre-implementation stage and whether or not, they agree to the main activities highlighted in the questionnaire and interviews survey. They were also asked to identify other key actors and/or activities, apart from the ones listed.

Findings from the research survey indicate that the government plays vital part in every crucial activity at the pre-implementation stage, apart for provision of low cost hardware and software, which the respondents mentioned is usually determined by the manufacturers from the technologically advanced countries.

Unlike the respondents at FMLHUD who affirmed all the four key actors have significant roles to play in the following activities: establishing of e-Government department;

provision of education and labour training; and issues relating to culture, religion and values. However the staff and managers at NESREA have mentioned that education and labour training is the only activity that all the four activities are involved in one way or the other at the pre-implementation stage.

As regards identifying additional activities and actors, none of the respondents was able to identify any new activity. However, the Director of Admin and Finance at NESREA recommended the inclusion of government ministries, departments and agencies as key actors, not just the government on its own. Further, a male Deputy Director had suggested the inclusion of Faith-Based organisations (FBO) and traditional institutions as key actors for e-Government development at the pre-implementation.

Hence, apart from agreeing with the list of e-Government actors presented in the framework, as stated in the survey questions, the respondents were able to identify additional actors they believe should be considered, which are relevant to the nature of their duties, and the fact that NESREA is a government agency.

Table 5-38 and Appendix 5g show the analysis of the research findings from survey carried out at National Environmental Standards and Regulations Agency (NESREA).

Key Actors & Main Activities: Pre-Implementation (Case Study 2: NESREA)		Government	Technologically-advanced	Companies	Users	Other actors (please specify)
E-Government Key Actors & Activities: Pre-Implementation	Legislation and regulations	*				
	Telecommunication infrastructure	*	*	*		
	Postal infrastructure	*	*			
	International trade	*	*			
	Establish an e-Government department	*				
	Payment system	*		*	*	
	Removing barriers for foreign investments	*				
	E-Government strategy	*	*	*		
	Low cost hardware and software		*			
	Education and Labour training	*	*	*	*	
	Lowering taxations	*				
	Culture, religion and values				*	
	Others (please specify)					
	Ministries, departments and agencies					*
	Faith-Based Organisation (FBO's)					*
Traditional Institutions					*	

**Table 5-38) CS2:E-Gov Key Actors and Main Activities: Pre-Implementation Stage
Case Study 2: National Environmental Standards and Regulations Enforcement Agency (NESREA)**

5.8.1.3 Case Study Three: Sagamu Local Government - Key Actors and Main Activities: Pre-Implementation Phase

Research analysis and findings from respondents from Sagamu Local Government verify the assertion that government, technologically-advanced countries, companies and users are the key actors involved in e-Government implementation. Most of the respondents also agree that the government has the most significant role to play. For instance, a female Senior Project Manager has sole responsibility for lowering taxation and provision of postal infrastructure. She also suggested it was joint responsibility between the government and technologically-advanced countries to make sure barriers are removed for encouraging foreign investments.

All the respondents recommend that the four key actors would be involved in education and training at the pre-implementation stage. This is to raise their awareness and increase their level of understanding of the e-Government services. In addition, both government and the technologically-advanced countries would have vital roles to play in aspects of legislation and regulations, telecommunication infrastructure as well as culture, religion and values.

As illustrated in Table 5-39 and Appendix 5g, there are no additional activities or actors identified by the respondents as significant at the pre-implementation stage.

	Key Actors & Main Activities: Pre-Implementation (Case Study 3: Sagamu Local Government)				
	Government	Technologically- advanced	Companies	Users	Other actors (please specify)
E-Government Key Actors & Activities: Pre-Implementation	Legislation and regulations	*	*		
	Telecommunication infrastructure	*	*		
	Postal infrastructure	*			
	International trade				*
	Establish an e-Government department	*		*	
	Payment system		*	*	
	Removing barriers for foreign investments	*	*		
	E-Government strategy		*		
	Low cost hardware and software	*			
	Education and Labour training	*	*	*	*
	Lowering taxations	*			
	Culture, religion and values	*	*		
	Others (please specify)				
	None				

**Table 5-39) E-Government Key Actors and Main Activities: Pre-Implementation Stage
Case Study 3: Sagamu Local Government (SLG)**

5.8.2 During Implementation Phase

This session will analyse the findings from the case studies regarding who are the key actors and which of the activities are vital to the actors during the implementation stage.

5.8.2.1 Case Study One: Cadastral Office and FELIS (FMLHUD) - Key Actors and Main Activities: During Implementation Phase

The researcher had attempts to analyse the findings of the survey carried out at the Federal Ministry of Lands, Housing and Urban Development, Abuja with two departments used as case studies. They are Cadastral Unit of the Office of The Surveyor-General of the Federation and Federal Land Information Systems (FELIS). However none of the respondents answered this section of the survey, either through interviews or face-to-face questionnaire. Part of the reasons was that they have not actually been involved in e-Government systems during the implementation process. Some have been involved prior to and after the implementation of ICT and e-Government systems. As a result, they did not feel it was appropriate to answer this section of the survey.

5.8.2.2 Case Study Two: NESREA Key Actors and Main Activities: During Implementation Phase

Analyses of the findings show that the actors have crucial responsibilities for ensuring implementation process are smooth, with the government and its agencies taking the lead role. According to a Deputy Director at NESREA, 'The government has the most significant to play, which makes them the first and most important actor in terms of implementing e-Government'. Thus the respondents argue that government is very vital in determining new strategies for government and businesses, as well as provision of security for stakeholders.

In terms of changing the business culture, a female Deputy Director affirms that the companies have the major responsibilities of ensuring their employees adapt to the changes. Whilst the respondents also believe that the key actors, bar the government have the responsibilities of using local languages on the websites so that the employees (and citizens) are not left out since language barrier is an issue in most part of the country.

As regards the issues of culture, religion and value, all the respondents agree that the users' co-operation should be given utmost consideration. Their attitude in this wise would go a long way in determining whether or not the e-Government systems will be implemented. Even after the implementation, their norm or culture could impact on sustainability of the e-Government systems.

Just as in the pre-implementation stage, the respondents approve that all the four actors – government, technologically-advanced countries, companies, and users are to participate in training and education programme during the implementation of the e-Government systems. More so, over 75% of the respondents suggested that both the government and the technologically-advanced countries have significant roles to play in encouraging expatriate workers to return from overseas.

Whilst a Director however ascertained that information dissemination should be additional activity, one of the Deputy Directors also identified FBO's and traditional institutions as additional actors to be well-thought-out during e-Government implementation.

Table 5-40 and Appendix 5h summarises the key actors and their crucial activities during implementation of e-Government systems.

Key Actors & Main Activities: During Implementation (Case Study 2: NESREA)		Government	Technologically- advanced	Companies	Users	Other actors (please specify)
E-Government Key Actors & Activities: During Implementation	New strategies for government and businesses	*				
	Change business culture			*		
	The use of local languages in website		*	*	*	
	Encouraging expatriate workers to return from overseas	*	*			
	Accept credit card and international payments	*	*	*		
	Transaction security	*	*			
	Security	*				
	Culture, religion and value				*	
	Training and education	*	*	*	*	
	Others (please specify)					
	Information dissemination	*	*	*		
	Faith-Based Organisations (FBOs)					*
	Traditional Institutions					*

**Table 5-40) CS2: E-Gov Key Actors and Main Activities: During Implementation
Case Study 2: NESREA**

5.8.2.3 Case Study Three: Sagamu Local Government Key Actors and Main Activities: During Implementation Phase

Based on the analysis of the data collected from the research survey carried out at Sagamu Local Government, the respondents believe that the government has crucial role to play in the following areas:

- a) New strategies for government and businesses
- b) Encouraging expatriate workers to return from overseas
- c) Security
- d) Training and education

In addition, the respondents suggest that all the four key actors – government, technologically-advanced countries, companies and users – are critical in the aspect of training and education during e-Government implementation. All the respondents agree that these actors have significant role to play by being involved in some of the activities that are relevant to their expertise knowledge and level of involvement.

In addition, the Chairman of Sagamu Local Government endorses that the user has a vital role to play in terms of culture, religion and value during implementation of e-Government as user involvement is key to ensure successful implementation of any ICT services. The same way those respondents believe that change business culture is an important activity for the companies to handle.

Table 5-41 below highlights the findings of key actors and their main activities, as expressed by the respondents at Sagamu Local Government See Appendix 5h for more analysis).

E-Government Key Actors & Activities: During Implementation	Key Actors & Main Activities: During Implementation (Case Study 3: Sagamu Local Government)	Government	Technologically- advanced Companies	Users	Other actors (please specify)
	New strategies for government and businesses	*			
	Change business culture			*	
	The use of local languages in website		*		
	Encouraging expatriate workers to return from overseas	*			
	Accept credit card and international payments			*	
	Transaction security			*	
	Security	*			
	Culture, religion and value				*
	Training and education	*	*	*	*
	Others (please specify)				
	None				

**Table 5-41) CS3: E-Gov Key Actors and Main Activities: During Implementation
Case Study 3: Sagamu Local Government**

5.8.3 Post Implementation Phase

5.8.3.1 Case Study One: Cadastral Office and FELIS (FMLHUD) Key Actors and Main Activities: Post-Implementation Phase

According to the Assistant chief officer, at the Cadastral Office, “the government should be accountable for ensuring security systems are in place and that customer satisfaction is taken very serious. In the same vein, they (government) should ensure that culture, tradition and value do not adversely impact on e-Government services even after implementation.”

Apart from online promotion and other marketing where the government is not directly involved, all the respondents believe that the role of the government is very significant in ensuring successful post-implementation.

In terms of monitoring and updating activities, a Principal Surveyor at Cadastral Office also argues that all the four actors with the exception of the users have major roles to play. He believes that monitoring and evaluation of projects would ensure continuous service delivery even after implementation.

The research findings confirm the proposition that education training and capacity building are essential activities for all actors to participate in throughout the development life cycle. Almost all the respondents at the case studies organisation, most especially at cadastral and FELIS offices have argued that education and training should be provided from pre-implementation (initiation) stage, to implementation (planning and development) stage and through to post-implementation (monitoring and evaluation) stage.

Analysis also show that the success of any project is not determine based on pre-implementation and during implementation phases, but it continues after the implementation since performance has to be measured and the service quality has to be maintained and improved, where possible. More so, regular review would enables perceived risks or issues to be identified and managed properly. The Chief Officer at

FELIS, who has a PG Diploma in Geographical Information System (GIS) mentioned in has been involved in a few e-government projects in respect of GIS and planning to partake in another e-Government implementation very shortly. He however stated that from experience, government and decision makers have major roles to play, either directly or indirectly, at every phase of the project development life cycle since their decisions are final.

As illustrated in Table 5-42 and Appendix 5i, there was no new activity identified by the respondents, neither did they endorse any additional e-Government actor. However they were able to validate the four key actors and the main activities discussed in the literature and research survey carried out.

		Key Actors & Main Activities: Post-Implementation (Case Study 1: FMLHUD)	Government	Technologically -advanced	Companies	Users	Other actors (please specify)
EGov	Post	Security	*				
		Monitoring and updating	*	*	*		
	Actors:	Online promotions		*	*	*	
		Customer satisfaction / customer trust	*				
		Culture, tradition and value	*				
	Key	Training and education	*	*	*	*	
		Others (please specify)					
	None						

**Table 5-42) CS1:E-Gov Key Actors and Main Activities: Post-Implementation
Case Study 1: FMLHUD**

5.8.3.2 Case Study Two: NESREA Key Actors and Main Activities: Post-Implementation Phase

The findings from the research survey carried out at NESREA thus validate the roles of the key actors, after mapping with the main activities that are usually undertaken after the implementation of e-Government services.

Just as in the findings from case study one, the respondents from NESREA suggest that the government have significant role to play in discharging the following activities: security, monitoring and evaluation, and training and education. However, the respondents do not acknowledge that the government must be crucially involved in all the major activities. For instance, two Deputy Directors and a Program Analyst¹ that were interviewed acknowledged that the companies have sole responsibility of online promotions after the e-Government systems have been implemented. They do not believe the either government, or technologically-advanced countries or even the users should have anything to do with online marketing and promotions after the implementation.

As revealed from previous findings regarding pre and during implementation, all the respondents endorsed training and education activities as significant, not just for the users but for all stakeholders throughout the development life cycle. This suggests that education and training should not be taken lightly and should be budgeted for by the decision makers when planning to implement e-Government services.

Over 65% of the respondents from NESREA stated that the companies and users should be responsible for maintaining high standards in terms of customer satisfaction and trust, since this relate to customer care. In a similar view, most of the respondents argue that both companies and users have major roles to play in respect of ensuring the culture, tradition, and value do not have adverse influence of e-Government, especially after the systems have been fully-implemented.

A Director at NESREA, in relating e-government implementation to the functions and responsibilities of the agency was able to identify additional actor – enforcement agencies. He believes the significant role of the enforcement agents would ensure systems are maintained as well as bring law and order to the friendly environment. As such, such role should not be over-looked when determining key actors involved at the post-implementation stage of e-Government systems.

Table 5-43 highlights the findings from case study 2 – NESREA about the key actors and the main activities to be deliberated at e-Government post-implementation stage whilst Appendix 5i presents detailed analysis.

Key Actors & Main Activities: Post-Implementation (Case Study 2: NESREA)		Government	Technologically -advanced	Companies	Users	Other actors (please specify)
Post	Security	*				
	Monitoring and updating	*	*	*		
Actors:	Online promotions			*		
	Customer satisfaction and customer trust			*	*	
	Culture, tradition and value			*	*	
Key	Training and education	*	*	*	*	
	Others (please specify)					
EGov	Enforcement agencies					*

**Table 5-43) CS2: E-Gov Key Actors and Main Activities: Post-Implementation
Case Study 2: NESREA**

5.8.3.3 Case Study Three: Sagamu Local Government - Key Actors and Main Activities: Post-Implementation Phase

The research findings from survey conducted at Sagamu Local Government reveal that all the four actors have crucial role to play. According to the Ogun State Chairman of the Nigerian Labour Congress who also participated in the research survey, the government has the most significant role to play because they are deeply involved in monitoring and updating, online promotion, customer satisfaction and trust, and training and education.

Interestingly, all the respondents mentioned that training and education are important activities for all the key actors after implementation. They are necessary to ensure sustainability through regular monitoring and evaluation of service provision.

Although no additional activity or actor was identified by any of the respondents, a Senior Project Manager agrees that the government and companies have significant role to play to ensure monitoring and updating of services after implementation. Similarly, a Principal Admin Officer, amongst other respondents stated that to maintain good culture, traditional and value, the other three actors – technologically-advanced countries, companies and users – are vital especially at the post-implementation stage.

Table 5-44 and Appendix 5i however respectively summarises and analysis the findings from the respondents from Sagamu local Government regarding the key actors and their main activities at the post-implementation stage.

Key Actors & Main Activities: Post-Implementation (Case Study 3: Sagamu Local Government)		Government	Technologically- advanced	Companies	Users	Other actors (please specify)
EGov Key Actors: Post Implementation	Security	*	*			
	Monitoring and updating	*		*		
	Online promotions	*		*		
	Customer satisfaction and customer trust	*		*		
	Culture, tradition and value		*	*	*	
	Training and education	*	*	*	*	
	Others (please specify)					
	Enforcement agencies					*

**Table 5-44) CS3: E-Gov Key Actors and Main Activities: Post Implementation
Case Study 3: Sagamu Local Government**

5.9 Presentation of Research Findings: Taxonomy

The researcher summarises the findings from all the case studies, for which data were collected through questionnaire response, face-to-face interviews and documentation. The analysis validated the accurate planning of the proposed conceptual framework for e-Government implementation throughout the development life cycle and endorses the role of the key actors and main activities that were projected. The Tables (5-45 to 5-50) attempt to summarise the case studies research findings:

Mapping of E-Government Implementation Factors in Nigeria		Overall Ranking
External Factors	Organisational	1
	Politics	2
	Economics	3
	Legal/Legislation	4
	Critical Mass	5
	Other external factor identified: None	
Internal Factors	Leadership / Management Capability	1
	Financial Matter	2
	Goals/Objective	3
	Network Collaboration/Trust	4
	Attitude	5
	Other external factor identified: None	
Business	Forced to change business process	Yes/No
	E-information sharing requires transformation	Yes

Table 5-45) Mapping of E-Government Implementation Factors

Mapping of E-Government Implementation Benefits, Barriers & Risks				
	Benefits	Barriers	Risks	No
E-Government Implementation Characteristics: Benefits, Barriers & Risks	Improve productivity and increase capacity of government	ICT infrastructure	Accessibility of info by other agencies	1
	Improve quality of service delivery and business and customer	High level of investment required	Environmental info' security e.g. identify theft	2
	Reduce the overall costs of the organisation and efficiency gains	Education, training and set-up costs	Reducing full control over information	3
	Reduce intra- and inter-agency paperwork/ flow	High level of knowledge among employees required	Inferior service quality e.g. delayed service	4
	Improve quality of decision and policy making	Cultural awareness	Relational privacy e.g. background checks	5
	Improve the organisation's business process	Complexity in understanding processes and systems	Misinterpretation and misuse of eGov services	6
	Network and community cohesion	Resistance to change among different departments	Increase criticisms by other agencies and citizens	7
	Improve collaboration among different department	Partnership and collaboration	Additional risks identified: Reduction in manpower Increase in unemployment Unstable power supply	8
	Improve accountability, transparency and anti-corruption	Leadership role		9
	Promote the use of ICT in other sectors of the society	Strategy (vision, mission & lack of ownership)		10
	Reduce data collection, process and storage	Security issues and privacy of citizens		11
	Additional benefits identified: Well-equipped offices to enhance productivity	Lack of legislative support / Formal policy		12
	Information sharing is quick and prompt	Additional barriers identified: Implementation policy	13	
	Speed the process of work and quality of decision-making.		14	
	Increased productivity in governance.		15	

Table 5-46) Taxonomy of E-Government Implementation Benefits, Barriers & Risks

Change Management (CM) in E-Government			
	CM Approaches	CM Requirements in E-Government	Overall Ranking
Change Management: Approaches and Requirements in E-Government	Education and Communication	Understanding why change is happening and why.	1
	Participation and Involvement	Recognise the project is being implemented by people with necessary core skills.	2
	Facilitation and Support	Appreciation of how change will take place and be effectively communicated.	3
	Negotiation and Agreement	People, process and infrastructure/ Knowing the project recognises org wide dependencies.	4
	Manipulation and Co-optation	Being able to take ownership and influence details of the change.	5
	Explicit and Implicit Coercion	Awareness of who is ultimately responsible for the project.	6
	Other Approaches identified: Change is necessary and very productive if handled sincerely and truthfully	Conscious that key individuals are involved in the project.	7
	Change is resisted sometimes for selfish reasons, and not in the interest of the organisation	Feeling that everyone is focused on the same goals and objectives.	8
	Change is also resisted when it becomes too frequent with little or no value added to the organisation.	Having assistance from the project owners, project infrastructure & training specialist	9

Table 5-47) Taxonomy of C M Approaches and Requirements in E-Gov

E-Government Key Actors & Main Activities in Nigeria: Pre-Implementation		Government	Technologically-advanced Companies	Users	Other actors (please specify)
E-Government Key Actors and Main Activities: Pre-Implementation	Legislation and regulations	*			
	Telecommunication infrastructure	*	*	*	
	Postal infrastructure	*	*		
	International trade	*	*		
	Establish an e-Government department	*	*	*	*
	Payment system	*		*	*
	Removing barriers for foreign investments	*			
	E-Government strategy	*	*	*	
	Low cost hardware and software	*	*	*	
	Education and Labour training	*	*	*	*
	Lowering taxations	*			
	Culture, religion and values	*	*	*	*
	Others (please specify)				
	Ministries, departments and agencies				*
	Faith-Based Organisation (FBO's)				*
Traditional Institutions				*	

Table 5-48) Taxonomy of E-Gov Key Actors & Main Activities: Pre-Implementation

E-Government Key Actors & Main Activities in Nigeria: During Implementation		Government	Technologically-advanced	Companies	Users	Other actors (please specify)
E-Government Key Actors and Main Activities: Implementation	New strategies for government and businesses	*				
	Change business culture			*		
	The use of local languages in website		*	*	*	
	Encouraging expatriate workers to return from overseas	*	*			
	Accept credit card and international payments	*	*	*		
	Transaction security	*	*			
	Security	*				
	Culture, religion and value				*	
	Training and education	*	*	*	*	
	Others (please specify)					
	Information dissemination	*	*	*		
	Faith-Based Organisations (FBOs)					*
	Traditional Institutions					*

Table 5-49) Taxonomy of E-Gov Key Actors & Main Activities: During Implementation

E-Government Key Actors & Main Activities in Nigeria: Post-Implementation		Government	Technologically-advanced	Companies	Users	Other actors (please specify)
E-Government Key Actors and Main Activities:	Post-Implementation					
	Security	*				
	Monitoring and updating	*	*	*		
	Online promotions		*	*	*	
	Customer satisfaction and customer trust	*		*	*	
	Culture, tradition and value	*		*	*	
	Training and education	*	*	*	*	
	Others (please specify)					
Enforcement agencies					*	

Table 5-50) Taxonomy of E-Gov Key Actors & Main Activities: Post Implementation

5.10 Conclusions

The aim of this chapter is to analyse the findings of the data collected from the case study research. The researcher was able to focus on the three core case studies – Federal Ministry of Lands, Housing and Urban Development (FMLHUD), National Environmental Standards and Regulations Agency (NESREA) and Sagamu Local Government. Since the Federal Ministry is a large organisation, the researcher limited his study to two departments of the ministry – Cadastral and FELIS.

Data was collected through questionnaire response, face-to-face interviews and documentation in order to validate the proposed conceptual framework and attempt to address the research questions. From the research findings, additional factors were identified, in addition to authenticating most of the factors and activities highlighted in the research survey.

The researcher has presents taxonomy of the research findings from Tables 5-45 to 5-50, for simplicity and better understanding. In achieving the aim and meeting the objectives in line with the research questions, the researcher was to certify the propositions and map e-Government factors – internal and external, benefits, barriers and risks including the key actors involved at every development phase of e-Government implementation. It was generally accepted that government has to play a leading role in successfully implementing e-Government services.

Based on analysis of findings, the researcher had attempted to validate some of the change management approaches and requires in e-Government implementations. This is due to the assertion that resistance to change, which is part of change management, often leads to failure of projects (Lam, 2005). Interestingly, the researcher had attempted to identify the good practice guidelines for e-Government implementation at every stage of the development life cycle, from pre-implementation, through implementation to post-

implementation stage. Respondents were able to acknowledge that the activities carried out by the stakeholders at every stage of the development life cycle.

The next chapter presents the lessons learned from the case study organisations and the revised conceptual framework based on validity of the research data.

Chapter 6 Revisiting the Conceptual Model and Data Analysis

6.1 Introduction

In this chapter the researcher outlines and provides a short discussion of the research findings. This chapter also presents the lessons learned from the case study organisations and the revised conceptual framework based on validity of the research data. The researcher also reflects on achievement of the research aim and objectives, and whether or not, the research questions were addressed.

Based on the research findings and data analysis, this chapter deliberates on the additional factors identified, which were not part of the literature or the research survey. As a result of the research findings and analysis, the research has been able to explain some issues and limitations, thereby making recommendations for effective implementation of e-Government systems in the Nigeria public sector organisations.

Whilst Chapters 2 and 3 presents the literature background and proposition of conceptual framework, Chapters 5 and 6 provided the data to assess the conceptual model. This Chapter however seeks to synthesise the empirical findings with the literature and revise the conceptual model proposed in Chapter 3 based on the factors – be it internal or external, benefits, barriers and risks that influence e-Government implementation within the developing countries using Nigerian public sector organisations as case studies.

The researcher discusses the change management approaches and its requirements in e-Government, based on the findings. In addition, the researcher has reflected on the roles of e-Government key actors and the main activities which have been validated and considered relevant at every phase of the development life cycle from pre-implementation to post-implementation.

In achieving the research aim, this chapter seeks to validate and revise the conceptual framework for e-Government implementation based on the empirical data collected and

analysed in Chapter 5. This is to enable the researcher to present a novel conceptual framework for e-Government implementation in developing countries, with a possible generalisation of the framework to extend to developed countries as well.

6.2 Findings and Discussions

6.2.1 Lessons Learned from Case Study Research Findings

The aim of this section is briefly summarise and provide a clear notion of the main findings in Chapter 5. As reviewed in the literature, there have been limited studies on the factors, benefits, barriers and challenges of e-Government implementation in developing countries. The researcher however carried out case studies research on public sector organisations in Nigeria in order to:

- 1) Test and validate the factors, internal and external, influencing e-Government implementation
- 2) Test and validate the benefits, barriers and risks influencing e-Government implementation
- 3) Mapping 1) and 2) above, which are e-Government implementation factors, benefits, barriers and risks
- 4) Test, validate and mapping then key actors involved and the main activities in e-Government implementation at pre-implementation, implementation and pre-implementation phases of the development life cycle
- 5) Identifying and mapping the change management approaches and requirements in e-Government.

Based on the findings from the case studies organisations in Chapter 5 and the analysis of data in Chapter 6, apart from validating the data, additional factors were identified and these are highlighted in Table 6.1. As a result, the researcher had to make some few changes by addition or removing some of the factors, issues and concepts influencing e-Government implementation which were consequential of the data presented in Chapter.

The modification to the conceptual framework proposed in Chapter 3 is outlined in Figure 6.1 (see Section 6.7).

The outline of the lessons learned from the research findings and data analysis are as follow:

- 1) The conceptualised e-Government implementation framework was tested and validated, and it was revealed that factors vary from country to country and from locality to locality. Therefore for e-Government to be successfully implemented, these factors should be identified and prioritized, as attempted by the researcher in Chapter 5. For instance, whilst majority of the respondents especially at NESREA stated that Organisational factor is the most significant external factor decision makers and e-Government implementers should first consider, a few respondents from the Federal Ministry of Lands, Housing and Urban Development however argued that economic factors should be ranked higher than organisational. In analysing the data, the researcher had to go with the view of the majority who respondent in order to map these factors in order of priority.
- 2) From the interviews and questionnaire survey carried out, it was realised that respondents agreed there is need for transparency and clarity of purpose in order to ensure successful e-Government implementation
- 3) In validating the modified Three-Quarter moon model postulated by Hamed *et al* (2008) for e-Commerce adoption and attempting to embrace it for e-Government implementation, the response suggests that the adoption and implementation process for e-Commerce and e-Government are similar, in principle. Based on the findings, additional actors such as government ministries and agencies, fait-based organisations and traditional institutions have been identified as important stakeholders of e-Government implementation. These changes have been reflected through revision of the validated conceptual framework in Figure 6.1.
- 4) Relationship gap between the government and its employees is wide and this calls for improvement. Some of the staff perceive their managers as little ‘gods’ and

would not challenge or seek clarification on decisions made, for fear of losing their jobs. Thus there is need for leadership role in training and re-tooling of employees to ensure good customer care, maintain high quality of service delivery and setting clear understanding of the roles of both junior and senior staff.

- 5) From the research visits carried out, it was observed there is a severe lack of IT qualified staff in most departments, especially at the case studies units and organisations. In actual fact some of the organisations have to rely on support from staff from other departments. Interview with the Head of IT department at NESREA was very useful in understanding the implementation process. This is due to the fact that they do not have adequate IT staff with the requisite knowledge of implementing e-Government initiatives in-house, they mostly tend to work with experts and consultants from other organisations in implementing changes in their ICT. This is a service gap that requires organisations to give opportunities to training their IT staff as part of career development and even employ some of these experts or consultants directly, in order to save costs.
- 6) The mapping of the factors influencing e-Government implementation would assist scholars and practitioners in future studies or e-Government development so they would be aware of which factors or issues to prioritise and be aware of. The research findings validated the external factors and internal factors in order of importance as:
 - External Factors (1-Organizational, 2-Political, 3-Economic, 4-Legal/Legislation and 5-Critical Mass)
 - Internal Factors (1-Leadership/Management Capability, 2-Financial Matters, 3-Goals/objectives, 4-Attitude, 5-Network Collaboration)
- 7) The researching findings certify the key actors and their roles in respect of key activities at every stage of the development. As a novel contribution, was able to map the specific activities to the actor(s) that are expected to take active roles, and at every stage of the development life cycle. For instance, data analysis reveal that the government has to play the most significant role in ensuring proper legislation

and policies are in place at the pre-implementation stage, like in the case of Nigeria where NITDA and NeGSt are governmental agencies responsible for formulating policies and ensuring sustainability; the government role during and after implementation are to ensure security, and monitoring and updating respectively. This would enable implementers of e-Government to have strategies in place and be able to determine which of the actors are crucial and the critical activities that are responsible for every stage of the project development.

- 8) Research analysis shows that every respondent that participated in the survey from each of the case studies organization, either through questionnaire or face-to-face interviews rather has varied opinion about the issues and topics raised with them. However the mapping the differences in opinions on the factors and characteristics in terms of benefits, barriers and risks influencing e-Government implementation allows the validation of the conceptual framework proposed in Chapter 3.
- 9) For e-Government to be successful, privacy and confidentiality must be given utmost priority. This is not the case in Nigeria at the moment, as confidentiality of documents is treated as 'part of the process', rather than being a crucial factor. Perhaps, government legislation for breach of privacy is not enforceable in the country.
- 10) Apart from change management and cultural issues, bribery and corruption have been observed as norm in the country. These are due to lack of online payment for title deeds and land registration system. It was observed that unemployment is as a result of economic activities, and not e-Government. However these observations are outside the scope of this research study.

6.3 Achievement of Research Aim and Objectives

The aim of this research is to evaluate and investigate what principles should guide successful implementation of e-Government systems in the developing countries.

The researcher carried out case study research of public sector organisations in Nigeria, with a generic view of establishing whether or not the following objectives could be achieved (see Appendix 5). The main objectives of this research that arise as a result of the above aim are:

6.3.1 Objective 1:

Critically review and analyse the existing literature in the area of e-government with reference to public sector delivery in developing countries.

Findings:

The research findings suppose that most of the factors and characteristics identified as influencing e-Government implementation are similar to those discussed in existing literature, although some may be specific to the Nigerian public sector context. For instance, from the research findings, it was revealed that unstable power supply is a risk to be measured and managed before implementing e-Government services, since Nigeria has unstable electricity supply. As a result, some organisations where their production depends mainly on electricity will have to rely on the generating plants as the main source of power supply whilst the main power supply is used as back-up.

The researcher has critically examined the concepts and applications of e-Government in Chapters 2 and 3, and based on the research gaps, made some propositions for developing a conceptual framework. This framework was validated through research survey carried out using Nigerian public sector organisations as case studies. Based on the findings the researcher was able to test and validate the factors, both internal and external, as well as the characteristics in terms of benefits, barriers and risks influencing e-Government implementation in Nigeria.

Further, the researcher was able to map these factors and characteristics and ranked them in order of priorities. This enabled validation of the proposed model and with additional factors determined from the analysis of findings, the researcher was able to make some modification especially in presenting the revised conceptual framework. It is therefore sound to state the researcher has achieved the research aim by investigating and examining the strengths and weaknesses of the key factors, concepts and activities influencing e-Government in the context of developing countries

6.3.2 Objective 2:

Critically review and analyse existing theories, policies and models relating to e-government implementation.

Findings:

The researcher reviewed existing literature and theories and policies relating to e-Government including change management theories that reflect on e-Government implementation. Based on the findings, some of the models were applied directly whilst some could not form part of the conceptual framework.

The proposed conceptual framework was based on adoption and/or modification of the following models and theory:

- Institutional theory (Environmental/institutional context in terms of external and internal factors influencing e-Government implementation)
- Three-Quarter Moon Model (Determining e-Government key actors and activities)
- Drivers-Barriers Model and Comprehensive Barrier framework (E-Government characteristics in terms of benefits and barriers)

However due to time and due to costs of conducting research visits, the researcher had to modify the structure by generalising the benefits, barriers and risks influencing e-Government implementation. This would also enable respondents to give their own views about what they believe these issues are. The Drivers-Barriers framework for instance,

listed 12 elements they believe could be classified as either drivers or barriers, and this system could prevent respondents from expressing their views. In generalising the e-Government concepts and characteristics rather than basing them on specific theories or models, the respondents validated the questions they were asked during the research survey. In addition, new factors were identified, which were not included in the survey.

As regards review of theories and model, the researcher was able to modify the three-quarter moon model, following the analysis of findings. This model was applied as there have been no specific model that identify the key actors in e-Government implementation, not just the stakeholders. The closest was the three-quarter model, which Hamed 2009 applied to applied to e-Commerce adoption in Jordan and he presented a generalised version which was suggested should be validated. In this vein, the researcher was able to import this concept to e-Government implementation since Jordan and Nigeria are both developing countries. The researcher successfully tested and validated the adopted model, which forms part of the revised conceptual framework. As a result, it can be deduced that the researcher has been able to achieve Objective 2 by reviewing existing policies, theories and models, validation of which eventually led to the formation of the revised conceptual framework.

6.3.3 Objective 3:

Based on review of literature and addressing the research gaps that exist between e-Government implementation, to develop and revise the conceptual model that would assist in its application particularly in the developing countries, from pre-implementation to post-implementation stages.

Findings:

Based on the findings from Objectives 2 and 3 above, the researcher was able to develop a conceptual framework for e-Government implementation in the developing country, using Nigerian public sector organisations as case studies. One of the models developed was the adoption of the Three-Quarter Moon model used for e-Commerce to e-Government environment.

6.3.4 Objective 4:

Using conceptual framework as the basis, to conduct case study research in order to reconceptualise the model.

Findings:

As a result of the research findings, the researcher was able to modify some of the names of the key actors. For instance, the respondents mentioned that as far as e-Government is concerned, the government has other ministries and parastatals that work closely with the government to ensure effective delivery of the ICT systems. As a result, the government was renamed 'Employer', comprising ministries and agencies. The same applies to the Users, which could be citizens or employees. Although the research studies focus on institutional perspectives in terms of government to employee (G2E), the researcher has attempted to generalise the framework for future studies and applications and as such took a broad view to classify the 'User' as either citizen or employee. This would enable future applications or studies based on citizens, and/or both citizens' and employees' perspectives.

6.4 Answers to Key Research Questions 1-3

6.4.1 Main Factors Influencing E-Government Implementation

RQ1: What are the external and internal factors influencing e-Government implementation in public sector in the context of developing countries in order to bring about transparent and generally acceptable system?

The researcher carried out survey to test and validate the proposed conceptual framework, with a view to making some modifications, where appropriate.

Table 6-1 summarises the findings based on the research survey carried out to test, validate and map the main factors in order of priority.

<p><u>External Factors</u></p> <p>Organisational</p> <p>Political</p> <p>Economic</p> <p>Legal/Legislation</p> <p>Critical Mass</p>	<p><u>Internal Factors</u></p> <p>Leadership</p> <p>Financial</p> <p>Goals/Objectives</p> <p>Network Collaboration</p> <p>Attitude</p>
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**Table 6-1) E-Gov Implementation Factors in Public Sector Organisations
(in Developing countries Context: Case Study of Nigeria)**

6.4.2 E-Government Characteristics: Benefits, Barriers and Risks

RQ2: How do these factors and characteristics – benefits, barriers and risks, influence e-Government implementation process and what implications may emerge from this implementation? How are we able to rank and map these factors/characteristics in order of priorities, and whether or not we are able to identify new factors/characteristics that have not been discussed in the review of literature?

Based on the research findings and analysis of data, the researcher was able to identify the benefits, barriers and risks influencing e-Government implementation in Nigeria public sector context. As shown in Table 5.46 in Chapter 5, additional factors were identified some of which are specific to the case studies context. For instance, unstable power supply was highlighted by one of the Directors in NESREA since e-Government requires constant and ready supply of electricity. However, Nigeria still experience a significant amount of power cut. For e-Government to be effective, then back-up systems such as mobile phone for online access and stand-by generating plants whenever there is power failure. Table 6-2 also highlights the e-Government benefits, challenges and risks influencing e-Government implementation and additional factors.

<p><u>E-Government Benefits</u></p> <ol style="list-style-type: none"> 1. Improve productivity 2. Improve service quality 3. Reduce the overall costs 4. Reduce intra- and inter-agency paperwork 5. Improve quality of decision 6. Improve accountability, transparency 7. Promote the use of ICT 8. Improve collaboration 9. Reduce data collection, 10. Improve business process 11. Network and community cohesion 	<p><u>E-Government Barriers:</u></p> <ol style="list-style-type: none"> 1. ICT infrastructure 2. High level of investment 3 Education, and set-up costs 4. High level of knowledge 5. Cultural awareness 6. Complexity in understanding processes and systems 7. Resistance to change among different departments 8. Partnership and collaboration 9. Leadership role 	<p><u>E-Government Risks</u></p> <ol style="list-style-type: none"> 1. Accessibility of info by other agencies 2. Environmental info' security e.g. identify theft 3. Reducing full control over information 4. Inferior service quality e.g. delayed service 5. Relational privacy e.g. background checks 6. Misinterpretation and misuse of eGov services 7. Increase criticisms by other agencies and citizens
<p><u>Additional benefits Identified:</u></p> <ol style="list-style-type: none"> 1. Well-equipped offices to enhance productivity 2. Information sharing is quick and prompt 3. Speed the process of work and quality of decision-making. 4. Increased productivity in governance. 	<p><u>Additional barriers Identified:</u></p> <ol style="list-style-type: none"> 1. Implementation policy 	<p><u>Additional risks Identified:</u></p> <ol style="list-style-type: none"> 1. Reduction in manpower 2. Increase in unemployment 3. Unstable power supply

**Table 6-2) Ranking of E-Govt Implementation Benefits, Barriers & Risks
(in Order of Priorities: Identification of new factors)**

As shown in Table 6-2 above, four (4) additional benefit factors were identified, which were not discussed in the research questionnaire and during the face-to-face interviews. The benefits are as follows: Well-equipped offices to enhance productivity; Information sharing is quick and prompt; Speed the process of work and quality of decision-making, and: Increased productivity in governance.

Based on the findings, the research identifies implementation policy as additional risk factor influencing e-Government implementation in developing countries, drawing experience from Nigerian public sector organisations.

Regarding e-Government implementation risks, three (3) additional factors were identified: Reduction in manpower; Increase in unemployment; unstable power supply. Thus the findings have shown that some of the factors may vary depending on locality and what the type of services to be provided. The researcher ensured the concepts and characteristics in terms of benefits, carriers and risks are generalised, and not based on a specific model or applications like PEST analysis or Drivers-Barrier model or Comprehensive Barrier framework, as originally planned.

The researcher has tested and validated the factors and other concepts identified during literature and proposed, which enabled the conceptual framework to be revised. These factors have also been mapped and ranked in order of importance to enable practitioners and scholars take them into consideration for future applications and research studies.

6.4.3 How these Factors Influence E-Government Implementation

RQ3: Who are the key actors involved in e-Government implementation process, and what are their main activities throughout the development life cycle? How are decision-makers able to identify, and address any challenges arising implementation of e-Government systems including change management issues?

The key actors responsible for e-Government implementation were determined using the model adopted from the Three-Quarter Moon to reflect its application to e-Government environment. The research findings and analysis of data have enabled the researcher to test and validate the main activities and the key actors involved, from pre-implementation up to post-implementation stage. This research has enable discussions on the importance of the key actors and their responsibilities, as well as good practice guidelines at every phase of the development life cycle, with government taking the lead role. Apart from endorsing the key actors and main activities, the researcher has been able to rank them in order of priority, as a result of the findings from the case studies research.

Table 6.3 below shows the classification of e-Government good practice guidelines and the key actors and main activities based on their activities throughout the project development life cycle, from pre-implementation to post-implementation phase. At pre-implementation phase for instance, decision makers and implementers would need to realise that political support is an essential good practice guideline and that government role is essential in carrying out the crucial activity of having legislation in place. Also vital at this stage is provision of training and education for all the key actors – government, technologically-advanced countries and users.

During implementation stage, the findings have suggested that sustainability and transparency are two of the important good practice guidelines to be adopted by implementers. The same way the government must start focusing on new strategies and providing security for all stakeholders. The company must also start thinking of how to change the business culture. After implementation, work continues as demand and commitment as well as structure and standard are considered to be good practice guidelines. Findings also suggest that the key actors, apart from the user must be responsible for monitoring and updating. They felt the users are not mostly part of the decision makers and would also follow instructions given. However the analysis reveal that trading and education is required for all the four actors throughout the development phases, that is, from pre-implementation though to post-implementation phase.

6.5 Presentation of Changes following validation

This sector outlines the changes made to the proposed structure following validation through the survey conducted across the case studies. Tables 6.4 to 6.6 provide taxonomies of these variations and modifications whilst the revised conceptual framework is show in Figure 6-1.

6.5.1 Presentation of E-Government Implementation Factors Validated

Validation of E-Government Implementation Factors in Nigeria		Proposed Ranking	Ranking (validation)	Outcome
External Factors	Organisational	1	1	No change
	Politics	2	2	No change
	Economics	3	3	No change
	Legal/Legislation	4	4	No change
	Critical Mass	5	5	No change
	Other external factor identified: None	N/A	N/A	None identified
Internal Factors	Leadership / Management Capability	1	1	No change
	Financial Matter	2	2	No change
	Goals/Objective	3	3	No change
	Attitude	4	5	Ranked Lowest
	Network Collaboration/Trust	5	4	Ranked 4th
	Other external factor identified: None	N/A	N/A	None identified
BPF	Forced to change business process	Yes/ No	Yes/ No	Mostly Yes (Inconclusive)
	E-information sharing requires transformation	Yes	Yes	Validated

Table 6-4) Taxonomy of E-Gov Implementation Factors – Internal & External

6.5.2 Presentation of E-Government Implementation Benefits, Barriers & Risks validated

Taxonomy of E-Government Implementation Benefits, Barriers & Risks				
E-Government Implementation Characteristics: Benefits, Barriers & Risks	Benefits (Validated – Yes/No)	Barriers (Validated – Yes/No)	Risks (Validated - Yes/No)	
		Improve productivity and increase capacity of government (Yes)	Y ICT infrastructure	Y Accessibility of info by other agencies
	Improve quality of service delivery and business and customer	Y High level of investment required	Y Environmental info' security e.g. identify theft	Y
	Reduce the overall costs of the organisation and efficiency gains	Y Education, training and set-up costs	Y Reducing full control over information	Y
	Reduce intra- and inter-agency paperwork/ flow	Y High level of knowledge among employees required	Y Inferior service quality e.g. delayed service	Y
	Improve quality of decision and policy making	Y Cultural awareness	Y Relational privacy e.g. background checks	Y
	Improve the organisation's business process	Y Complexity in understanding processes and systems	Y Misinterpretation and misuse of eGov services	Y
	Network and community cohesion	Y Resistance to change among different departments	Y Increase criticisms by other agencies and citizens	Y
	Improve collaboration among different department	Y Partnership and collaboration	Y Additional risks identified: Reduction in manpower	
	Improve accountability, transparency and anti-corruption	Y Leadership role	Y Increase in unemployment	
	Promote the use of ICT in other sectors of the society	Y Strategy (vision, mission & lack of ownership)	Y Unstable power supply	
	Reduce data collection, process and storage	Y Security issues and privacy of citizens	Y	
	Additional benefits identified: Well-equipped offices to enhance productivity	Lack of legislative support / Formal policy	Y	
	Information sharing is quick and prompt	Additional barrier identified:	Y	
	Speed the process of work and quality of decision-making.	Additional barriers identified:		
	Increased productivity in governance.	Implementation policy		

Table 6-5) Taxonomy of E-Gov Implementation Benefits, Barriers & Risks Validated

6.5.3 Presentation of Key Actors, Activities and Development Life-cycle

Validation of Key Actors & E-Government Development Life-cycle			
	Conceptual Structure	Empirical Structure	Outcome (after validation)
E-Government Key Actors	Government	Employer Ministries/Agencies	Variation [3Additional actors identified: i) Ministries, agencies; ii) Faith-based organisations (FBOs) iii) Traditional institutions]
	Technologically-advanced Countries	Technologically-advanced Countries	Constant (No change)
	Companies	Companies	Constant (No change)
	Users	User (Employee /Citizen)	Slight variation
E-Gov Main Activities	E-Government Practice Guidelines	E-Government Practice Guidelines	Validated (No change)
	E-Government Development Life-cycle i) Pre-Implementation ii) During Implementation ii) Post-Implementation	E-Government Development Life-cycle i) Pre-Implementation ii) During Implementation ii) Post-Implementation	Validated (No change)
Conceptual Model	Three-Quarter Moon Model for e-Commerce adoption	Four-Rectangular Actor- Activity Model for e- Government implementation (see Figure 6.2)	Validated but with slight Variation (Modification). Similar actors involved in e- Commerce and e-Government adoption / implementation but new conceptual model proposed for e-Government implementation - to be validated by scholars for application to other countries

Table 6-6) Taxonomy of validation outcome: Changes made to the proposed conceptual Model (Key Actors, Main Activities & Development Life-cycle

6.6 Revised Conceptual Framework for E-Government Implementation

The conceptual framework in Figure 6-1 below identifies key factors influencing e-Government implementation throughout the development life cycle – pre-, during and post-implementation. It also identifies the main actors involved and their key activities, which would enable scholars and researchers to prioritise in order of relevance as well as determining good practice guidelines required for successful implementation at every phase of the development life cycle.

In exploring institutional theory, this framework enables its application for wider IS/IT context since it helps researchers to understand and explain why organisations often create and maintain formal security structures without trying to implement it fully. This is in addition to the fact that institutional theory allows for combination with other theories and models, as have been observed in past literature relating to management of IS/IT security in organisations. Based on institutional context, application of this conceptual model relates to the environmental factors of the organisation and these include the external and internal factors influencing e-Government implementation.

The external factors are the factors outside the organisations control. Based on review of literature, they are considered as organisational, political, economic and legal factors. However, practitioners and academicians believe that the external factors would often impact on the internal factors, although the organisation would have absolute control over these factors, which are: Leadership, financial matter, goals/objectives of the organisation, network collaboration and critical mass. These factors are not specific to a country or locality; it might be possible to identify new factors, depending on the scope of implementation of the e-Government system. This is the reason why the model was validated through survey carried out in a developing country – Nigeria to test its reliability.

This conceptual model also allows for flexibility because researchers and practitioners are able to determine the key activities and which of the actor play major role at every phase of the development cycle, thereby identifying them in order of priority.

In addition to the key activities at every stage of the development life cycle, a crucial aspect of the above conceptual framework is determination of key actors that influence the implementation process of any e-Government environment. The researcher have, for the purpose of this study, identified four main actors, which are similar to e-commerce adoption postulated in the Three Quarter Moon model, within the context of developing countries. These are:

- Employer – Ministries/Agencies /Parastatal
- Technologically-advanced countries
- Companies
- Users – Employees / Citizens

The researcher names the e-Government actors –Rectangular Four Actor-Activity Model. In order to validate the model, survey was carried based on the research strategies and methodologies adopted. This enabled analysis of research findings and model being revised in order to produce an authenticated framework, which would be relevant for use and implementation of e-Government systems in the development countries, in particular, and the IS/IT environment, in particular.

As highlighted in the revised model in Figure 6-1 below, there are four major steps that form the holistic framework for e-Government implementation process:

- Step 1: E-Government Implementation Factors: Identifying and ranking the internal and external factors influencing e-Government implementation, within institutional context. This section will also be relevant for practitioners or academicians intending to research on organisational behaviour in the aspect of change management issues impacting on e-Government implementation. This will also enable mapping and validaion of these factors

- Step 2: E-Government Implementation Characteristics: Identifying and ranking of e-Government concepts in terms of benefits, barriers and risks. There is the need to map and Need to validate these concepts.
- Step 3: E-Government Key Actors, Main Activities and Good Practice Guidelines: Identifying the key actors in e-Government implementation and what are the critical activities to be considered for individual actor. There is also the need to identify and validate the factors to be considered as e-Government good practice guidelines in order to support successful implementation.
- Step 4: Development Life cycle: Having identifyies the factors and concepts, it is essential to categorise their functions and significance at every stage of the development life cycle, ranging from pre-implementation to post-implementation.

The researcher is satisfied that, following validation of the framework, this step-by-step implementation process would help managers and academicians to have holistic view of the factors and concepts influencing e-Government implementation and enable them understand the difference that may occur between theory and practice, within the context of its application. The framework will also be useful for effective planning and evaluation, especially where organisations are embarking on organisational change. Figure 6-2 and Table 6-7 provides detailed explanation of the e-Government implementation process by use of flow chart and step-by-step checklist as frame of reference respectively.

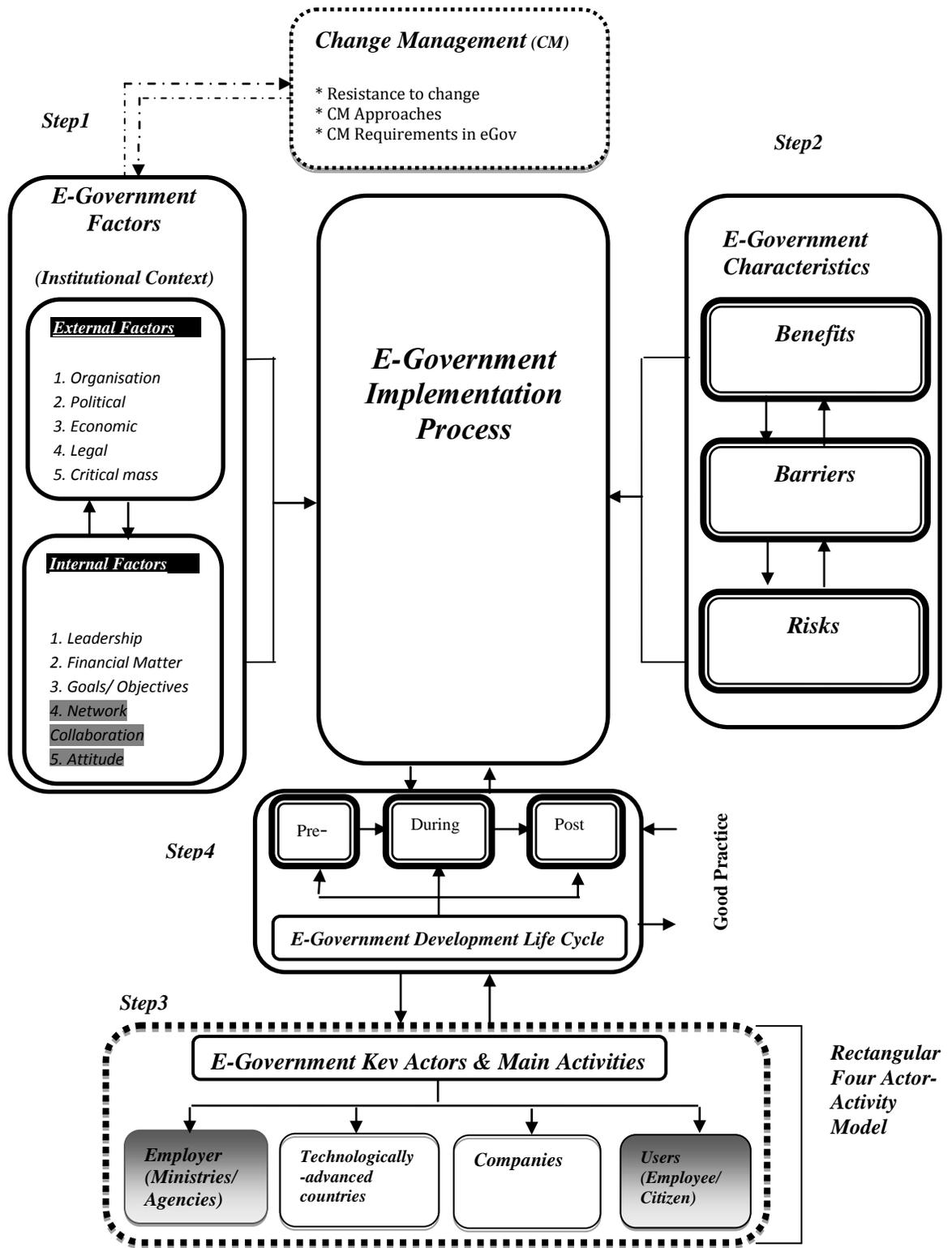


Figure 6-1) Revised Conceptual Model: E-Gov Implementation Framework

6.7 Frame of Reference: E-Government Good Practice Guidelines

There is the need to develop a frame of reference for e-Government implementation that would act as good practice guidelines for decision makers and implementer of change in determining key actors and main or crucial activities at every phase of the project life cycle. A frame of reference is useful for navigating through the variety of ways decision-makers will adopt in appraising e-Government evaluation techniques and implementation factors (Irani & Love, 2001).

Figure 6-2 and Table 6.7 below highlight the frame of reference that can be used by academicians and IT practitioners for implementing e-Government systems. Although the conceptual framework in chapter 3 has been modified and presented in Figure 6.1 after validation, other elements of the framework in respect of the e-Government key actors and main activities may need to be extended for application to other developing, and even some developed countries. This extension of Rectangular Four Actor-Activity model may require further validation in order to determine its relevance to the country of application. This is because ICT development and e-Government growth vary from countries to countries especially in the aspect of e-Readiness and available ICT infrastructure.

Figure 6-7 summarises the stages to be followed in determining the implementation factors and characteristics. It also explains the process of navigation from the initial stage of project appraisal to the implementation and post-implementation stage. Table 6-7 however shows taxonomies of frame of reference for e-Government implementation, highlighting activities and action plans for applying the revised conceptual framework to implement e-Government services. It is the researcher's expectation that this framework would serve as practical guidance for senior managers and decision makers in public sector organisations who are undertaking e-Government implementation projects and for researchers undertaking studies in the area of e-Government.

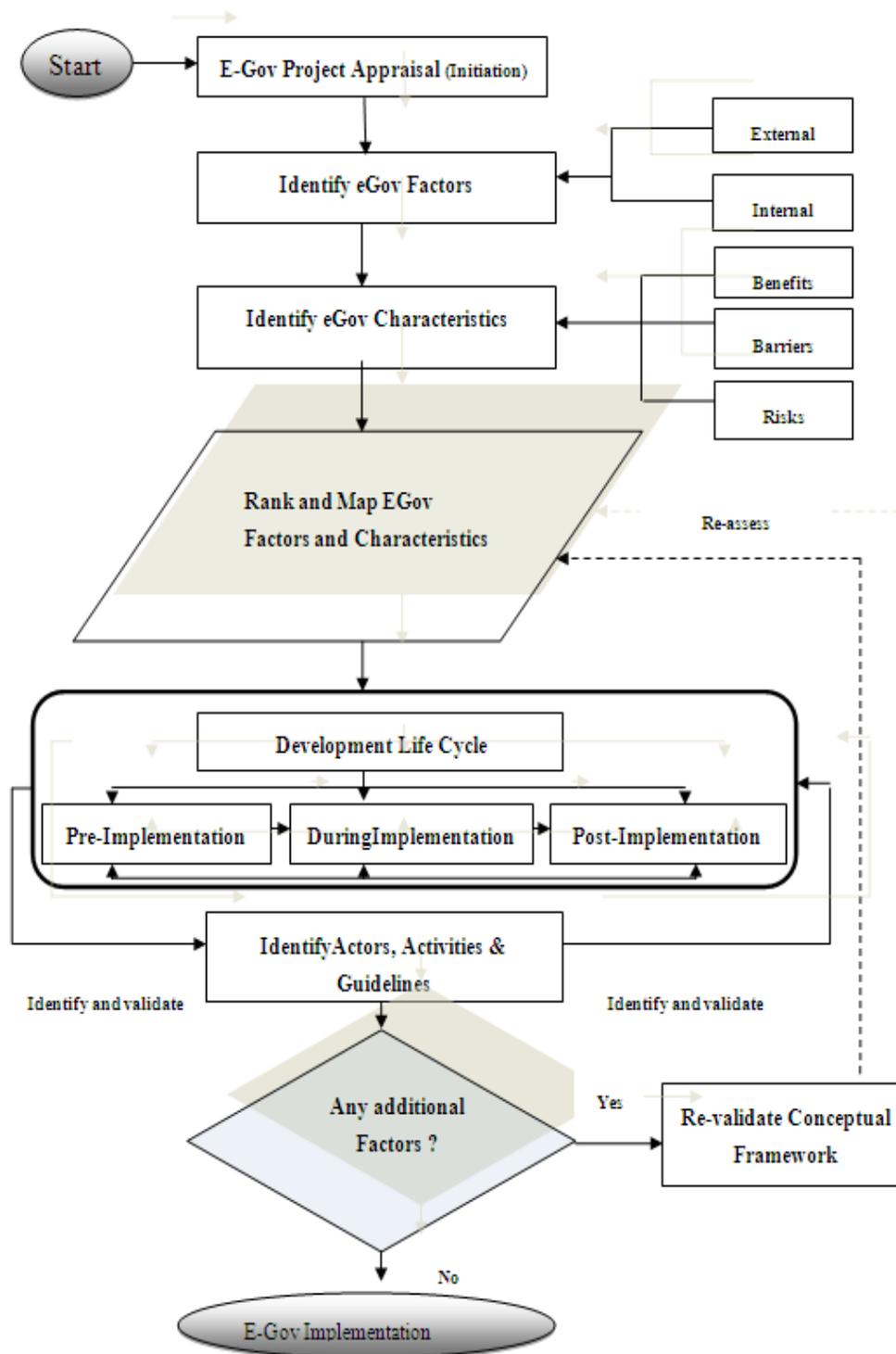


Figure 6.2 Frame of Reference: Flow Chart showing E-Gov Implementation

Figure 6-2) Frame of Reference for E-Gov Implementation Process
(Flow Chart Showing step by step guide for implementing e-Gov)

Stages	Dimension	Description	Theory /Model
E-Gov Project Appraisal / Initiation	Project brief Use of appropriate appraisal technique	Project sponsors and champions identify the project need based on the business case; Approval given to commence implementation	
Identify EGov Implementation Factors	External Factors	Organisational; Political; Economic Legal; Critical Mass	Institutional Theory
	Internal Factors	Leadership/management Capability; Financial; Goals; Network Infrastructure and Attitude	Institutional Theory
	Change Management: Organisational change and behaviour	Resistance to change; CM Approaches and CM Requirements in eGov	Institutional Theory Change Management Theory: Kurt-Lewin
Identify EGov Implementation Characteristics	Benefits	Technology, Process; People; Organisational; Resources; Security and Privacy	Drivers-Barriers Model
	Barriers	Technology, Strategic, Process, People, Organisational, Financial Resources, Security and Privacy	Driver-Barriers Model / Comprehensive Barrier Framework
	Risks	Technology, Process, People, Organisational, Financial, Resources, Security and Privacy	Drivers-Barriers Model
Ranking and Mapping	EGov Factors	Environmental Factors: External and Internal	
	EGov Characteristics	Benefits, Barriers & Risks	
Development Life Cycle	Pre-Implementation	Good Practice Guideline, Key Actors and Main Activities	
	During Implementation		
	Post-Implementation		
Identify Actors, Activities & Guidelines	EGov Key Actors, Main Activities & Good Practice Guidelines	Employer (Government Ministries & Agencies), Technologically-Advanced Countries, Company, User (Employee/Citizen)	Drivers-Barriers Model Three-Quarter Moon Model
Additional Factors	Revisit and Re-validation	Test and validate new factors Determine if new factors are relevant	
Conceptual Framework	Apply conceptual framework	Environmental (External/internal factors); Characteristics (Benefits/Barriers/Risks); Key Actors/Main Activities/Good Practice Guidelines	E-Government Implementation Framework; Four Rectangular Actor-Activity Model

Table 6-7) Frame of Reference: E-Government Implementation Process Checklist

6.8 Conclusions

This chapter focuses on evaluating the factors influencing e-Government implementation. It has also concentrated on the revision and modification of the proposed conceptual framework, which comprises the institutional context (external and internal factors), rectangular four-Actor model (adopted based on the Three-Quarter Moon Model for e-Commerce). The researcher tested and validated each part of the conceptual framework proposed in Chapter 3 and maps the possible relationship between the factors influencing e-Government implementation, based on the findings and analysis of data.

The revised conceptual framework presented in Figure 6.1 is a novel contribution as it comprises the following:

- This is one of the first frameworks that attempt to explore the factors influencing e-Government implementation from organisational perspectives. The research focuses on government to employee (G2E) context and the initial conceptual framework was influenced by institutional theory so as to provide sound theoretical frame of reference for studying e-Government implementation
- This framework consists of e-Government issues and concepts that are perceived to be benefits, barriers and risks. Intention was to adopt the drivers-barriers model (Hamed *et al*, 2008a) and comprehensive barrier framework (Lam, 2005). However these characteristics were later generalised for simplicity and it also enables identification of additional factors that are considered to be either drivers or barriers to e-Government implementation
- By exploring the Three-Quarter Moon Model for e-Commerce adoption (Hamed, 2009), the researcher was able to develop a model for determining the key actors responsible for e-Government implementation. This model was called ‘Rectangular Four Actor-Activity model’ as it consist of the following: Employer (Government Ministries and agencies); Technologically-advanced countries; Companies; and

Users (Employee/Citizens). Also the Rectangular Four Actor-Activity Model was postulated for developing countries and government-to-employee perspective, the researcher has attempted to generalise the model so that it could be used within the citizens' perspectives as well as for developed countries. This is because there is the flexibility to identify additional or remove factors that are not relevant to the case study research.

- The framework could also be used by decision makers to understand the factors considered to be good practice guidelines at every stage of the development life cycle. Another novel contribution is the use of the model to determine the key actors and main activities that decision makers need to consider at pre-implementation, during implementation and post-implementation phases. This would help the decision makers to develop proper strategies and implementation plan before embarking on any e-Government development.
- Another novel contribution is the sets of change management approaches and requirements in e-Government established in the conceptual framework, which could be used as stepping guide in managing change when implementing e-Government systems.
- The conceptual framework will be useful tool particularly for decision makers and implementers of changes in e-Government. , to assist government ministries, parastatal and agencies in understanding the decision making process
- The conceptual framework consists of sets of components and factors that could be mapped and would results in identification of additional factors and opportunity to modify the model to suit the research focus.
- From the academic point of view, the framework consist of sets of components that lead to better understanding of the factors, benefits, barriers and challenges influencing e-Government and how decision makers are able to implement their

services, taken in to consideration issues and activities that require utmost priority at every phase of the development life cycle. The research findings, also validates that apart from training and education, no activity is the same through the developmental phases and this enables decision makers to determine the roles and scope of stakeholders.

In the next Chapter, the researcher presents the research overview and findings and briefly explains the research outcomes in terms of contribution to the body of knowledge and limitations. This would enable discussion of issues and recommendations for future research for this study and for the Nigerian government.

Chapter 7 Research Conclusions

7.1 Introduction

This chapter presents the thesis by examining the important areas covered in the research study and drawing conclusions from research objectives, literature review, findings and conceptual framework chapters.

Further this chapter presents an overview and findings, and discussing the theoretical and practical contributions to the body of knowledge, in the aspect of e-Government implementation in the Nigerian public sector organisations. Having highlighted the research limitations, recommendations are then made for further research on e-Government implementation and for the Nigerian government in order to ensure successful implementation throughout the development life cycle in the country.

7.2 Research Overview and Findings

7.2.1 Research Overview: Chapters 1 – 7

E-Government is based on the integration of information technology capacity, primarily websites, intranets, databases, to allow self-service through an IT medium. The concept relates to putting government information and communication technology (ICT) online for the citizens, business and employees to have access; and emulates the private sector by offering more efficient, transparent and accessible public services to citizens and businesses.

Thus the efficiency of e-Government is decisively connected with the presence or absence of public accountability (Budd & Harris, 2004; Sofiane, 2005; Al-Shafi *et al*, 2009; Bhatnager, 2004).

Chapter 1 of this thesis explains the brief background to the research context and discusses the rationale and motivation for undertaken this research study on e-Government implementation in developing countries. This chapter also presents the aim of the study, which is to evaluate and investigate what principles should guide successful implementation of e-Government systems in the developing countries. In order to achieve this aim, the researcher concentrated on the 3 main research questions:

- a) What are the external and internal factors influencing e-Government implementation in public sector in the context of developing countries in order to bring about transparent and generally acceptable system?
- b) How do these factors and characteristics – benefits, barriers and risks, influence e-Government implementation process and what implications may emerge from this implementation? How are we able to rank and map these factors/characteristics in order of priorities, and whether or not we are able to identify new factors/characteristics that have not been discussed in the review of literature?
- c) Who are the key actors involved in e-Government implementation process, and what are their main activities throughout the development life cycle? How are decision-makers able to identify, and address any challenges arising implementation of e-Government systems including change management issues?

Chapter 2 relates to the literature background. This is the background theory comprising the review of existing literature in order to raise the cognisance of e-Government concept and its characteristics. The researcher discusses about theoretical framework and factors, both holistic and motivational, influencing e-Government implementation.

In addition, the characteristics of e-Government in terms of benefits, barriers and risks were summarised, with taxonomy for classifying them. Also discussed is a brief description of project development life cycle, phases as reviewed in the literature, which steered to offering a contribution to the area of e-Government implementation within the context of government-to- employee (G2E).

In Chapter 2, the researcher further introduced some e-Government theories that are applicable to e-Government implementation. These include Stage Growth model, Government Key Business Process (G-KBP) model, Adaptive Structuration Theory (AST), Attraction-Selection-Attrition Framework (ASA), Diffusions of Innovation (DOI) theory, Theory of Reasoned Action and Planned Behaviour (TRAPB), Kurt Lewin's Theory of Change and Institutional theory.

The researcher was able to justify the adoption of the institution theory over the others, some of which was as a result of its flexibility and ability of the theory to be applied in combination with other theories. The researcher further deliberates on other models such as The Driver-Barrier model (Hamed *et al*, 2008a), Comprehensive Barrier Framework (Lam, 2005), and Three-Quarter Moon model (Hamed, 2009). Justification for the use of these model in conjunction with institutional theory was explained in detailed in Chapter 3.

The third chapter, Chapter 3 is the focal theory, where the researcher has concentrated on the research issues resulting from Chapter 2. This enabled identification of gap in the literature in respect of lack of unified theoretical framework for understanding e-Government implementation, especially in developing countries. Based on the research gap, this Chapter intended to develop a framework that would be appropriate for this study.

Thus a conceptual framework was proposed to encourage better understanding of the implementation process and the various characteristics that impact on e-Government. This proposed framework, apart from consisting of the external and internal factors it enable the researcher to use the institutional theory in conjunction with other theories such like Drivers-Barrier model, Comprehensive Barrier Framework and Three-Quarter Moon model. Institutional theory thus allows for more practical guidelines for decision makers and implementers of change (Irani *et al* 1999), and this enable the researcher to justify the use of the theory and the others as appropriate for proposing a conceptual model that enable the understanding of the factors and issues influencing use and implementation of e-Government systems.

Chapter 4 is the research methodology section of the thesis where the researcher introduces the data theory. It summarises the epistemological stances, explaining why the researcher

preferred the interpretivist to other paradigms. This is because when applied to Information Systems, interpretivism produces an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context. More so it produces rich and subjective qualitative data (Walsham, 1995; Yin, 2003; Collis & Hussey, 2009).

In addition, the researcher rationalises the selection of qualitative analytical approach since it fits perfectly into this inductive research work, and is considered the most suitable for a case study approach; ordinal quantitative method was also adopted for data collection purposes only. Also discussed are the research strategy and dimensions as well as the research design. Data were collected through multi-method approach using web and paper-form questionnaire and interviews to conduct the research visits with government employees (senior and junior), who are involved in e-Government implementation, either directly or indirectly. This was necessary in order to be able to test and validate the proposed framework and analyse the research findings.

Chapter 5 is the fifth chapter, which is also part of the data theory. The researcher presents the case study background and the findings of the study conducted in Nigeria public sector organisations. This chapter offers an analysis of different case studies' perspectives that describes the major aspect of this research. Apart from explaining the choice of case study and the evolution of ICT, this chapter also analyses the various components of the proposed framework presented in Chapter 3: Implementation process; characteristics in terms of benefits, risks and barriers; the role of key actors and crucial activities in address issues such like change management; and good practice guidelines as every phase of the development lifecycle to ensure successful and effective e-Government implementation.

Over all, the research data confirmed was able to establish the conceptual issues identified from review of literature, which were presented in Chapter 3. It also enabled identification of additional factors that were not concealed in the proposed conceptual framework model in Chapter 3. These analysis were necessary to make it simpler for the researcher to discuss the research findings in the next chapters, and make modifications, were required.

Following on from Chapter 5, the researcher presents the next chapter that in relation to data theory. Thus Chapter 6 presents the research findings, as analysed from the collection of data through the survey carried out at the case studies organisations. This was necessary to validate the proposed conceptual framework, in particular, and evaluate the usage and implementation of e-Government in Nigeria.

The findings validated the framework as most of the respondents approved most of the notions put forward, and they were able to make some practical and theoretical suggestions from the survey. Based on the findings and discussions, the researcher was able to highlight lessons learnt from the case study research and summarise, whether or not, the research aim was achieved as well as addressing the research questions appropriately. The researcher then discusses issues from the case study,. The conceptual framework was then revised and validated, which centred on data analysis and findings.

The final Chapter 7 is the novel contribution section where the researcher, having mirrored on the findings of the theoretical perspectives, presents the validated the conceptual model, which was suggested for e-government implementation in the developing countries, using Nigeria as a case study. Although the model was based on the Nigerian public sector organisation, the researcher offers some action plan for generalisation of e-Government implementation to extend to other developing countries.

Finally, the researcher summarises the research contributions both theoretical and practical, and based on research limitations recommendations were made for future studies on e-Government implementation, as well as for the Nigerian government.

7.3 Findings: Meeting Aim, Objectives and Research Questions

7.3.1 Research Findings

The key outcome in terms of the findings and the innovative contribution resulting from this research are presented as follows:

Findings 1: The review of literature in relation to factors influencing e-Government indicates they are generalised, with no unified theoretical models associated with e-Government implementation. This study adopts the institutional theory by studying the environmental forces – external and internal – influencing e-Government implementation. There was the need to identify and classify these factors, and to rank these factors in order of priorities. It is planned that this conceptual model would enable decision makers and implementer of changes like the Nigerian government to have a better understanding of e-Government implementation factors.

Findings 2: In addition to understanding the e-Government implementation factors, within the institutional context, this study adopts the approach of understanding and classifying the e-Government characteristics or concepts – benefits, barriers and risks affecting implementation in Nigeria, from technology, process, people, organisational, financial, resources, security and privacy view-points.

Findings 3: There is limited or no literature on the good practice guidelines that forms part of the framework for e-Government implementation. More so, there is the need to validate and map these factors in order to serve as practical standards for decision makes to adopt when implementing e-Government at every stage of the development life cycle. More so, it can be used as a frame of reference for decision making.

Findings 4: Based on the review of literature and proposed framework, there is the need to identify who the key actors are. This is due to the fact that past literature has centred on the role of stakeholders, in general. Thus, based on the validation of the conceptual framework, there is the need to modify the framework to cover some of the gaps and recommendations from findings. For instance, whilst the key actors and their roles were identified, additional actors such as enforcement agencies and government ministries and agencies were suggested as vital to e-Government implementation was applied and validated. This led to postulation of a novel model a ‘Rectangular Four Actor-Activity model’, which was adapted from Three-Quarter Moon model for e-Commerce adoption.

Findings 5: As a result of the research gap identified in review of literature, a conceptual model has been proposed for implementing e-Government in order to address the issues as discussed and presented in Chapter 3 (Figure 3-4). One of the voids is the limited framework and lack of unified theoretical model for understanding on e-Government implementation and role of key actors. Based on the research analysis and findings, this model has been validated and revised to contribute an innovative proposal for e-Government implementation as in Figure 6-1.

The revised conceptual model consists of the following components:

- a) Institutional theory explaining the environmental forces in terms external and internal factors. The external factors have been validated and ranked in order of priority as organisational, political, economic, legal and critical mass. Similarly, the internal factors are ranked as leadership, financial matters, goals/objectives, attitude and network collaboration.
- b) The Drivers- Barrier model (Hamed *et al*, 2008a) and Comprehensive Barrier Framework (Lam, 2005) were combined with other general e-Government characteristics, to identify and rank the benefits, barriers and risks influencing e-Government implementation in developing countries. Based on research findings, new factors were identified and the components validated
- c) The Three-Quarter Moon Model (Hamed, 2009) was developed to e-Commerce adoption in Libya, as discussed in the review of literature. This model was then adopted and tested for e-Government implementation in Nigeria, and based on findings, the model was revised and a (novel) model was developed known as ‘Rectangular Four Actor-Activity’ model. Although this is a model that forms part of the framework, it has been generalised in order to extend it to other developing (and possibly, developed) countries. In addition, this model could also be used as a separate (detached) model by scholars and practitioners who wish to explore further the role of e-Government actors at every developmental phase – from pre-implementation to post-implementation.

Findings 6: The revised conceptual framework in Figure 6-1 can also be used to understand change management issues especially in the aspect of resistance to change, approaches and requirements in e-Government. Review of literature suggests that resistance

to change often lead to project failure (Lam, 2005). This framework could be extended for further research on change management, as it enables the study of organisational change and behaviour. Thus the frame of reference for change management requirements in e-Government has already been developed and incorporated in this revised framework.

Findings 7: The revised framework consists of mapping of e-Government factors (external and internal), characteristic (benefits, barriers and risks), good practice guidelines and key actors (employer, technologically-advanced countries, companies and users). This is a novel contribution based on the fact there has been no similar conceptual model combining these crucial activities and concepts together. This model will be very useful to scholars and practitioners, particularly decision makers and implementer of changes.

7.3.2 Meeting Research Aim, Objectives and Questions

Analysis of the research findings and reflection on data analysis in Chapters 5 and 6 has enabled the researcher to address the research questions that were presented in Chapter 1. Research question (RQ) 1 was addressed by identifying e-Government implementation factors, both holistic and motivational through the review of literature in Chapter 2. These factors were then identified and classified in Chapter 3 before they were validated based on research analysis of data in Chapter 5. The data were collected through case study research on public sector organisations in Nigeria.

The researcher attempted to find answers to RQ2 by identifying and analysing e-Government implementation characteristics – benefits, barriers and risks, as reviewed in literature in Chapters 2 and 3. These concepts and factors were then mapped and ranked in order of importance before they were validated through research findings from data collection and analysis in Chapters 5 and 6. The third and final research question, RQ3 was also addressed based on the review of literature in Chapter 2, which enabled the researcher to map various elements of the conceptual framework presented in Chapter 3. These components were then analysed and validated following the research findings and reflection on data collection in Chapters 5 and 6 respectively. Table 7-1 sum-ups the research issues and questions, and how they were addressed.

Research Issues	RQ	Research Questions	Chapter	Research Findings
E-Government Implementation Factors: Literature	RQ 1	What are the external and internal factors influencing e-Government implementation in public sector in the context of developing countries in order to bring about transparent and generally acceptable system?	Chapter 2, Chapter 3 & Chapter 5	Review of literature enable identification of research gaps e.g. having holistic framework and identifying risk factors asides the drivers and barreirs. These were suiccessfully validated through resarch survey andanalysis (see Table 5-45)
Mapping of E-Government Implementation Factors: Benefits, Risks, Barriers	RQ 2	How do these factors and characteristics – benefits, barriers and risks, influence e-Government implementation process and what implications may emerge from this implementation? How are we able to rank and map these factors / characteristics in order of priorities, and whether or not we are able to identify new factors/characteristics that have not been discussed in the review of literature?	Chapter 2, Chapter 3, Chapter 5 & Chapter 6	Based on findings and analysis, factors and concepts were ranked and mapped – This is in attempt to text and alidate the proposed implementation framework (see Table 5-46).
Mapping of E-Government Actors: Role, activities & Change Management issues	RQ 3	Who are the key actors involved in e-Government implementation process, and what are their main activities throughout the development life cycle? How are decision-makers able to identify, and address any challenges arising implementation of e-Government systems including change management issues?	Chapter 3, Chapter 5, & Chapter 6	Response from respondents – questionnaire and face-to-face interviews enable successfuly mapping of the factors and characteristics/concepts to reconceptualise the framework (see Table 5-47 to 5-50 & Appendix 5).

Table 7-1) Meeting the Research Aim, Objectives and Questions

7.3.3 Research Outcomes

As presented in Chapters 5 and 6, the researcher has been able to analyse the research findings and revisit the conceptual model and data that were analysed. A major aftermath of this research is the researcher's assertion that there is at present, no studies that is based on examination of e-Government implementation in Nigeria that examines the factors and concepts together. More so, the conceptual framework has components that allow identification and ranking of crucial factors and the role of e-Government actors in the Federal Republic of Nigeria. The research outcome of this thesis has broadened the understanding of the expanse of e-Government implementation through theoretical and practical contribution (and innovation) from the researcher.

7.4 Research Contribution to the Body of Knowledge

7.4.1 Contribution to Theory

New knowledge about literature of E-Government Implementation

From review of literature, the researcher was able to establish e-Government factors – external and internal, as well as benefits, barriers, and risks within the context of developing countries, using Nigerian public sector organisations as case study. Based on analysis and research findings, these issues – factors and concepts were validated, with new factors identified.

For instance, despite identifying no new factors there were additional benefits identified, which did not form part of the literature and conceptual framework vis-à-vis:

- a) Well-equipped offices
- b) Information sharing is quick
- c) Speed the process of work
- d) Increased productivity in governance.

More so, implementation policy is an additional barrier identified through the research finding. The research also indicates that e-Government implementation risks include the following:

- a) Reduction in manpower
- b) Increase in unemployment, and
- c) Unstable power supply.

The researcher was therefore able to contribute new knowledge to the e-Government literature through identification and ranking of factors impacting on e-Government implementation in Nigerian public sector organisation. The new literature knowledge also links the factors – external and internal with the characteristic in terms of benefits, barriers and risks of e-Government within the institutional context.

The Rectangular Four Actor-Activity Model

Based on the research findings and discussions, the researcher was able to present the Rectangular Four Actor-Activity Model, which is a subset of the (revised) conceptual framework for e-Government implementation. This model was developed based on adoption and application of the Three-Quarter Moon model designed by Hamed (2009) for Libya's e-Commerce adoption.

The Rectangular Four Actor-Activity Model identified four key e-Government actors as employers (government ministries and agencies), technologically-advanced countries, companies and users (citizens and/or employees). Although the model was specifically designed for Nigerian's e-Government implementation, it consist of good practice guidelines that would enable generalisation in order to extend to other developing countries – see Figure 7-1 below.

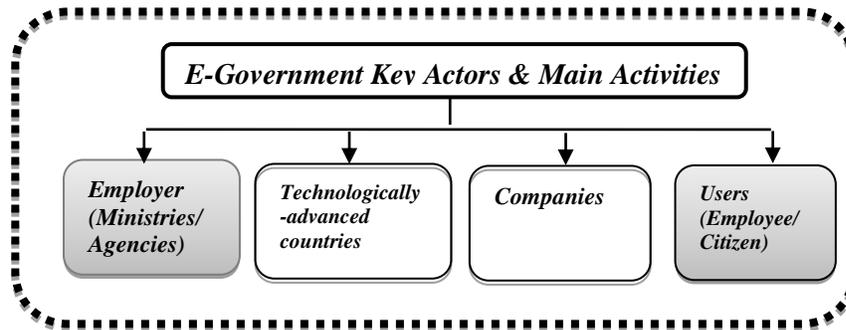


Figure 7-1) Rectangular Four Actor-Activity Model
 (A subset of the revised conceptual framework presented in Figure 6.1)

Expansion of the Rectangular Four Actor-Activity Model for other developing countries

The Rectangular Four Actor-Activity Model has been developed for Nigerian public sector organisation, however an expansion of the model will enable decision makers and implementer of changes to embrace it for other developing countries, both government-to-employee (G2E), and government-to-citizen (G2C) perspective.

This expansion acknowledges the fact that other key actors may be identified or there may be a possible change of roles for the e-Government actors. This explains why good practice guidelines have been presented for other developing countries, depending on their socio-economic, political, and cultural situation. This model; which forms part of the conceptual framework for e-Government development, also makes provision for its usage for other developed countries, realising that each country position is different in terms of stages of e-Government and e-Readiness. The model is to be used as a frame of reference for determining e-Government actors and activities in other developing (including developed) countries.

Novel Model for implementing E-Government

Based on the research findings, the innovative contribution towards implementation of e-Government are in the following areas:

Contribution 1: The conceptual framework was revised in Chapter 6 after testing and validating the model through research survey and data collection. This would enable better understanding of the e-Government factors and characteristics –benefits, barriers and risks, and any potential relationships. Thus the research allows for identification and ranking of factors impacting on e-Government implementation in Nigerian public sector organisations and linking the – external and internal factors within the institutional context. The mapping of the framework will allow decision makers and implementer of changes to have holistic view of the factors influencing e-Government implementation, which will allow them to plan effectively for say organisational change within their organisation.

Contribution 2: The revised conceptual framework presents sets of components, for which the researcher was able to identify and rank e-Government characteristics and mapping of these characteristics - benefits, barriers and risks of e-Government.

The external factors were themed under the following: organisational, political, economic, legal and critical mass. The framework also examines the internal factors under the following theme: leadership/ management capability, financial matters, goals/objectives, attitude and network collaboration. However no new factors – internal or external, was identified apart from these themed factors, which were confirmed.

In terms of e-Government implementation in Nigeria, four new benefits were identified, in addition to the ones adopted from the Drivers-Barriers (Hamed *et al*, 2008a) and discussed in literature which was presented in the proposed framework in Chapter 3. These are: well-equipped offices, quicker information sharing, speeding the process of work, and increased productivity in governance.

The e-Government barriers examined from the Drivers-Barriers model (Hamed *et al*,

2008a) and Comprehensive Barrier Framework (Lam, 2005) also identified implementation policy as additional barrier, apart from the ones presented in the literature.

Further, the researcher was able to identify additional risks (i.e. reduction in manpower, increase in unemployment, and unstable power supply) to e-Government risks initially presented in Chapter 3, based on review of literature. Thus the researcher was able to present a revised conceptual framework that incorporates all the elements including the newly identified factors, following justification of the proposed model, through research findings and data analysis. This would help managers and academicians understand the step by step guidance to e-Government implementation, and be able to rank the implementation factors and characteristics – benefits, barriers and risks, which is likely to vary from country to country.

Contribution 3: A novel contribution is the inclusion of e-Government good practice guidelines to the conceptual framework, which would be useful particularly for decision makers to adopt at every phase of the development, from pre- to post-implementation and to be able to understand there exists difference between theory and practice, in terms of the implementation process.

Contribution 4: Although there has been limited research on models of e-Government implementation stages (AlRashidi, 2012), this study extends further by linking e-Government characteristics with the roles and activities of the key actors throughout the development life cycle, within the institutional context. This would enable decision makers and scholars to determine which actors are crucial at every stage of the development and which of the activities should be vital as well. The mapping of these elements and concepts has been confirmed through the case study research survey carried out in the Nigerian public sector organisation.

Contribution 5: Development of a (novel) -Rectangular Four Actor-Activity model – This is intended to be used by decision makers and implementers of changes (and other scholars and practitioners) as a frame of reference for identifying e-Government key actors and their main activities (responsibilities) at every phase throughout the development life cycle. This

model forms part of the revised conceptual framework for e-Government implementation in the developing countries, which can be used by researchers in determining the crucial role and responsibilities of the key actors at every stage of the project development life cycle.

Despite developing a (revised) conceptual framework, as presented in Chapter 6, the researcher also suggests action plans for generalisation to extend its usage to other developing countries that intend to implement e-Government implementation. This may however be validated in future research studies, as there is likely to exist difference between theory and practice of adoption of this action plan to the Four-Rectangular Actor model for e-Government implementation.

Based on the research analysis and findings, the researcher has been able to present a reconceptualised framework, which consists of mapping of factors – external and internal, characteristics – benefits, barriers and risks, good practice guidelines and key actors involved in e-Government implementation.

7.4.2 Contribution to Practice

Based on analysis and findings, the researcher has been able to make recommendations for successful implementation of e-Government. Generally, scholars and practitioners would value the services provided through e-Government services such as online payment, compared to the old-fashioned system. Nigeria is still a cash-in-hand society and has gradually began to adopt the ‘paperless’ and ‘cashless’ system of transaction. This research has been evidenced through findings that e-Government implementation provides transparency and efficiency of services. It also builds the trusts in the employers. Although most of the drivers highlighted in this research are not easily achievable without concentrating on the strategies required to address the impact of the e-Government barriers and risks

On a practical level, the revised conceptual framework which has been tested and validated, would be useful for decision makers and implementer of changes, as well as other

practitioners to adopt the model in understanding how e-Government will be implemented within their locality. In addition, the framework has a Rectangular Four Actor-Activity model built-in with it, which forms part of the framework, and could be applied in identifying key actors in the country of study. The good practice guidelines are useful factors that serve as action plan for implementers to embrace when executing e-Government services. These guidelines consist of three stages, pre-implementation, during implementation and post-implementation stages, which would enable application throughout the development lifecycle.

The revised conceptual model presented in Chapter 6 (Figure 6.1) maps the following e-Government concepts and components into a framework. The model consists of the factors - external and internal; characteristics – benefits, barriers and risks; good practice guidelines – plan of action from pre to post-implementation stage; key actors – employers, technologically-advanced countries, companies and users; and the main activities for the e-Government actors at every stage of the development life cycle. The framework, to the best of the researcher's knowledge, appears to be the first to map all these components together, which have been tested and validated. It has also been generalised to enable extension to other developing countries.

Table 7-2 highlights the theoretical and practical research contributions (and innovations) to e-Government implementation.

Research Area	Existing research	Contribution to this research
E-Government Implementation Factors (External and Internal); and Characteristics (Benefits, Risks, and Barriers)	Factors influencing e-Government implementation in general (no ranking in order of importance) E-Government Benefits, Barriers and Risks in general (no ranking in order of importance)	Identification and ranking of factors and characteristics impacting on e-Government implementation in Nigerian public sector organisation. Linking the – external and internal factors within the institutional context with the characteristics – benefits, barriers, and risks. These were then mapped with the key actors and their roles and activities throughout the development life cycle. It is expected that this framework will help managers and academicians understand the step by step guidance to e-Government implementation, and they will be able to rank in order of importance, these implementation factors and characteristics, which is likely to vary from country to country
E-Government Implementation Good Practice Guidelines	Good practice guidelines for e-Government (no mapping)	Mapping and including good practice as guidelines for decision makers to use as frame of reference when implementing e-Government as at any of the three stages of the development life cycle. This will help understand the difference between theory and practice, in terms of e-Government implementation process.
E-Government Implementation Key Actors and Main Activities	E-Government stakeholders in general	Identification of key e-Government actors, their roles and key activities involved at every stage of the project development, from pre- to post-implementation. Development of a (novel) Rectangular Four Actor-Activity model – This model could be used as a 'stand alone' model by

		<p>decision makers and implementers of changes for identifying e-Government key actors and their main activities (responsibilities) at every phase throughout the development life cycle – see Figure 6-2. It could also be applied as part of the holistic implementation framework (as in Fig 6-1)</p>
E-Government Implementation framework	Limited framework with lack of unified theoretical model for understanding on e-Government implementation.	Proposal of e-Government implementation framework for developing countries, and suggesting frame of reference using Rectangular Four Actor- Activity Model to enable generalisation for use by other developing countries – see Figures 6-2 & 7-1
Mapping of E-Government Implementation factors, characteristics, good practice guideline and actors	Identified factors, characteristics and good practice guidelines with no mapping	Mapping of factors – external and internal, characteristics – benefits, barriers and risks, good practice guidelines and key actors involved in e-Government implementation. The mapping of the framework will allow decision makers and implementer of changes to have holistic view of the factors influencing e-Government implementation, which will allow them to plan effectively for say organisational change within their organisation.

Table 7-2) Taxonomy of Research Contribution – Theory and Practice

7.4.3 Research Limitations

The researcher conducted this study in Nigeria, being a developing country and regarded as one of the fastest growing information communication and technology (ICT) market in Africa. Despite all these, the country is ranked low in terms of e-Readiness. The research however faced some limitations. Firstly, there was the issue of time factor. The proposed timescale for completion was 3 to 4 years, but there were some delay in obtaining approval of research ethics from the University in order to carry out research survey review.

Further, there was the problem of obtaining relevant information and documentation from the case study organisation. The data collection consists of web-form questionnaires, which respondents were meant to complete and return online. This was not being done on time as researcher had to keep chasing the respondents. Most of the respondents preferred to complete the hard-copies.

There was also the issue of obtaining permission from the case studies organisations in order to conduct the research visits. Even during the research visits, some of the scheduled appointments were cancelled at the last minute and had to be re-arranged. As analysed in Chapters 4 and 5, some of the respondents from the case studies organisation, especially at Sagamu Local Government failed to complete some part of the questionnaire, they felt were either too technical for them or they could not devote time to complete. But for the benefit of having lead contact in each of the case study organisations, the researcher would have even struggled more to collect data.

Due to bureaucracy experienced in collecting data and obtaining documentation, the researcher could not conduct further research visits to Nigeria to chase up some of the questionnaires left behind. The issue of cost in terms of returned flights both from the United Kingdom and within Nigeria could not be over-looked. The researcher had to delay his stay in Abuja, Nigeria for a few days in order to be able to interview some of the respondents who were not readily available at the initially scheduled appointment time. This meant the hotel accommodation had to be extended further a few nights.

Having collected the data, there were restrictions in analysing the research findings. Occasionally, there was inconsistent information from the participants about the same subjects. This meant the researcher had to spend more time in asking the respondents additional questions in order to direct them to the precise information required. The focus was on the most relevant information and data that would meet the aim, objectives and research questions as it was difficult to include all the findings from the questionnaire and face-to-face interviews in this thesis.

Although a revised conceptual framework has been presented based on validation through data collection and analysis in Nigeria, it might be difficult to generalise to other countries until tested and validated in such country, although the good practice guidelines would serve as action plan towards implementation of e-Government services, particularly within the context of developing countries.

7.5 Recommendations for E-Government Implementation

7.5.1 Recommendations for Further Research

E-Government is basically a wide concept that relates to management and information systems, there is the need for more research work from the management perspectives. Further cultural issues were observed during the survey as norm in the country. These are due to lack of online payment systems as customers have to pay by cash.

Institutional theory thus allows for more practical guidelines for decision makers and implementer of any change (Irani *et al*, 2009). There is the need for researchers and academicians to carry out extensive studies on the better understanding of organisational actions and behaviour, in the context to institutional theory.

More research work is needed in relation to the role of change management in e-Government programme. This is because apart from bribery and corruption, change

management is an important aspect of e-Government implementation. The research findings indicate that staff and managers are resistant to changes within their organisations for different reasons. These include their concerns with implication of change for self, not the effects on organisation success; and low tolerance to change. It was noted approach to change management differ from organisation to organisation. Obviously, the impact of change management needs to be explored further.

Although the study was specific to the Nigerian information system, the framework was generalised as a frame of reference that would enable application to a wider context, as it was determined that factors influencing e-Government implementation vary from country to country and from locality to locality. Having developed the Rectangular Four Actor-Activity model, it was realised there are synergies in determining who the main actors are and their roles in both e-Commerce adoption and e-Government implementation, particularly in the developing countries. The roles and responsibilities of actors involved in the implementation process have impact on the tasks and activities carried out at different phases of the development life cycle of the project. Whether this notion would be this same with developed countries is something to be explored by future researchers and academicians.

Having analysed the research findings, it is evident that further works need to be carried into why most the developing countries as ranked as low in terms of e-Readiness. The resistant and unco-operative attitude of the change needs to be explored further in terms of change management issues. Researches have shown that resistance to change often leads to project failure. Although this study was looked at from the institutional viewpoint, there is need for further research on the management perspective since leadership support in essential for successful of e-Government implementation.

Academicians should identify potential risks and challenges to be faced before implementing e-Government, and not just focusing on the benefits. More so, there are always differences in between theory and practice of any application, including e-Government systems, and the characteristics in terms of benefits, barriers and risks will vary from countries to countries.

Having developed a conceptual model for e-Government implementation, which has been tested and validated within this specific area services based on previous literature, there is little empirical research information available on its implementation in developing countries since the phenomenon of e-Government is relatively new. Thus researcher would recommend future studies using both qualitative and quantitative analytical methods since this study was carried out using inductive case study research analytical approach.

The Rectangular Four Actor-Activity model should be explored further by scholars and practitioner using other theories, apart from institutional theory. The model also needs to be extended further as it has been generalised with the adoption of the good practice guidelines that would serve as action plan at every stage of the development. The findings may be helpful to increase understanding of e-Government implementation within the context of the research study.

The conceptual framework was developed and validated for e-Government implementation, from organisational (government-to-employee) perspective. Ideally, the researcher would recommend the testing and validation of this model from citizens' view point by focusing on e-Government adoption or diffusion. This may be a study carried out independently, or by looking at both adoption and implementation simultaneous by observed in previous studies on e-Government in Qatar (Al-Shafi, 2009).

The (revised) conceptual framework only serves as a frame of guidance for evaluating and investigating e-Government implementation factors and characteristics, especially within the context of developing countries. It does not provide evaluation tools for e-Government implementation. However, there is the need for further studies to define key performance indicators that would enhance successful e-Government implementation. Monitoring and evaluation are necessary to understanding demand, assessing the benefits of the e-Government services implemented to users of alternative proposals and evaluating the effectiveness of proposals in meeting their objectives.

Scholars and practitioners may benefit from further studies that would ensure post-implementation review of the e-Government services implemented. Apart from the

traditional cost-benefit analysis (CBA), academicians and researchers could use monitoring and evaluation tools such as EFQM excellence model (common assessment framework – used for government assessment in the public sector) and e-Business evaluation tool (balance scorecard or Cranfield’s process model). These tools could be applied to evaluate three essential areas: Citizens / end users, mission / programme impact and technical capability, both current and future technical aspects.

7.5.2 Issues and Recommendations for Nigerian Government

Studies have shown that strategy and planning have important roles to play in the creation of vision, goals and targets. In addition, technology, people and processes remain the enablers of e-Government. Based on research findings the following actions have been recommended for the Nigerian government to take on-board:

- a) E-Government strategy office should work closely with other organisations. At the moment, it is not known by many like a ‘stand-alone’ organisation. The office should be responsible for organising and coordinating seminars, workshops, conferences and training and development programme on e-Government and ICT infrastructure.
- b) Infrastructure is crucial to a country’s development. Government should improve ICT infrastructure and delivery fulfilment. Electricity and internet connection are two main factors the government should address before implementing any e-Government services. At the moment, there is limited broadband network in Nigeria whilst government, businesses and citizens rely on dial-up network or even mobile phones.
- c) Government should encourage technologically-advanced countries and companies to be involved in e-Government implementation by developing implementation strategies. They should also reduce tax duties on equipment and services relating to implementation of e-Government projects in the country.

- d) A country like Nigeria would benefit from establishment of an independent monitoring and evaluation body, supported by government but independent in its operation and structure. This would help monitor closely e-Government projects and ensure transparency or expose any corruption.

- e) The success of any e-Government project implementation would be largely dependent on government support and resources available. Government therefore has crucial role to play, principally in areas of legislation and regulations to control e-Government activities. Funding should also be provided to improve ICT infrastructure, education, training of government staff and sustaining citizen's rights.

7.6 Summary and Conclusions

The researcher has reviewed the drivers, barriers and risks of e-Government implementation by carrying out multiple case studies research in the context of Nigerian public sector organisation. Research findings, therefore supports the notion that senior government officials and decision-makers would need to buy into the e-Government concept in order to address the issue of staff attitude and resistance to change, which is common with most public servants globally.

Review of literature has shown that a few academicians and practitioners have carried out studies in determining the strength, weakness, opportunities and threats of e-Government implementation, it is evidence from the survey carried out and findings, that the concept of e-Government requires the implementer of changes to give full support to e-Government services being provided for both citizens and employees including businesses.

The researcher has reviewed and analysed the factors and characteristics impacting on implementation, including the roles of the key actors involved in ICT systems in an e-Government environment. The developed conceptual framework was validated through the

survey carried out to identify and test the key elements of the models well as the roles and activities of the main actors involved at different phases of the development life cycle of e-Government projects – pre-implementation, during implementation and post-implementation.

Based on the research findings, the model was validated and modified to reflect the new additions and/or omissions from the proposed framework in Chapter 3. This led to the presentation of the revised framework, which included the development of a new smaller model – Four-Rectangular Actor-Activity model, which could be applied either independently to understanding and evaluating e-Government key actors, or as part of the general conceptual framework.

Despite the challenges and limitations, the researcher was able to make recommendations for both future studies, and specifically for the Nigerian government. From the analysis and findings, it was evident that the success of any e-Government project implementation would be largely dependent on government support and resources available. It should also be mentioned that the government would need to work closely with other key members of the e-Government project who have key roles to play at every stage of the development life cycle – the technologically, advanced countries, companies and users (employees or citizens).

The researcher therefore accomplishes that this study extends the knowledge in the aspect of e-Government implementation from the organisational perspective (government-to-employee), by employing the entrenched institutional theory and validating the relevant factors – external and internal - influencing the implementation of e-Government including the characteristics – benefits, barriers and risks, from the Nigerian public sector organisation context.

References

- Abdallah, S. & Fan, I. S. (2012). Framework for e-government assessment in developing countries: case study from Sudan. *Electronic Government, an International Journal*, 9(2): 158-177.
- Adeyemo, A.B. (2011). E-government implementation in Nigeria: An assessment of Nigeria's global e-gov ranking, *Journal of Internet and Information System*, 2:11-19.
- Agunloye, O. (2007). An Overview of the Implementation of e-Government Programme in Nigeria. *First International Conference on Theory and Practice of Electronic Governance, ICEGOV*, Macao, China. 10 - 13 December 2007.
- Agunloye, O. (2010). Strategies for Implementing the Nigerian e-Government and e-Payment Initiative. *A Presentation at the NITDA eNigeria 2010 International Conference and Exhibition, 18-20 May 2010*. [online] Available from <https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0CDoQFjAC&url=http%3A%2F%2Fenigeria.gov.ng%2F2012%2Fdownloads%2F%2Fagunloye.ppt&ei=xk_oUrvAHoSmhAel5YD4Bw&usg=AFQjCNGN2Un3fDu7CqZMsXMmcfSasykBcQ> [15 March 2012]
- Ajayi, L. (2007). *ICT Business in Nigeria: Challenges and Opportunities*. [online] Available from <http://www.nitpa.org/articles/globalit/NCS_Paper.pdf> [16 March 2012]
- Ajzen, I. (1985). From Intention to Actions: A Theory of Planned Behaviour. In *Action Control: From Cognition to Behaviour*, Kuhl, J. & Beckmann, J., (Eds) New York: Springer Verlag.
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*, 50 (2): 179–211.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Akhter, M. S. (2007). e-Governance in a Developing Country: Citizen-Centric Approach for Success. *International Journal of Electronic Government (EJEG)*, Switzerland: Inderscience Publishers. Provide page.

- Al-Awadhi, S. & Morris, A. (2009). Factors Influencing the Adoption of E-government Services. *Journal of Software*, 4(6): 584-590.
- Alhujran, O. (2009). *Determinants of e-government services adoption in developing countries: A field survey and a case study*. University of Wollongong, Wollongong, Australia.
- Almarabeh, T. & AbuAli, A. (2010). A General Framework for E-Government: Definition Maturity Challenges, Opportunities, and Success. *European Journal of Scientific Research*, 39:29-42.
- Al-Rashidi, H. (2009). Examining Internal Challenges to E-Government Implementation from System User Perspective. *European and Mediterranean Conference on Information Systems, EMCIS 2010*, Abu Dhabi, UAE, April 12 – 13, 2009.
- AlRashidi, H.J. (2012). The Role of Stakeholders and Influencing Factors during E-Government Initiative Implementation. *Unpublished PhD Thesis, Brunel University, London*.
- Al-Shafi, S. H. (2009). Factors affecting e-Government implementation and adoption in the State of Qatar. *Unpublished PhD Thesis, Brunel University, London*.
- Al-Shafi, S., Weerakkody, V. & Janssen, M. (2009) Investigating the Adoption of E-government Services in Qatar Using the UTAUT Model. Paper presented at the *Proceedings of the 15th Americas Conference on Information Systems (AMCIS2009)*, San Francisco, California, August 6 - 9, 2009, [CD-Proceedings].
- Alshehri, M., Drew, S. & Alfarraj, O. (2012). A Comprehensive Analysis of E-government services adoption in Saudi Arabia: Obstacles and Challenges. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 3(2): 1-6.
- Al-Shehry, A. M. (2008). Transformation towards e-government in the Kingdom of Saudi Arabia: Technological and Organisational. *Unpublished Doctoral Thesis*, the School of Computing (CSSR), De Montfort University.
- Al-Sobhi, F. & Weerakkody, V. (2010). The Role of Intermediaries in Facilitating E-Government Diffusion in Saudi Arabia. *EMCIS 2010, Proceedings of the European & Mediterranean Conference on Information Systems*. Abu Dhabi, United Arab Emirates. 12-13 April 2010.
- Alsuwaidi, H. (2009). Evaluating the Factors Affecting for the Adoption of E-government Services in the Public Sector (UAE). *A project proposal submitted to Brunel*

- Business School, Brunel University* (PhD student) [Online]. Available from <<http://www.brunel.ac.uk/329/.../Hassanalsuwaidi0631732.pdf>> [12 October 2009].
- Altameem, T., Zairi, M. & Alshawi, S. (2006). Critical Success Factors of E-Government: A Proposed Model for E-Government Implementation. *Innovations in Information Technology*, 2006, 1-5.
- Akpan-Obong, P. (2009). *Information and communication technologies in Nigeria*. New York: Peter Lang.
- Anderson, K.V. (2006). E-Government: Five Key Challenges from Management. *Electronic Journal of E-Government* 4(1): 1-8 [Online]. Available from <<http://www.ejeg.com/volume-4/vol4-iss1/Anderson.pdf>> [13 September 2009]
- Andoh-Baidoo, F. K. & Osatuyi, B. (2009). Examining Online Banking Initiatives in Nigeria: a Value Network Approach. *Ejisdc*, 38: 1-14
- Atkinson, R. D. & Ulevich, J. (2000). Digital Government: The Next Step to Reengineering the Federal Government, Technology & New Economy Project. *Democratic Leadership Council & Progressive Policy Institute, Washington*.
- Auditing E-Government, 2010. Updating Life Cycle Risks on E-Government. *19th Working Group on IT Audit (WGITA-meeting), INTOSAI Standing Committee, Beijing, April 2010*.
- Ashaye, O.R. (2009). E-Government in Land Administration in Developing Countries: A System Analysis. *A project proposal submitted to BBS, Brunel University* (PhD student), 28 October 2009.
- Ashaye, O.R. & Irani, Z. (2012). Supporting the use of E-Government in the implementation of Land Administrative Systems: A Conceptual Framework. In *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications* (pp. 19-28). Chesapeake, VA: AACE. Retrieved January 27, 2014 from <http://www.editlib.org/p/40721>.
- Ashaye, O.O.R. & Irani, Z. (2012). E-Government Implementation Factors: A Conceptual Framework. In *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 480-489). Chesapeake, VA: AACE. Retrieved January 27, 2014 from <http://www.editlib.org/p/41637>.

- Ashaye, R.T. (2010). Supporting E-Government in Land Administration: A System Analysis. *tGov Workshop*, Brunel University, West London, 18 March 2010. [Online]. Available from <<http://www.iseing.org/tgovwebsite/tGov2010AcceptedPapers/C15.pdf>> [01June 2010].
- Avgerou, C. (2000). IT and organizational change: an institutionalist perspective. *Information Technology & People*, 13(4): 234 – 262.
- Ayo, C.K. and Ekong, U. (2008). e-Voting Implementation in Nigeria: Prospects and Challenges, Proceedings of the 8th European Conference on e-Government 10-11 July 2008, Ecole Polytechnique, Lausanne, Switzerland.
- Ayodele, A. E, (2012). A Critical Analysis of Diffusion of Innovation Theory [online] Available from <<http://odinakadotnet.wordpress.com/2012/09/22/a-critical-analysis-of-diffusion-of-innovation-theory/>> [15 December 2012]
- Azenabor, C. E., Imafidon, C. & Preston, D. (2012). The E-Government Application in Nigeria. *International Journal of Advanced Scientific and Technical Science*, 5(2), October 2012.
- Bachman, R. & Schutt, R. K. (2008). *Fundamentals of Research in Criminology and Criminal Justice*. California: Sage Publications, Inc.
- Backus, M. (2001). E-Governance and Developing Countries: Introduction and examples. *Research Report No 3*, April 2001. [online] Available from <<http://www.ftpiicd.org/files/research/reports/report3.pdf> > [12 October 2009]
- Bagchi, K., Gallup, S. & Cerveny, R. (2006). An empirical study on e-government readiness: the roles of institutional efficiency and interpersonal trust. *ACM International Conference Proceeding Series*, 151: 371-372. *Digital Government Research Center*.
- Baum, C. & Di Maio, A. (2000). *Gartner's four phases of e-government model*. Stamford, Ct., *Gartner Group*, 21, 12-6113.
- Basu, S. (2004). E-government and developing countries: an overview. *International Review of Law, Computers & Technology*, 18: 109-132.
- Bayer, J. & Melone, N. (1989). A Critique of Diffusion-Theory as a Managerial Framework for Understanding Approach of Software Innovations. *Journal of Systems and Software*, 9: 161-166.

- Bell, J. (2001). *Doing your research project*, 3rd edition. Philadelphia, USA: Open University Press.
- Benbasat, I., Goldstein, D. & Mead, M. (1987). The case research strategy in studies of information systems. *MIS quarterly*, 11: 369-386.
- Bernhard, I. C. (2014). Local e-Government in Sweden - Municipal Contact Centre Implementation with Focus on Public Administrators and Citizens. *The Journal of Community Informatics*. ISSN: 1712-4441, 10(1).
- Beynon-Davies, P. (2005). Constructing electronic government: the case of the UK inland revenue. *International journal of information management*, 25, 3-20.
- Bhatnagar, S. (2002). 'E-Government: Lessons from Implementation in Developing Countries' Regional Development Dialogue (24: Autumn) 9.
- Bhatnagar, S. (2004). *E-Government: From Vision to Implementation – A Practical Guide with Case Studies*, Sage Publications, London.
- Bhattacharjee, A., & Harris, M. (2009). Individual adaptation of Information Technology. *Journal of Computer Information Systems*, 50(1): 37-45.
- Bigdeli, A. Z. & de Casare, S. (2011). Barriers to e-Government Service Delivery in Developing Countries: The Case of Iran. *Emerging Themes in Information Systems and Organization Studies*: 307-320
- Björck, F. (2004). Institutional theory: A new perspective for research into IS/IT security in organisations. *IEEE. Proceedings of the 37th Hawaii International Conference on System Sciences*.
- Berger, P., & Luckmann, T. (1967). *The social construction of reality*. London: Penguin.
- Bogdan, R. & Taylor, S. J. (1975). *Introduction to Qualitative Research Method – A Phenomenological Approach to the Social Sciences*, New York: John Wiley & Sons.
- Boeije, H. (2010). *Analysis in Qualitative Research*. California: Sage Publications Inc.
- Bonham, G., Seifert, J. & Thorson, S. (2001). The transformational potential of e-government: the role of political leadership.
- Borras, J. (2004). International Technical Standards for e-Government. *Electronic Journal of e-Government*, 2(2): 75-80.

- Bouma, G. A. & Atkinson, G. B. J., (1999). *A Handbook of Social Science Research: A Comprehensive and Practical Guide for Students*. New Revised and Expanded Edition. Oxford: Oxford University Press.
- Boyle, B. & Nicholson, D. (2003). E-Government in New Zealand. *The World of E-Government*. New York: The Hanworth Press Inc.
- Brace, I. (2004). *Questionnaire Design*. UK: Kogan Page Limited.
- Brewer, J., & Hunter, A., (1989). *Multimethod research: A synthesis of styles*. Newbury Park. CA: Sage.
- Bryman, A. (1984). The Debate about Quantitative and Qualitative Research: A Question of Method or Epistemology? *The British Journal of Sociology*, 35(1): 75-92.
- Bryman, A. (2008). *Social research methods*, 4th edition, Oxford: Oxford University Press.
- Btoush, M.A. (2002). Evaluation of E-Government Services in Jordan: Providers' & Users' Perceptions. *Unpublished PhD Thesis* submitted to Sheffield Hallam University. January 2009.
- Buccoliro, L., Calciolari, S., & Marsilio, M. (2008). ERP Evaluation in Healthcare Organisations: Results of Empirical Study. 8th *European Conference on E-Government, Eceg 2008*, Switzerland: 93:104.
- Budd, L. & Harris, L. (2004). *E-Economy: Rhetoric or Business Reality*, Routledge, London.
- Bumes, B. (2004b). *Managing Change, 4th Edition*, IT/Prentice-Hall, Harlow.
- Burn, J. & Robins, G. (2003). Moving towards e-government: a case study of organisational change processes. *Logistics Information Management*, 16: 25-35.
- Burnes, R. (2004). Kurt Lewin and the planned approach to change: a re-appraisal. *Journal of Management Studies*, 4(6):972-1002.
- Burns, R., (2000). *Introduction to research methods*. London: Sage Publication Ltd.
- Cabinet Office. (2000). *E-government: A strategic Framework for Public Services in the Information Age*. Cabinet Office, London, UK, 2000.
- Carbo, T. & Williams, J. G. (2004). Some Determinants of User Perceptions of Information Quality on the World Wide Web. *Electronic Journal of e-Government*, 2:94-105.
- Cardoso, J., Bostrom, R. P. & Sheth, A. (2004). Workflow management systems and ERP systems: Differences, commonalities, and applications. *Information Technology and Management*, 5:319-338.

- Carter, L. & Belanger, F. (2004). The Influence of Perceived Characteristics of Innovating on e-Government Adoption. *Electronic Journal of e-Government* 2, (1) 11-20 [Online]. Available from <http://www.ejeg.com/volume-2/volume2-issue-1/v2-i1-art2-carter.pdf> [13 September 2009]
- Cavana, R.Y., Delahaye B.L. & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative methods*. Milton, Queensland: John Wiley & Sons Australia Ltd.
- Chandler, S., L., E. G. & Emanuels, S. (2002). Transformation not automation. Academic Conferences Limited, 91.
- Chatman, J. A. (1989). Improving interactional organizational research: A model of person-organization fit. *Academy of Management Review*, 14: 333-349.
- Chatman, J. A. (1991). Matching people and organizations: Selection and socialization in public accounting firms. *Administrative Science Quarterly*, 36: 459-484.
- Chau, P. Y. K. & Hu, P. J. H. (2002). Investigating healthcare professionals' decisions to accept telemedicine technology: An empirical test of competing theories. *Information & Management*, 39: 297-311.
- Checkland, P. (1987). *The Application of Systems in Real-World Problem Situations: The Emergence of Soft Systems Methodology*. In Jackson, M.C. & Keys, P. (Ed's), *New Directions in Management Science*, Aldershot: Gower.
- Chen, Y. N.; Chen, H. M.; Huang, W.; & Ching, R. K. H. (2006). E-Government Strategies in Developed and Developing Countries: An Implementation Framework and Case Study. *Journal of Global Information Management*, 14: 23-46.
- Chua, W. F. (1986). Radical Developments in Accounting Thought. *The Accounting Review*, 61(4): 601-632.
- Central Bank of Nigeria. (2010). Centre
- Ciborra, C. & Navarra, D. D. (2005). Good Governance, Development Theory, and Aid Policy: Risks and Challenges of E-Government in Jordan. *Information Technology for Development*, 11(2): 141-159.
- Chowdhury, H. G., Habib, M. W. & Kushchu, I. (2006). Success and failure factors for e-Government projects Implementation in developing countries: A study on the perception of government officials of Bangladesh. In: *The Proceedings of Euro mGov 2006: The Second Conference on Mobile Government*, Brighton, UK, September 3-5, 2006.

- CIA: Worlds Factbook. (2005). SMART is an Acronym for Simple, Moral, Accountable, Responsive and Transparent Government; See Nigerian Tribune Newspaper 17/01/2008.
- Collis, J. & Hussey, R. (2009). *Business Research: A Practical Guide for Undergraduate & Postgraduate Students*. 3rd edition. New York: Palgrave MacMillan.
- COMESA. (2007). Guidelines for the formulation of e-Government Strategies. *E-Government Toolkit*. The Common Market for Eastern and Southern Africa, (COMESA) website [online] available from <<http://egov.comesa.int/index.php/e-government-toolkit/30-guidelines-for-the-formulation-of-e-government-strategies>> [08 June 2013]
- Corbetta, P. (2003). *Social research, theory, methods and techniques*. London: Sage.
- Creswell, J.W. (1994). *Research Design: Qualitative and Quantitative Approaches*. California: Sage Publications, Inc.
- Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*, Sage Publications, Inc.
- Crossan, F. (2003). Research Philosophy: Towards an Understanding. *Nurse Researcher* 11(1): 46-55.
- Currie, W. (2009). Contextualising the IT artefact: towards a wider research agenda for IS using institutional theory. *Information Technology & People*, 21:63-77.
- Currie, W. L. & Guah, M. W. (2007). Conflicting institutional logics: a national programme for IT in the organisational field of healthcare. *Journal of Information Technology*, 22: 235-247.
- Dada, D. (2006). The failure of E-government in developing countries. *In the proceedings of the Electronic Journal of information systems in developing countries, EJISDC*, 26(7): 1-10.
- Dakwa, K.D. (2011). Information and Communication Technology in Nigeria: Prospects and Challenges for Development (review). *Africa Today*. 56(4): 95-96. *Project MUSE*. Web. 27 Dec. 2011. <<http://muse.jhu.edu/>>.
- Davis, L. E. & North, D. C. (1971). *Institutional change and economic growth*. Cambridge: Cambridge University Press.
- Dawson, P. (1994). *Organizational Change: A Processual Approach*, London: Paul Chapman Publishing.

- Delone, W.H. & Maclean, E.R. (1992). Information systems success: The quest for the dependent variable. *Information Systems Research*, 3(1):60-95.
- Deloitte, R. (2000). *At the Dawn of e-Government: The Citizen as Customer*, Deloitte Consulting, New York.
- Deloitte Research. (2001). *E-government's next generation: Transforming the government enterprise through customer service*. New York: Deloitte Consulting (Global).
- Denscombe, M. (2003). *The Good Research Guide*, Maidenhead: Open University.
- Dillon, J. & Pelgrin, W. (2002). *E-Government/Commerce in New York State*, Office of Technology, New York, NY.
- DiMaggio, P.J. (1983). State expansion and the structuration of organisational field; In R. Quinn (Ed): *Theory and Public Policy*, Beverly Hills Sage.
- DiMaggio, P. J. & Powell, W. W. (1991). The new institutionalism in organizational analysis. *Chicago University, Chicago, USA*.
- DeSanctis, G., & Poole, M. S. (1994). Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory. *Organization Science*, 5(2): 121-147. INFORMS. doi: 10.1287/orsc.5.2.121.
- Docktor, R. (2005). Accelerating e-Government e-Readiness at work. Regional workshop on building e-Governance capacity in Africa, [Online] Available: <<http://unpanl.un.org/intradoc/groups/public/documents/CAFRAD/UNPAN006617.pdf>> [15 June 2013]
- Dode, R.O. (2007). Prospects of E-Government Implementation in Nigeria. *ICEGOV 2007*, Macao, 10-13 December 2007.
- Dul, J. & Hak, T. (2008). *Case study methodology in business research*. Oxford: Elsevier Ltd.
- Dyer, W. G. & Wilkins, A. L. (1991). Better stories, not better constructs, to generate better theory: a rejoinder to Eisenhardt. *The Academy of Management Review*, 16: 613-619.
- Easterby-Smith, M., Thorpe, R. & Jackson, P. R. (2008) *Management research*, 3rd edition. London: SAGE Publications.
- Easterby-Smith, M., Thorpe, R. & Lowe, A. (2002). *Management Research: An Introduction*. 2nd edition. London: Sage Publications Ltd.

- Ebbers, W. E., & Van Dijk, J. (2007). Resistance and support to electronic government, building a model of innovation. *Government Information Quarterly*, 24:554-575.
- Ebrahim, Z.A. (2005). The Adoption of E-Government in the Kingdom of Bahrain. *Unpublished PhD Thesis*. School of Information Systems. Computing and Mathematics: Brunel University.
- Ebrahim, Z. & Irani, Z. (2005). E-Government adoption: architecture and barriers. *Business Process Management Journal*, 11(5):89-611.
- Eddowes, L.A. (2004). The Application of Methodologies in e-Government. *Electronic Journal of e-Government*, 2:115-126, 2004 [Online]. Available from <<http://www.ejeg.com/volume-2/volume2.../v2-i2-eddowes-pp115-126.pdf> > [13 September 2009]
- Edwards, J. R. (1994). The study of congruence in organizational behavior research: Critique and proposed alternative. *Organizational Behavior and Human Decision Processes*, 58: 683 - 689.
- Edwards, J. R., & Parry, M. E. (1993). On the use of polynomial regression equations as an alternative to difference scores in organizational research. *Academy of Management Journal*, 36: 1577 - 1613.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14: 532-550.
- Esteves, J. & Joseph, R. C. (2008). A comprehensive framework for the assessment of e-Government projects. *Government Information Quarterly*, 25:118-132.
- Evangelidis, A., Akomode, J., Taleb-Bendiab, A. & Taylor, M. J. (2002). Risk Assessment & Success Factors for e-Government in a UK Establishment. *In proceedings of Electronic Government, First International Conference, EGOV 2002*, (eds. Traunmuller, R. and Lenk, K.), Aix-en-Provence (France), September 2-6, 2002, pp. 395-402, ISBN 3-540-44121-2.
- Evered, R. & Louis, M. R. (1981). Alternative Perspectives in the Organizational Sciences. *Academy of Management Review*, 6(3): 385-395.
- Fan, J., & Zhang, P. (2007). A Conceptual Model for G2G Information Sharing in E-Government Environment. *The Sixth Wuhan International Conference on E-Business - e-Business Track*. 199-204. *Conference proceedings*.

- Fang, Z. (2002). E-Government in Digital Era: Concept, Practice and Development. *International Journal of the Computer, the Internet and Management*, 10(2):1-22.
- Fernández-i-Marín, X. (2011). The Impact of e-Government Promotion in Europe: Internet Dependence and Critical Mass. *Policy & Internet*, 3(4), Article 2. [online] Available from: <<http://www.psocommons.org/policyandinternet/vol3/iss4/art2>> [11 September 2012]
- Field, T. (2003). *The e-government imperative*, Publications de l'OCDE.
- Finger, M. & Pecoud, G. (2003). From e-Government to e-Governance? Towards a model of e-Governance. *Electronic Journal of e-Government*, 1(1): 52-62.
- Flak, L. S. & Rose, J. (2005). Stakeholder governance: adapting stakeholder theory to e-government. *Communications of the Association for Information Systems*, 16: 31.
- Flak, L. S. & Nordheim, S. (2006). Stakeholders, contradiction and salience: An empirical study of a Norwegian G2G effort. *Proceedings of the 39th Hawaii International Conference on System Sciences, IEEE*.
- Fletcher, K., and Wright, G. (1995). Organizational, Strategic and Technical Barriers to Successful Implementation of Database Marketing. *International Journal of Information Management*, 15(2): 115-126.
- Flick, U. (2002). *An introduction to qualitative research*, 2nd Edition. London: Sage Publications.
- Fontaine, C., Haarman, A., & Schmid, S. (2006). The Stakeholder Theory, December 2006. [online] Available from <<http://www.diseniosessparrados.goolecode.com>>[10 October 2010].
- Freeman, R.E. (1984). *Strategic Management: A stakeholder Approach*. Boston, USA: Pitman.
- Friedman, A.L. & Miles, S. (2006). *Stakeholders: Theory and Practice*. Oxford, UK: Oxford University Press.
- Galliers, R. D., (1991). Choosing Appropriate Information Systems Research Approaches: A Revised Taxonomy. In *Information Systems Research: Contemporary Approaches & Emergent Traditions*, (Nissen H-E, Klein H K & Hirschheim R Eds.), pp.327-346., B.V, The Netherlands: Elsevier Science Publishers.
- Galliers, R. D. (1992). *Information systems research—Issues, methods and practical guidelines*. Oxford, UK: Blackwell Scientific
- Galliers, R. (1994). *Information systems research*, Waller.

- Gefen, D. & Pavlou, P. (2002). E-government adoption. *Paper presented at Americas Conference on Information Systems*.
- Gatignon H. & Robertson T. S. (1985). A propositional inventory for new diffusion research. *Journal of Consumer Research*, 11: 849-867.
- Ghapanchi, A., Albadvi, A., & Zarei, B. (2008). A framework for e-government planning and implementation. *Electronic Government*, 5(1): 71–90.
- Ghuri, P & Grønhaug, K. (2002). *Research Methods in Business Studies*. 2nd Edition. Harlow: Pearson Education Limited.
- Giddens, A. (1984). *The Constitution of Society: Outline of the Theory of Structuration*, Berkeley, CA: University of California Press.
- Gilbert, D., Balestrini, P. & Littleboy, D. (2004). Barriers and benefits in the adoption of e-government. *International Journal of Public Sector Management*, 17:286-301.
- Gillham, B. (2005). *Research interviewing*. England: Open University press.
- Gleick, J. (1988). *Chaos: The Making of a New Science*, London: Heinemann.
- Goings, D., Young, D. & Hendry, S. (2003). Critical Factors in the Delivery of e-Government Services: Perceptions of Technology Executives. *Communications of the International Information Management Association*, 3:1-14.
- Griffin, E. (2000). *A first look at communication theory (4th Ed.)*. Boston, MA: McGraw-Hill: 209-210, & 224-233.
- Hachigian, N. (2002). Roadmap for E-Government in the Developing World: 10 Question E-Government Leaders Should Ask Themselves.
- Hackman, J. R., & Oldham, G.R. (1980). *Work Redesign*. Reading, MA: Addison-Wesley.
- Hakim, C., (1987). *Research Design Strategies and Choices in the Design of Social Research*. London/New York: Routedledge.
- Halchin, L. E. (2004) Electronic government: Government capability and terrorist resource. *Government Information Quarterly*, 21, 406-419.
- Hamed, A. (2009). E-Commerce and Economic Development in Libya. *Unpublished PhD Thesis*, submitted to University of Wales Institute, Cardiff.
- Hamed, A., Berger, H., Cleary, P. & Ball, D. (2008a). E-Commerce drivers and barriers: A new classification method in digital revolution. *UKAIS*, Bournemouth.
- Harling, K. (2002). An overview of case study. *Retrieved August, 4, 2007*.

- Hassan, S. (2003). Introducing E-Government in Bangladesh: Problems and Prospects. *Journal of International Social Science Review*, 78(3/4):111.
- Hatch, M. J. (1997). *Organization Theory: Modern, Symbolic and Postmodern Perspectives*, Oxford: Oxford University Press.
- Hector, P. (2012). E-Government: Security Threats. *IEEE e-Government STC* [Online] Available from: <<http://stc-egov.ieee.net/blog/e-governmentsecuritythreats>> [17 July 2013]
- Heeks, R. (1999). *Reinventing government in the information age: International practice in IT-enabled public sector reform*, Routledge
- Heeks, R. (2001). Understanding e-Governance for Development. Manchester: Institute for Development Policy and Management (*i-Government Working Paper Series*, No11).
- Heeks, R. (2002). E-Government in Africa: Promise and practice. *Information Polity*, 7: 97-114.
- Heeks, R. (2003). Most e-Government-for-development projects fail: how can risks be reduced? *Institute for Development Policy and Management*.
- Heeks, R. (2006). *Implementing and Managing e-Government: an international Text*. London: Sage.
- Hiller, J. S. & Belanger, F. (2001) Privacy strategies for electronic government. *E-government*, 162-198.
- Hirschheim, R. (1985). Information Systems Epistemology: An Historical Perspective. In: Mumford, E., Hirschheim, R., Fitzgerald, G. & Wood-Harper, A. T. (eds.) *Research Methods in Information Systems*. (North Holland), Amsterdam, The Netherlands: Elsevier Science Publishers B. V.
- Ho, A. T. K. (2002). Reinventing Local Governments and the E-Government Initiative. *Public administration review*, 62: 434-444.
- Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations across Nations*, 2nd Edition. Thousand Oaks, CA: Sage Publications.
- Hodgson, G. M. (1995). The evolution of evolutionary economics. *Scottish Journal of Political Economy*, 42: 469-488.

- Holden, S.H., Norris, D.F. and Fletcher, P.D. (2003). Electronic Government at the Local Level: Progress to Date and Future Issues. *Public Performance and Management Review*, 26(3):1-20.
- Hu, Q., Hart, P. & Cooke, D. (2006). The Role of External Influences on Organizational Information Security Practices: An Institutional Perspective. *Proceedings of the 39th Annual Hawaii International Conference on System Sciences, HICSS '06*.
- Hu, Y., Xiao, J., Pang, J. & Xie, K. (2005). A Research on the Appraisal Framework of e-Government Project Success. *Proceedings of the 7th international conference on electronic commerce, ICEC'05*. ACM Press.
- Hunter, D. R., & Jupp, V. (2001). *E-Government leadership: Rhetoric vs. reality-closing the gap: Accenture*. [online] Available from <<http://www.accenture.com>> [13 June 2013].
- Hussey, J. and Hussey, R. (1997). *Business Research. A Practical Guide for Undergraduate and Postgraduate Students*. Basingstoke, UK: Palgrave.
- Idowu, O. O. W. (1999). Citizenship status, statehood problems and political conflict: The case of Nigeria, *Nordic Journal of African Studies*, 8(2): 73-88.
- Ifinedo, P. (2006). Towards E-Government in a Sub-Saharan African Country. *Journal of E-Government*, 3:3-28.
- Im, J. J. H. & Seo, J.-W. (2005). E-government in South Korea: planning and implementation. *Electronic Government, an International Journal*, 2: 188-204.
- InfoDev (Information for Development Program). (2004). E-readiness Assessment: The Case of Egypt. *InfoDev Program*, the World Bank.
- InfoDev. (2002). *The e-Government Handbook for Developing Countries*. Center of Democracy and Technology.
- Inyang, B. T. (2004). *Organizational behaviour managerial perspective*. Calabar: Merb Publishers.
- Irani, Z., Dwivedi, Y. K. & Williams, M. D. (2009). Understanding consumer adoption of broadband: an extension of the technology acceptance model. *Journal of the Operational Research Society*, 60, 1322-1334.
- Irani, Z., Elliman, T. & Jackson, P. (2007). Electronic Transformation of Government in the UK. *European Journal of Information Systems*, 16(3):327-335.

- Irani, Z., Ezingard, J., Grieve, R. J. & Race, P. (1999) A Case Study Strategy As Part of An Information Systems Research Methodology: A Critique. *International Journal of Computer Applications in Technology* 12(2): 190-198
- Irani, Z. & Love, P. (2001). Developing a frame of reference for ex-ante IT/IS investment. *European Journal of Information System (EJIS)*, 11(1):74-82.
- Irani, Z., Themistocleous, M. & Love, P.E.D. (2003). The impact of enterprise application integration on information system lifecycles. *Information and Management*, 41:177-187.
- Jaeger, P. T. (2003). The endless wire: e-Government as global phenomenon. *Government Information Quarterly* 20:323-331.
- Jaeger, P. T. & Thompson, K. M. (2003). E-Government around the world: Lessons, challenges, and new directions. *Government Information Quarterly*, 20: 389-394.
- James, G. (2002). Empowering bureaucrats, *MC Technology Marketing Intelligence*, 20(12): 2000, 62-68.
- Janesick, V.J., (1998). *Stretching Exercises for Qualitative Researchers*. Thousand Oaks, CA: Sage Publications Inc.
- Jankowicz, A. (2000). *Business research projects*, 3rd Edition. London: Thomson Learning.
- Janssen, M. A & van Veenstra, A. F. (2005). Stages of Growth in e-Government: An Architectural Approach. *Electronic Journal of e-Government* [Online]. Available from: <<http://www.ejeg.com/...3/.../JanssenMarijnandvanVeenstraAnneFleur.pdf>> [Accessed September 2009]
- Jarvenpaa, S. L. (1989). The effect of task demands and graphical format on information processing strategies. *Management Science*, 35(3): 285-303.
- Jensen, T.B., Kjaergaard, A. & Svejvig, P. (2008). Two Perspectives on Information System Adaptation: Using Institutional Theory with Sense making. *Working paper I-2008-06, Informatics Research Group*.
- Jepperson, R.L. (1991). Institutions, institutional effects and institutionalism. In *The new institutionalism in organizational analysis*, W.W Powell. and P. J DiMaggio (eds.), Chicago: The University of Chicago Press: 143-163.
- Joia, L. A. (2007). Sources of resistance to G2G endeavors: Evidence from a case study in the Brazilian context. *Information Technology for Development*, 13, 233.

- Johnson, B., & Christensen, L., (2004). *Educational research*, 2nd edition. USA: Pearson Education.
- Johnson, R. B. & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time
- Johnson, R.B., & Turner, L.A. (2003). Data collection strategies in mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 297-319). Thousand Oaks, CA: SAGE.
- Jones, S., Irani, Z. & Sharif, A. (2007) E-Government Evaluation: Reflections on Three Organisational Case Studies *Proceedings of the 40th Hawaii International Conference on System Sciences, Hawaii. IEEE Computer Society.*
- Jones, M., & Karsten, H. (2008).
- Jones, M., & Karsten, H. (2009). Divided by a common language? A response to Marshall Scott Poole. *MIS Quarterly*, 33(3): 589-595. Retrieved October 30, 2010, from <http://web.ebscohost.com.library.capella.edu/ehost/visual?vid=2&hid=112&sid=fd5f9a98-c9de-464c-8aa9-2a73c3ba9bab%40sessionmgr114>
- Joshi, J. & Ghafoor, A. (2001). Digital government security infrastructure design challenges. *IEEE Computer*, 34(1): 66-72.
- Kaaya, J. (2004). The emergence of e-government services in East Africa: tracking adoption patterns and associated factors. *ACM New York, NY, USA*, 438-445.
- Kaaya, J. (Year). The emergence of e-government services in East Africa: tracking adoption patterns and associated factors. *In*, 2004a. ACM New York, NY, USA, 438-445.
- Kaaya, J. (2004b). Implementing e-government services in East Africa: Assessing status through content analysis of government websites. *Electronic Journal of e-Government*, 2, 39-54.
- Kaliontzoglou, A., Sklavos, P., Karantjias, T. & Polemi, D. (2005). A secure e-Government platform architecture for small to medium sized public organizations. *Electronic Commerce Research and Applications*, 4(2): 174-186.
- Kanat, I.E. & Özkan, S. (2009). Explaining Planning Citizen Adoption of Government to Citizen Services: A Model Based on Theory of Planned Behaviour (TPB), European and Mediterranean Conference on *Information Systems* (EMCIS2009), July 13-14 2009, Crowne Plaza Hotel, Izmir

- Kanter, R.M., Stein, B.A. & Jick, T.D. (1992). *The Challenge of Organizational Change*, New York: Free Press.
- Kaplan, A. (1964). *The Conduct of Enquiry: Methodology for Behavioural Research*, California, USA: Chandler.
- Kessler, K., Hettich, N., Parsons, C., Richardson, C. & Triana, A. (2011). A Framework for Assessing Privacy Readiness of e-Government. *iGovernment Working Paper Series, Centre for Development Informatics*.
- Key, S. (1999). Toward a new theory of the firm: a critique of stakeholder "theory". *Management Decision*, 37(4): 317-328.
- Khanh, N. T. V. (2014). The Critical Factors Affecting E-Government Adoption: A Conceptual Framework in Vietnam. *Computers and Society, Computer Science, Cornell University Library (submitted)*. MLA. [online] Available from: <<http://arXiv preprint arXiv:1401.4876>> [26 February 2014].
- Khasawneh-Jalghoum, S.S. (2011). A Case Study of Drivers and Barriers to E-Government Initiative in Jordan. *Unpublished PhD Thesis*, submitted to University of Manchester, Manchester, England.
- Kim, S., Kim, H. J. & Lee, H. (2009). An institutional analysis of an e-government system for anti-corruption: The case of OPEN. *Government Information Quarterly*, 26: 42-50.
- Klein, H. K. & Lyttinen, K. (1985). The Poverty of Scientism in Information Systems. In: E. Mumford, R. Hirschheim, G. Fitzgerald & T. Wood-Harper (Eds.), *Research Methods In Information Systems* (pp.131-161). Amsterdam: North-Holland.
- Klein, H. K. & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly: Management Information Systems*, 23: 67-94.
- Kojima, R. (1996). Introduction: Population Migration and urbanization. *The Developing Economies*, 34 (4): 349-369.
- Kontopolous, K. M. (1993). *The Logics of Social Structure*, Cambridge, UK: Cambridge University Press.
- Kotter, J.P. (1995). *Leading Change*. Harvard Business Review, Boston, USA
- Kritsonis, A. & Student, M. (2004). Comparison of change theories. *International journal of scholarly academic intellectual diversity*, 8, 1-7.

- Kvale, S. (1996). *Inter Views: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage.
- Kwon, T. H. & Zmud, R. W. (1987). Unifying the fragmented models of information systems implementation. *Critical issues in information systems research*, 227-251.
- Lam, W. (2005). Barriers to E-Government Integration. *The Journal of Enterprise Information Management*, 18(5):511-530.
- Lambkin, M. & Day, S. (1989). Evolution Process in Competitive Markets: Beyond the Product Life Cycle. *Journal of Marketing*, 53 (July): 4-20.
- Lambrinouidakis, C., Gritzalis, S., Dridi, F. & Pernul, G. (2003). Security requirements for egovernment services: a methodological approach for developing a common PKI-based security policy. *Computer Communications*, 26(16): 1873-1883.
- Lamersdorf, W., Tschammer, V. & Amarger, S. (2004). *Building the E-Service Society: E-Commerce, E-Business and E-Government*, Boston: Kluwer Academic Publishers.
- Land Use Decree. (1978). *Federal Republic of Nigeria Official Gazette*. Federal Government of Nigeria 1978, pp. A 58.
- Lau, E. (2003). Challenges for EGovernment Development, *5th Global Forum on reinventing Government*, Mexico City, 5th November, 2003.
- Lawler, E. and Worley, C. (2008). Built to Change: How to Achieve Sustained Organizational Effectiveness. *Lagos The guardian newspaper*, Friday, February 22, 2008: 36 and 43.
- Layne, K. & Lee, J. (2001). Developing fully functional E-government: A four stage model. *Government Information Quarterly*, 18, 122-136.
- Lee, A. S. (1989a). A Scientific Methodology for MIS Case Studies. *MIS Quarterly*, 13(1):33-50.
- Lee, A. S. (1989b). Case Studies as Natural Experiments. *Human Relations*, 42(2): 117-137.
- Lee, A. S. (1991). Integrating Positivist and Interpretive Approaches to Organizational Research. *Organization Science*, 2(4): 342-365.
- Lee, A. and Baskerville, R. (2003). Generalizing Generalizability in Information Systems Research. *Information Systems Research*, 14 (3).

- Lee-Kelley, L. & James, T. (2005). E-Government and Social Exclusion: *An Empirical Study in Advanced Topics in Electronic Commerce*, 1: 222-239. Idea group publishing.
- Leedy, P. D. (1997). *Practical research: planning and design*, 6th edition. Upper Saddle River, NJ: Prentice-Hall, Inc.
- Lemanski, T. & Overton, T. (2011). *An Introduction to Qualitative Research*. UK Physical Sciences Centre, The Higher Education Academy [online] Available from: < www.heacademy.ac.uk/assets/ps/documents/.../qualitative_research.pdf> [16 November 2013]
- Lenk, K. & Traunmüller, R. (2000). A Framework for electronic Government. *Database and Expert Systems Applications*, 10: 340-345.
- Lewin, K. (1946). Action research and minority problems; in G.W. Lewin (Ed) (1948): *Resolving Social Conflicts*, London: Harper & Row.
- Lewin, K. (1947a). Frontiers I group dynamics; in D. Cartwright (Ed) (1952): Field theory in Social Science. *Social Science Paperbacks*, London.
- Lewis-Beck, M. S., Bryman, A. & Liao, T. F. (2004). Pilot study. *Encyclopedia of Social Science Research Methods*.
- Li, F. & Steveson, R. (2002). Implementing E-Government strategy in Scotland: current situation and emerging issues. *Academic Conferences Limited*, 251.
- Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic Inquiry*. California: Sage Publications, Inc.
- Lincoln, Yvonna S. & Guba, Egon, G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), *The handbook of qualitative research* (second edition) (pp.163-188). London: Sage.
- Littlejohn, S. (2000). *Theories of Human Communication*. Belmont, CA: Wadsworth
- Liu, Y., & Zhou, C. (2010). A citizen trust model for E-government. 2010 I.E. International Conference on Software Engineering and Service Sciences: 751–754.
- London Borough of Hillingdon (2005). Customer access Strategy 2005-2010. *Cabinet report* on 28 April 2005 [Online] Available from [01 February 2011]
- Lorenz, E. (1993). *The Essence of Chaos*, London: UCL Press.
- Lorenzi, N. M. & Riley, R. T. (2000). Managing change: An overview. *J Am Med Inform Assoc. JAMIA*, 7: 116–24.

- Lubbe, S. (2003). The development of a case study methodology in the information technology (IT) field: a step by step approach. *South African Journal of Information Management*, 5(4).
- Lubbe, S. (2004). The development of a case study methodology in the information technology (IT) field: a step by step approach. *Computing Reviews*, 45: 565.
- Luthans, F. & Davis, T. R. V. (1982). An Idiographic Approach to Organizational Behaviour Research: The Use of Single Case Experimental Designs and Direct Measures. *Academy of Management Review*, 7(3): 380-391.
- Ma, L., Chung, J. & Thorson, S. (2005). E-government in China: Bringing economic development through administrative reform. *Government Information Quarterly*, 22: 20-37.
- Macintosh, A. (2004). Characterizing e-Participation in Policy-Making. Proceedings of the 37th Annual Hawaii International Conference on System Sciences, Honolulu, HI, USA.
- Madden, T. J., Ellen, P. S., & Ajzen, I. (1992). A comparison of the theory of planned behavior and the theory of reasoned action. *Personality and Social Psychology Bulletin*, 18: 3-9.
- Mahajan, V., Muller, E., & Srivastava, R. K. (1990). Determination of Adopter Categories by Using Innovation Diffusion Models. *Journal of Marketing Research*, XVII.
- Malmberg A, Malmberg B. & Lundequist, P. (2000). Agglomeration and firm performance: economies of scale, localisation, and urbanisation among Swedish export firms. *Environment and Planning A* 32: 305-321.
- Martin, G. & Reddington, M. (2009). Reconceptualising absorptive capacity to explain the e-enablement of the HR function (e-HR) in organisations. *Employee Relations*, 31: 515–537.
- Matavire, R., Chigona, W., Roode, D., Sewchurran, E., Davids, Z., Mukudu, A. & Boamah-Abu, C. (2010). Challenges of eGovernment Project Implementation in a South African Context. *The Electronic Journal Information Systems Evaluation*, 13(2): 153 - 164, available online at www.ejise.com.
- McCaffrey, D.P., Faerman, S.R. & Hart, D.W. (1995). The appeal and difficulties of participative systems. *Organization Science*, 6:603-27.

- McClure, D. (2000). Electronic government: federal initiatives are evolving rapidly but they face significant challenges. *Accounting and Information Management Division*, Available: www.gao.gov/new.items/a200179t.pdf.
- McClure, R. D. (2002). *Common Data Collection Strategies Effective in Qualitative Studies Using Action Research in Technical /Operational Training Programs* [online] Available from: < <http://evokedevelopment.com/uploads/blog/commonData.pdf>> [21 December 2013]
- McDonagh, M. (2002). E-Government in Australia: the Challenge to Privacy of Personal Information. *International Journal of Law and Information Technology*, 10: 327-343.
- McNamara, C. (1999). *General Guidelines for Conducting Interviews*. [online] Available from <<http://www.mapnp.org/library/evaluatn/intrview.htm>> [15 January 2013]
- Merton, R., & Kendal, P. (1946). The Focused Interview. *American Journal of Sociology*, 51: 541-557. (Quoted in Cohen & Manion, 1994).
- Miller, R., & Brewer, J. (2003). *The A-Z of social research*. London: SAGE Publications Ltd.
- Mintzberg, H. (1979). An emerging strategy of direct research. *Administrative Science Quarterly*, 24: 105–16.
- Mirada, S. M. & Kim, Y-M. (2006). Professional versus political contexts: institutional mitigation and the transaction cost heuristic in information systems outsourcing. *MIS Quarterly*, 30(3):725-753
- Miriam, L. (2000). Designing Electronic Government Around the World. Policy Development in the USA, Singapore, and Australia. *The EDI Law Review*, 7: 199-216. In Prins, J. E. J. (2001). (Eds) *Designing E-Government On the Crossroads of Technological Innovation and Institutional Change*, Kluwer Law International.
- Moon, M. J. (2002). The Evolution of E-Government among Municipalities: Rhetoric or Reality? *Public administration review*, 62, 424-433.
- Morgan, G. & Smircich, L. (1980). The Case For Qualitative Research. *Academy of Management Review*, 5(4): 491-500.
- Mundy, D. & Musa, B. (2010). Towards a Framework for eGovernment Adoption in Nigeria. *The Electronic Journal of e-Government*, 8(2): 147-160.

- Muoka, R. (2010). Prospects of Nigeria's action Agenda for Better Citizen Engagement through ICT for Development. *WSIS 2010 Forum EGM*, 13-14 May 2010.
- Myers, M. (1997). Qualitative Research in Information Systems. *MIS Quarterly* 21(2): 241-242.
- Myers, M. and Avison, D. (2002). An Introduction to Qualitative Research in Information Systems. In M. D. Myers and D. E. Avison, eds. *Qualitative Research in Information Systems: A Reader*. London: Sage Publications Ltd. Ch.1.
- Naoum, G. (1999). *Dissertation Research and Writing for Construction Students*. Oxford: Butterworth-Heinemann.
- National Environmental Standards and Regulations Enforcement Agency (NESREA) [Online]. Available from: < <http://www.nesrea.org> > [12 March 2013].
- National Research Council, 2002
- Ndou, V. D. (2004). E-Government for Developing Countries: Opportunities and Challenges. *The Electronic Journal on Information Systems in Developing Countries – EJISDC*, 18 (1):1-24.
- Nijaz, B. & Moon, Y. B. (2009). Enhancing systems integration by incorporating business continuity drivers. *Industrial Management & Data Systems*, 109(1): 74 - 97
- Nissen, H. E. (1985). Acquiring Knowledge of Information Systems – research in methodology quagmire. In *Research Methods in Information Systems*, Mumford, E., Hirschheim, R., Fitzgerald, G. & Wood-Harper, T. (Eds): BV, North-Holland: Elsevier Science Publications.
- Nkohkwo, Q. N. & Islam, M. S. (2013). Challenges to the Successful Implementation of e-Government Initiatives in Sub-Saharan Africa: A Literature Review. *Electronic Journal of e-Government*, 11(2): 253-267 [online] Available from <<http://www.ejeg.com>> [03 February 2014]
- North, D.C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Oates, B. (2006). *Researching Information Systems and Computing*. California: Sage Publications Inc.
- Obayelu, A.E. & Ogunlade, I. (2006). Analysis of the uses of information and communication technology for gender empowerment and sustainable poverty

- alleviation in Nigeria. *International Journal of Education and Development using ICT* [Online], 2(3). Available: <http://ijedict.dec.uwi.edu/viewarticle.php?id=172>.
- Obasanjo, O. (2004). "Speech by His Excellency President Olusegun Obasanjo" at the Stakeholders Conference on National e-Government Strategies and Implementation for Nigeria. [online] Available from <http://www.nigeriafirst.org/objspeeches/2004/stakeholders_conf.html> 11 January 2012.
- OECD. (2001). The Hidden Threat to E-Government: Avoiding large government IT failures. *Public Management (PUMA) Policy Briefing No.8*, March 2001. [Online] Available from: <<http://www.oecd.org/governance/pem/1901677.pdf>> [17 July 2013]
- Office of the Deputy Prime Minister. (2003). Local e-Government: Process Evaluation of the Implementation of Electronic Local Government in England, November 2003, *ODPM*, London.
- Ogbomo, M. O. (2009). Information and Communication Technology (ICT) in Local Government Administration: The Case of Oshimili North Local Government Area of Delta State. *Library Philosophy and Practice, Electronic Journal. ISSN 1522-0222*.
- Okot-Uma, N. K. & Rogers, W. O. (2004). The Roadmap to eGovernance Implementation: Selected Perspectives. *Presented at a Commonwealth Regional Pacific Workshop on Law and Technology*, 1-5 November 2004, Wellington, New Zealand.
- Onu, G. & Chiamogu, A.P. (2012). E-Governance and Public Administration in Nigeria: A Discourse. *International Journal of Business and Management Tomorrow*, 2:1-6, September 2012.
- Opara, S. & Ituen, I. (2009). *Nigeria's ICT sector: Growth, gains and challenges*.
- Oppenheim, N. (1992). *Questionnaire Design, Interviewing and Attitude Measurement*. Continuum International Publishing.
- Orange, G., Burke, A., Elliman, T., & Kor, A.L. (2006). CARE: An integrated framework to support continuous, adaptable, reflective evaluation of e-government systems: A research note presented at *European and Mediterranean Conference on Information Systems*, Alicante, Spain.

- O'Reilly, C. A., III, Chatman, J., & Caldwell, D. F. (1991). People and organization culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal*, 34(3): 487-516.
- Organisation for Economic Co-operation and Development. (2004). *The e-Government Imperative*, Paris: OECD.
- Oriikowski, W. J. (1992). The Duality of Technology: Rethinking the Concept of Technology in Organizations. *Organization Science*, 3(3): 398-427.
- Orlikowski, W. & Baroudi, J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information systems research*, 2: 1-28.
- Otubu, A K. (2009). E-Government and Land Administration in Nigeria – A Recipe for Lagos State. *Working paper Series of Social Services Research Network (SSRN)* 15 May 2009. Available from <<http://ssrn.com/abstract=1405363>> [12 October 2009]
- Palvia, P., Means, D.B. & Jackson, W.M. (1994), Determinants of computing in very small businesses. *Information & Management*, 27(3): 161-74
- Parajuli, J. (2007). A Content Analysis of Selected Government Web Sites: a Case Study of Nepal. *The Electronic Journal of e-Government*, 5 (1): 87 – 94.
- Pardo, T. (2002). Realizing the Promise of Digital Government: It's more than Building a Web Site. *Information Impacts Magazine*, October 2002.
- Pardo, T. & Scholl, H. (2002). Walking atop the cliffs: Avoiding failure and reducing risk in large scale e-government projects. *IEEE*, 1656-1665.
- Parikh, M. A. (2002). Knowledge Acquisition through Case Study Development: A Student Researcher Perspective. *Communications of the Association for Information Systems* 8(1): 360-379.
- Patton, M. Q. (1987). *How to Use Qualitative Methods in Evaluation*. Newbury Park: Sage Publications Ltd.
- Patton, M., (1990), *Qualitative Evaluation and Research Methods*, California, CA: Sage Publications.
- Pavlichev, A. (2004). The e-government challenge for public administration education. In A. Pavlichev & G.D. Garson (Eds.), *Digital government: Principles and best practices*. Hershey, PA: Idea Group Publishing, 276-290

- Payne, J. E. (2002). E-Commerce Readiness for SMEs in Developing Countries: A Guide for Development Professionals. *Academy for Educational Development/LearnLink*.
- Payne, G., Durand-Lasserve, A. & Rakodi, C. (2007). Social and economic impacts of land titling programmes in urban and peri-urban areas: A review of the literature. *World Bank Urban Research Symposium*. Washington DC – 14-16 May 2007.
- Peter, G.B. (2000). Institutional Theory: Problems and Prospects. *Political Science Series*. Vienna.
- Peters, L. H. & O’Conner, E. J. (1988). Measuring work obstacles: Procedures, issues, and implications. In Scheorman F. D., Schneider, B. (Eds), *Facilitating work effectiveness*. Lexington, MA: Lexington Books.
- Peterson, S. (2002). Digital legislature. *Electronic Government*, 3(3): 8-12.
- Phillips, E. M. & Pugh, D. S. (2000) *How to get a PhD: a handbook for students and their supervisors*, Open University Press, 325 Chestnut Street, Philadelphia, PA 19106.
- Pinfield, L. (1986). A Field Evaluation of Perspectives on Organizational Decision Making. *Administrative Science Quarterly*, 31(S): 197 -216.
- Popper, K. (1963). *Conjectures and Refutations*, London: Routledge
- Powell, W. W. (2002). The New Institutionalism to appear in *The International Encyclopedia of Organization Studies*. Sage Publications.
- Preston, L. & J. Post. (1975). *Private Management and Public Policy*. New Jersey: Prentice Hall.
- Rana, N. P., Dwivedi, Y. K, & Williams, M. D. (2012). E-Government Adoption Research: Analysing Challenges and Critical Success Factors. *European, Mediterranean & Middle Eastern Conference on Information Systems 2012 (EMCIS2012)*, June 7-8, Munich, Germany
- Rana, N. P., Dwivedi, Y. K, & Williams, M. D. (2013) Analysing challenges, barriers and CSF of egov adoption. *Transforming Government: People, Process and Policy*, 7(2): 177 – 198.
- Rates, S. J. (2004) *Doing social science research*, SAGE Publications, London
- Reddick, C. G. (2004). A two stage model of e-Government growth: Theories and empirical evidence for U.S. cities, *Government Information Quarterly*, 21(1), 51–64.

- Reffat, R. (2003). Developing a Successful E-Government, *Working Paper, School Of Architecture, Design Science And Planning*, University Of Sydney, Australia.
- Remenyi, D., Williams, B., Money, A. & Swartz, E. (1998). *Doing research in business and management*, London: SAGE.
- Responsible Conduct of Research. (2005). Faculty Development and Instructional Design Center 'Data Collection'. Responsible conduct in Data Management, Northern Illinois University, DeKalb, RCR Website [Online] available from: <<http://www.niu.edu/rcrportal/datamanagement/dctopic.html>> [01 July 2013]
- Richard, S.W. (2004). Institutional theory. *Encyclopaedia of Social Theory*, pp.408-414, George Ritzer, Eds. Thousand Oaks, CA, USA: Sage.
- Robbins, S. (2003). *Organisational Behaviour*, 10th Edition. Upper Saddle, NJ: Prentice Hall.
- Robey, D. & Boudreau, M. C. (1999). Accounting for the Contradictory Organizational Consequences of Information Technology: Theoretical Directions and Methodological Implications. *Information Systems Research*, 10: 167-185.
- Robins, G. (2001). E-government, information warfare and risk management: an Australian case study. *Paper presented at 2nd Australian Information Warfare Security Conference*.
- Robson, C. (2002). *Real World Research: A Resource for Social-Scientists and Practitioner-Researchers*. 2nd edition. Oxford: Blackwell Publishers Ltd
- Rogers, E.M. (1983). *Diffusion of Innovation (3rd Edition)*. New York, USA: The Free Press.
- Rogers, E.M. (1995). *Diffusion of Innovation (4th Edition)*. New York, USA: The Free Press.
- Roger, H. (2002). *ICT and Poverty Alleviation framework: prepared for the UNDP workshop for UNDP countries office ICP programme officers/ focal points in Asian Specific*. Roger Harris Associates. Hong Kong
- Root, R. W. & Draper, S. (1983). Questionnaires as a Software Evaluation Tool Interface Design 4 -- Analyses of User Inputs. *Proceedings of ACM CHI'83 Conference on Human Factors in Computing Systems* 12 December 1983: 83-87.
- Rowley, J. (2011). e-Government stakeholders—Who are they and what do they want? *International journal of information management*, 31: 53-62.

- Rowley, T. (1998). A Normative Justification for Stakeholder Theory. *Business and Society*, 37(1): 105-107.
- Ryan, F., Coughlan, M. & Cronin, P. (2007). Step-By-Step Guide to Critiquing Research. Part 2: Qualitative Research. *British Journal of Nursing*, 16(12): 738-744.
- Sæbø, Ø., Rose, J., & Flak, K. S. (2008). The shape of eParticipation: Characterizing an emerging research area. *Government Information Quarterly*, 25: 400-428.
- Sagheb-Tehrani, M. (2010). A model of successful factors towards e-government implementation. *Electronic Government, an International Journal*, 7: 60-74.
- Saha, P. (2008). Government e-Service Delivery: Identification of Success Factors from Citizens' Perspective. *Unpublished Doctoral Thesis*, Department of Business Administration and Social Sciences, Lulea University of Technology, Pakistan.
- Salem, JA Jr . (2003). Public and private sector interests in e-Government: a look at the DOE's PubSCIENCE. *Government Information Quarterly*, 20: 13-27.
- Sanchez, A. D., Koh, C. E., Kappelman, L. A. & Prybutok, V. R. (2003). The relationship between IT for communication and e-government barriers. *In Proceedings of 9th Americas Conference on Information Systems*, August 4 – 6, Tampa, Florida.
- Sang, S. & Lee, J. D. (2009). A Conceptual Model of e-Government Acceptance in Public Sector. *Third International Conference on Digital Society; IEEE Computer Society*: Washington, DC, USA:71–76.
- Sang, S., Jeong-Dong, L.E.E. & Jongsu, L.E.E. (2009). A Study on the Contribution Factors and Challenges to the Implementation of E-Government in Cambodia. *Journal of Software* (4): 529.
- Saunders, M., Lewis, P. & Thornhill, A. (2000) *Research Methods for Business Students*, 3rd edition. Harlow: Prentice Hall.
- Saunders, M., Lewis, P. & Thornhill, A. (2003) *Research Methods for Business Students*, 3rd edition. Harlow: Prentice Hall.
- Saunders, M., Lewis, P. and Thornhill, A. (2007). *Research Methods for Business Students*. 4th edition. Essex: Pearson Education Limited.
- Saunders, M., Lewis, P. & Thornhill, A. (2009). *Research methods for business students*, 5th edition, Harlow: Pearson Education.
- Schein, E.H. (1996). Kurt Lewin's Change Theory in the Field and Classroom: Notes towards a model of managed learning. *System Practice*, 9(1), pp. 27-47.

- Schlegel, R. P., d'Averna, I. R., Zanna, M. P., DeCourville, N. H., & Manske, S. R. (1990). Problem drinking: A problem for the theory of reasoned action? *Unpublished manuscript. Department of Health Studies, University of Waterloo, Waterloo, Canada.*
- Schmidt, F. L. (1973). Implications of a measurement problem for expectancy theory research. *Organizational Behavior and Human Performance*, 10: 243-251.
- Schneider, B. (1978). Person-situation selection: A review of some ability-situation interaction research. *Personnel Psychology*, 31: 281-298.
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, 40: 437-453.
- Schneider, B., Goldstein, H.W. & Smith, D.B. (1995). The ASA Framework: An Update. *Personnel Psychology*, 48: 747-779.
- Scholl, H. J. (2003). E-government: a special case of ICT-enabled business process change. *Proceedings of the 36th Annual Hawaii International Conference on System Sciences (HICSS-36), IEEE Computer Society.*
- Scholl, H. J. (2004). Involving salient stakeholders. *Action Research*, 2 (3): 277–304.
- Schwester, R. (2009). Examining the Barriers to e-Government Adoption. *Electronic Journal of e-Government*, 7: 113-122.
- Scott, R. W. (1995). *Institutions and Organizations*, Thousand Oaks, CA: Sage.
- Scott, W. R. (2005). *Contributing To A Theoretical Research Program*. Great minds in management: The process of theory development, 460.
- Seifert, J. & Petersen, R. (2002). The promise of all things e? Expectations and challenges of emergent electronic government. *Perspectives on Global Development and Technology*, 1:193-212.
- Sekaran U. (2000). *Research methods for business: A skill building approach*. New York: John Wiley & Sons, Inc.
- Sewell, W. H. (1992). A Theory of Structure: Duality, Agency, and Transformation. *American Journal of Sociology* (98): 1-29.
- Shang, S. & Sheddon, P.B. (2002). Assessing and managing the benefits of enterprise systems: the business manager's perspective. *Information Systems Journal*, 12: 271-299.

- Shareef, M. A., Kumar, V., Kumar, U. & Dwivedi, Y. K. (2011). e-Government Adoption Model (GAM): Differing service maturity levels. *Government Information Quarterly*, 28, 17-35.
- Sharifi, M. & Manian, A. (2010). The study of the success indicators for pre-implementation activities of Iran's e-government development projects. *Government Information Quarterly*, 27: 63-69.
- Shboul, O. (2011). Change Management Aspect in e-Government. *ICT-enabled Investment Climate Reform: Leveraging Technology to Improve Regulatory Governance*. Estarta Solutions.
- Smith, A. (1937). *The Wealth of Nations*. New York: Modern Library.
- Sofiane, S. (2005). E-Government In The Arabian Gulf: Government Transformation Vs. Government Automation. *e-Government Workshop '05 (eGOV05)*, September 13 2005, Brunel University, West London UB8 3PH, UK.
- Solove, D. (2004). *The Digital Person: Technology and Privacy in the Information Age*, NYU Press, New York, N.Y.
- Song, H. J. (2006). e-Government in Developing Countries: Lessons Learned from Republic of Korea. *United Nations Educational, Scientific and Cultural Organisation (UNESCO)*. [Online] Available from <<http://www2.unescobkk.org/elib/publications/083/e-government.pdf>> [12 October 2012)
- Stake, R. E. (1995). *The art of case study research*, Sage Publications, Inc.
- Stewart, C., & Cash, W. (2006). *Interviewing principles and practices*, Eleventh edition. New York: McGraw-Hill.
- Stoica, V. & Lls, A. (2008). Romanian Urban e-Government: Digital Services and Digital Democracy in 165 Cities. *Proceedings of the 8th European Conference on e-Government 10-11 July 2008*, Ecole Polytechnique, Lausanne, Switzerland.
- Straub, D., Boudreau, M. C. & Gefen, D. (2004). Validation guidelines for IS positivist research. *Communications of the Association for Information Systems*, 13: 380-427.
- Straub, D., Gefen, D. & Boudreau, M. C. (2005). Quantitative Research. *In Research in Information Systems: A Handbook for Research Supervisors and Their Students*. Avison, D. & Pries-Heje, J. (Ed.), Elsevier. Amsterdam.

- Straub, D. W., Loch, K., & Hill, C. (2001). Transfer of Information Technology to the Arab World: A Test of Cultural Influence Modelling. *Journal of Global Information Management*, forthcoming.
- Stuart, I., McCutcheon, D., Handfield, R., McLachlin, R. & Samson, D. (2002). Effective case research in operations management: a process perspective. *Journal of Operations Management*, 20: 419-433.
- Styhre, A. (2002). Non-linear change in organizations: organization change management informed by complexity theory. *Leadership and Organization Development Journal*, 23(6): 343-51.
- Suh, B. & Han, I. (2003). The impact of customer trust and perception of security control on the acceptance of electronic commerce. *International Journal of Electronic Commerce*, 7(3): 135 – 161.
- Suki, N. M. & Ramayah, T. (2010). User Acceptance of the E-Government Services in Malaysia: Structural Equation Modelling Approach. *Interdisciplinary Journal of Information, Knowledge, and Management*, 5: 395-413.
- Tambouris, E., Gorilas, S. & Boukis, G. (2001). Investigation of Electronic Government. *Proceedings of the 8th Pan-Hellenic Conference on Informatics* 2:367-376.
- Tambouris, E & Wimmer, M. (2005). *Online One-Stop Government: A Single Point of access to Public Services' in Electronic Government Strategies and Implementation*. Hershey: Idea Group Publishing.
- Tellis, W. (1997). Introduction to case study. *The Qualitative Report*, 3.
- Themistocleous, M. & Irani, Z. (2002). Evaluating Enterprise Application Integration Technologies: A Novel Frame of References. *European Journal of Operational Research*, 159(2):393-405.
- Themistocleous, M., Irani, Z. & Love, P. E. D. (2005). Developing e-government integrated infrastructures: a case study. *Proceedings of the 38th Annual Hawaii International Conference on System Sciences, Big Island, Hawaii, IEEE, 1-10*.
- Thom-Otuya, V. C., & Thom-Otuya, B. E. N. (2013). Managing Organisational Change I Human Work Environment in Nigeria. *Journal of General Studies*, 1(2): 83-88.
- Timonen, V., O'Donnell, O., & P. Humphreys. (2003). E-Government and the Decentralisation of Service Delivery, *CPMR Discussion Paper (No.25)*, Dublin: PA.

- Ting, L. & Williamson, I.P. (1999). Land Administration and Cadastral Trends: The Impact of the Changing Humankind-Land Relationship and Major Global Drivers' revised version of a paper presented at *the United Nations-International Federation of Surveyors International Conference on Land Tenure and Cadastral Infrastructures for Sustainable Development* held in Melbourne, Australia 24-27 October, 1999.
- Tolbert, P. S. and Zucker, L. G. (1996). The institutionalization of institutional theory [Electronic version]. In S. Clegg, C. Hardy & W. Nord (Eds.), *Handbook of organization studies*, pp. 175-190. London, UK: SAGE.
- Tyndale, P. (2002). Will E-government Succeed? *Preceding of the 2nd European Conference on E-Government*, October 1-2, 2002, St Catherine's College Oxford, United Nations. (2005). Global e-Government Readiness Report 2005. Department of Economic and Social Affairs, New York. [Online]. Available: <http://unpan1.un.org>
- United Nations. (2005). World public sector report: Global E-government Readiness, from E-Government to E-Inclusion. *United Nations*. New York. United Nations (2011). The State of the World Population 2011. *United Nations Population Fund (UNFPA)*.
- United Nations. (2011). World Economic Situation and Prospects. New York: United Nations.
- United Nations Department of Economic and Social Affairs. (2002). Plans of Action on e-Government for Development. *International Conference on E-government for Development*, May 2002 (UN/DESA) [online] Available from: <www.itu.int/wsis/docs/background/themes/egov/action_plan_it_un.doc> [10 July 2013]
- United Nations Division for Public Economics and Public Administration, (2001). Benchmarking Egovernment: A Global Perspective - Assessing the Progress of the UN Member States. ,*United Nations*, from <http://pti.nw.dc.us/links/docs/ASPA_UN_egov_survey1.pdf> [19 December /2009].
- United Nations Economic Commissions for Europe. (1996). Land Administration Guidance with Special Reference to Countries in Transition, *United Nations Economic Commission for Europe ECE/HBP/96*, New York and Geneva, 112p [Online].

Available from <<http://www.unece.org/hlm/wpla/publications/lguidelines.html>> [16 May 2010].

United Nations Economic Commissions for Europe. (2005). Land Administration in the UNECE Region: Development Trends and Main Principles. *United Nations Economic Commission for Europe ECE/HBP/140*, New York and Geneva [Online]. Available from <<http://www.unece.org/env/documents/2005/wpla/ECE-HBP-140-e.pdf>> [18 April 2010].

UNPAN. (2004, 2008). UNe-Government survey, *UN Public Administration Programme*. UN E-Government Development Database. [online] Available from <<http://www.unpan.org/home/unpannewsletter/tabid/79/language/en-us/default.aspx>> [17 April 2013].

Van Der Molen, M. & Wubbe, M. (2007). E-Government and E-Land Administration - As an example: The Netherlands. Presented at the 6th *FIG Regional Conference*, San Jose, Costa Rica 12 – 15 November 2007 [Online] Available from <http://www.fig.net/pub/...1/.../ts10_02_wubbe_vandermolen_2480.pdf> [12 October 2009]

Van Maanen J. Ed. (1983). *Qualitative Methodology*, Beverly Hills, CA: Sage Publications.

van Ryn, M., & Vinokur, A. D. (1990). The role of experimentally manipulated self-efficacy in determining job-search behavior among the unemployed. *Unpublished manuscript, Institute for Social Research, University of Michigan at Ann Arbor*.

Vogt, F. (1993). Functional and Aesthetic Information Needs Underlying the Pleasure Travel Experience. *Journal of Travel & Tourism Marketing*, 2(2/3): 133-146.

Voss, C., Tsiriktsis, N. & Frohlich, M. (2002). Case research in operations management. *International Journal of Operations and Production Management*, 22: 195-219.

Walther, J. B. (1992), Interpersonal Effects in Computer-mediated Interaction: A Relational Perspective. *Communication Research*, 19(1): 52-90.

Wallace, J. (2009). Land Acquisition in Developing Economies. Paper presented at the 7th *FIG Regional Conference, Spatial Data Serving People: Land Governance and the Environment – Building the Capacity*, Hanoi, Vietnam, 19-22 October 2009.

Walliman, N., (2001). *Your research project* A step-by-step guide for the first time researcher. London: SAGE publications Ltd.

- Walsham, G. (1993). *Interpreting information systems in organizations*, John Wiley & Sons, Inc.
- Walsham, G. (1995). The emergence of interpretivism in IS Research, *Information Systems Research*, 6: 376-394.
- Warklentin, M., Gefen, D., Pavlou, P. A. & Rose, G. M. (2002). Encouraging Citizen Adoption of e-Government by Building Trust. *Electronic Markets*, 12 (3): 157-162.
- Watts, D. (2001). CEO's role in IT-driven organizational change. *The Journal of Information Technology Theory and Application*, 3:44-55.
- Wax, M. L. & Wax, R. H. (1980). Fieldwork and the research process. *Anthropology and Education Quarterly*, 11(1): 29-37.
- Welch, E.W., Hinnant, C.C. & Moon, M. J. (2004). Linking citizen satisfaction with E-government and trust in government. *Journal of Public Administration Research and Theory*, 15(3): 371-391.
- Weerakkody, V. & Choudrie J. (2005). Exploring E-Government in the UK: Challenges, Issues and Complexities. *Journal of Information Science and Technology*, 2(2): 25-45.
- Weerakkody, V., Dwivedi, Y.K. & Irani, Z. (2009). The diffusion and use of institutional theory: A cross-disciplinary longitudinal literature survey. *Journal of Information Technology*, 24 (4), pp. 354- 368.
- Weerakkody, V., Irani, Z., Osman, I. & Hindi, N. (2013). E-government implementation: A bird's eye view of issues relating to costs, opportunities, benefits and risks. *Information Systems Frontiers: A Journal of Research and Innovation*, New York: Springer Science + Business Media 10.1007/s10796-013-9472-3
- Weerakkody, V. & Reddick, C. G. (2013). *Public Sector Transformation through E-Government: Experiences from Europe and North America*. New York: Routledge.
- West, D.M. (2004). Equity and accessibility in e-Government: A policy perspective. *Journal of e-Government*, 1(2): 31-43.
- Whipp, R. (1998). Qualitative Methods: technique or Size? In Whitfield, K. and Strauss, G. (eds). *Researching the World of Work: Strategies and Methods in Industrial Relations*. London: Cornell University Press.

- Williamson, O. E. (1985) Reflections on the new institutional economics. *Journal of Institutional and Theoretical Economics*, 141, 187-95.
- Williamson, R. (2001). Remote Sensing Policy and the Development of Commercial Remote Sensing. *Commercial Observation Satellites: At the Leading Edge of Global Transparency*. Ed. John C. Baker, Kevin M. O'Connell, and Ray A. Williamson. Santa Monica, CA: RAND. pp. 37–52.
- Wimmer, M. (2002). Integrated service modelling for online one-stop government. *EM – Electronic Markets*, 12(3): 1-8.
- Wimmer, M. & Traunmuller, R. (2000). Trends in e- government: managing distributed knowledge. *Proceedings of the 11th International Workshop on Database and Expert Systems Applications*. New York: Springer.
- Wimmer, M. & E. Tambouris. (2002). Online One-Stop Government: A working framework and requirements. *In proceedings of the 17th World Computer Congress of IFIP*. Montreal: Kluwer Academic Publishers
- Wimmer, M. & Traumuller, R. (2001). Trends in electronic government: Managing distributed knowledge. In the *Proceedings of the 11th International Workshop on Database Expert Systems Applications*, Springer New York.
- Wing, X. (2005). Urbanization and its Classification in China from the Consideration of Environment. *Journal of Asian Architecture and Building Engineering*, 4(1): .279-284.
- Winter, A. (2000). www.help.gv.at – Die osterreichische Verwaltung im Internet. In H. Reinermann (Ed), *Regieren und verwalten im informationszeitatler*, unterwegs zur virtuellen verwaltung: 170-185. Heidelberg: R v Decker.
- Wiskott, B. (2002). ISE e-Government. *HP invent Centre*, Meyrin.
- Witchel, E. (2004). *The Fixers. Committee to Protect Journalists*. [online] Available from <<http://cpj.org/reports/2004/01/fixers.php>> [5 September 2012].
- Wood, D. (1991). Corporate Social Performance Revisited'. *The Academy of Management Review*, 16(4): 691– 717
- Wood-Harper, T., Ibrahim, O. & Ithnin, N. (2004). *An interconnected success factor approach for service functional in Malaysian electronic government*. ACM New York, NY, USA.

- World Bank, (2004) Building Blocks of e-Governments: Lessons from Developing Countries, Development Economics Vice Presidency and Poverty Reduction and Economic Management Network (PREM Notes for Public Sector), No. 91.
- World Bank (2010) [Online] Available from :<
<http://www.worldbank.org/en/country/nigeria>> [03 April 2013].
- World Bank (2012). Focus on Nigeria. *Focus, Infodent International*, March 2012.
- Williamson, I. P. & Steudler, D. (2002).A Framework for Benchmarking Land Administration Systems' [Online] Paper presented to *FIG XXII International Congress*, Washington D.C. USA, April 19-26 2002.
- Wing, X. (2005).Urbanization and its Classification in China from the Consideration of Environment. *Journal of Asian Architecture and Building Engineering* 4 (1):279-284.
- Yin, R.K. (1993).*Application of Case Study Research*. Second Edition, London, UK: Sage Publications.
- Yin, R.K. (2003). *Applications of Case Study Research*. Second Edition. London, UK: Sage Publications.
- Yin, R. (1994). *Case study research: Design and methods* (2nd Ed.). Thousand Oaks, CA: Sage Publishing.
- Yin, R. (2009). *Case study research: Design and methods*. CA: Sage Publications, Inc.
- Yusuff, M. (2005). Information and Communication Technology, and Education: An Analysing the Nigerian National Policy for Information Technology. *International Education Journal*, 6(3): 316-321.
- Yusuf, O. (2006). Solutions for eGovernment Deveopment in Nigeria. *Presentation paper to Accenture*, 24 July 2006.
- Zaharias, P. & Poylymenakou, A. (2009). Developing a usability evaluation method for e-learning applications: beyond functional usability. *International Journal of Human-Computer Interaction*, 25: 75-98. DOI:10.1080/10447310802546716.
- Zaied, A. N. H., Khairalla, F. A. & Al-Rashid, W. (2007). Assessing e-Readiness in the Arab Countries: Perceptions Towards ICT Environment in Public Organisations in the State of Kuwait. *The Electronic Journal of e-Government*, 5(1): 77 – 86 [online] Available from <<http://www.ejeg.com>> [13 July 2013]

- Zhang, J., Dawes, S.S. & Sarkis, J. (2005). Exploring stakeholders' expectations of the benefits and barriers of e-government knowledge sharing, *Journal of Enterprise Information Management*, 18:548-567.
- Zeichner, L.M. (2001). Developing an overarching legal framework for critical service delivery in America's cities: three recommendations for enhancing security and reliability. *Government Information Quarterly*, 18(4): 279-91.
- Zikmund, W. G. (2000). *Business Research Methods*, 6th edition. Fort Worth, TX: Dryden Press.
- Zimmermann, P. A. & Finger, M. (2005). ICT and Local Power Relationships: An Impact Assessment. *Electronic Journal of e-Government*, 3 (4), 231-240 [Online]. Available from: <<http://www.ejeg.com/volume.../ZimmermannPhilippandFingerMatthias.pdf>> [Accessed 13/09/09].
- Zucker, L. G. (1987). Institutional theories of organization. *Annual Review of Sociology*, 13, 443-464.

Appendix 1: Research Ethics Approval

Head of Brunel Business School
Professor Zahir Irani

Brunel
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Brunel University, Uxbridge,
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Brunel Business School
Research Ethics Committee

06 November 2012

STATEMENT OF ETHICS APPROVAL

Proposer: Mr Olusoyi Olatokunbo Richard Ashaye

Title: Evaluating the Use and Implementation of Electronic Government in
Developing Countries: The Case of Nigeria

The school's research ethics committee has considered the proposal recently submitted by you. Acting under delegated authority, the committee is satisfied that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that you will adhere to the terms agreed with participants and to inform the committee of any change of plans in relations to the information provided in the application form.

Yours sincerely,



Dr. Ahmad Ghoneim
Chair, Research Ethics Committee
BBS

Appendix 2: Support Letter from Supervisor/Head of School

Head of Brunel Business School
Professor Zahir Irani

Brunel
UNIVERSITY
L O N D O N

Brunel University, Uxbridge,
Middlesex, UB8 3PH, UK
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9th November 2012

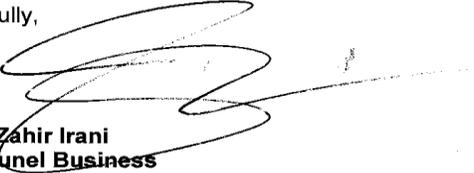
To Whom It May Concern

Re: Olusoyi (Richard) Ashaye

I am able to confirm that the above named is a research student within the Brunel Business School and is currently undertaking his PhD on a part-time mode of study.

Should you require any further information, please do not hesitate to contact me.

Yours faithfully,


Professor Zahir Irani
Head of Brunel Business

Appendix 3: Research Questionnaire: Covering Letter



22 January 2013

Dear Sir/Madam,

Request for Permission to Conduct Research Survey at The Civil Service of the Federation for Academic Research Purpose

I am a research student at Brunel University, United Kingdom. I am currently undertaking a study titled, "**Evaluating the Implementation of Electronic Government in the Developing Countries: The Case of Nigeria**". I wish to identify the factors that influence the implementation of the e-government initiative and impact of change management in the public sector in Nigeria.

I would greatly appreciate your participation in this study. There is no personally identifiable information on the questionnaires. Participation is voluntary. You may decide to stop participation at any time. All answers to this survey will be kept in strict confidence. Only summary measures and conclusions will be reported in the research. No data or opinions will be associated with specific individuals. All questionnaires will be returned directly to the researcher, and will be destroyed once the data have been entered into my system, where it will be secured and will not be available to anyone outside of the researcher. The data will be used solely for research purposes.

Thank you for your anticipated cooperation.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Richard Ashaye".

Olusoyi Olatokunbo Richard Ashaye, MSc, MRICS, IRRV, MBCS

PhD Researcher
Brunel Business School
Brunel University,
Uxbridge, Middlesex, London
UB8 3FG
Email: Olusoyi.ashaye@brunel.ac.uk / RichardAshaye@gmail.com
Tel: +44 7956243598

Appendix 4: Research Questionnaire – Sample

Section A: General Interview Information

*** 1. Organisation Name**

2. Interviewee's Contact Details*** 3. Interviewee's Age Group****4. Interviewee's Gender:****5. What is the highest level of education you have completed?****6. Interviewee's Position:**

Section B: General Questions

7. What is the population in your community (Approximately)

8. Approximately, how many employees work in your organisation?

- 5 - 10 employees
- 11 - 50 employees
- 51 - 100 employees
- 101 - 500 employees
- 501 - 1000 employees
- 1001 or more

9. Which of the statements below attempt(s) to characterise your organisation's participation in Electronic Government (e-Government)?

- I have not heard of the term 'e-Government', not until now
- Although I have heard of the term, however do not use it in anyway
- Have heard of the term but only use, for exampe _____
- Have visited seminars relating to e-Gov _____
- Have prepared strategies for e-Government type activites _____
- Planning of using e-Government
- Undertaking e-Government development
- Extensive user of e-Government
- Extensive user of other technologies
- Explanation: _____

10. How long have the department among your organisation been participating in Electronic Government?

- Less than 1 Year
- Between 1 to 2 Years
- Between 2 to 5 Years
- More than 5 Years

11. Does your organisation have a strategy for implementing Electronic Governance?

- Yes
- No
- I don't know

Other (please specify)

12. Does your organisation have a strategy for implementing Electronic Governance?

- Yes
- No
- I don't know

Other (please specify)

Section C: Electronic Government Characteristics

13. Benefits: What are the benefits for your organisation (agency) to participate in this initiative? Relevant literature specified the Electronic Government Implementation brings a number of benefits to the organisation. The number of benefits to the organisation. The following summarises these benefits:

	Very Important	Moderate	Less important
Reduce the overall costs of the organisation and efficiency gains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduce intra- and inter-agency paperwork/paperflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduce data collection, processing and storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve productivity and increase capacity of government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve quality of decision- and policy-making	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve quality of service delivery to business and customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve collaboration among different department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve accountability, transparency and anti-corruption	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve the organisation's business process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Network and community cohesion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Promote the use of ICT in other sectors of the society	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Other Benefits: What other benefits do you think your organisation can gain through implementation of Electronic Government services? Please indicate the level of importance as well.

15. Risk: What are the risk for your agency to participate in this initiative? relevant literature indicates that there are certain risks of Electronic Governemnt services and information sharing among different departments as it is shown below. Please highlight which of these risks your oranisation face.

	Very Important	Moderate	Less Important
Accessibility of information by other agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Misinterpretation and misuse of the e-government services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase criticisms by other agencies and citizens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing full control over information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inferior service quality (Expected loss e.g. delayed service)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relational Privacy (e.g. background check, surveillance)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental information security (e.g. identity theft, unstable network)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Other Risk: Do you think you faced any other risks regarding Electronic Governemnt implementation including information sharing? Please indicate the level of importance as well.

17. Barriers: What barriers do you think you faced regarding Electronic Government implementation in your organisation? Relevant literature indicates that there are certain barriers of Electronic Government implementation process as it is shown below. Please highlight which of these barriers apply to your organisation

	Very Important	Moderate	Less Important
Implementing E-Government requires a higher level of knowledge among the employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participating in E-Government requires higher levels of investment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cultural awareness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resistance to change among different departments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education, training and set-up costs (skills, capacities & learning)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of legislative support / Formal policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICT infrastructure (e-readiness, computer literacy, telecom equipment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complexity in understanding the processes and systems among the employees plus management technical skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partnership and collaboration (public/private partnership, community and network creation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strategy (vision, mission & lack of ownership)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leadership role (motivate, involve, influence & support)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Issues regarding security and privacy of citizens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Other Barriers: What other barriers do you think you might face while implementing Electronic Government? Please indicate the level of importance as well.

Section D: External Factors

19. Organisational: Do you think top management support, decision-making structure and management style have influence your decision in participating in E-Government implementation?

20. Politics: In your views, has the encouragement or pressure from the federal government influenced your decision on implementing e-governemnt services within your organisation?

21. Economics: Have you received any kind of financial aid from the federal government? Have the spending cuts influenced your decision on implementing e-Government systems among your organisation? How?

22. Legal / Legislation: Has the legisaltion set by the federal governeemt regarding using ICT in the public sector influenced your participation in E-Government systems including information sharing among your organisation? How?

23. Critical Mass: Were you knowledgeable about other agencies participating in this initiative? Did it influence your decision on participating in E-Governeemt implementation?

- Yes
 No

Pease explain why

24. Please indicate the level of importance of each of the external factors described above.

	Very Important	Moderate	Less Important
Organisational	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Political	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Legal / Legislation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critical Mass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. Other External Factors: What other external factors have you faced while participating in E-Government implementing within and with other departments/agencies?

26. Kindly rank these external factors in order of priority and importance:

	1	2	3	4	5
Organisational	<input type="checkbox"/>				
Political	<input type="checkbox"/>				
Economic	<input type="checkbox"/>				
Legal / Legislation	<input type="checkbox"/>				
Critical Mass	<input type="checkbox"/>				

Section E: Inter-organisational factors (IF)

27. Leadership: In your perspective, has the managerial capability, as a factor, influenced your implementation of E-Government services?

28. Financial Matter: In your view, has the financial capability of your organisation affected the decision to implement E-Governemtn services How?

29. Goals / Objectives: Who was responsible for overseeing the implementation of this E-Governemnt initiative in your agency? Has this initiative been defined in the organisation goals/objectives?

30. Attitude: What is the attitude of your manager(s) toward the deployment of such information technologies? What about the attitude of the employees?

31. Network Collaboration / Trust: In gernal, how do you describe the relationship among the agencies and departments? Do you think trust is a vital factor regarding this relationship which would affect the implementation of E-Government services?

32. Please state the level of importance of each of these inter-organisational factors:

	Very Important	Moderate	Less Importance
Leadersip / Management Capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial Matter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goals / Objective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attitude	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Network Collaboration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. Other Inter-organisational Factors: What other inter-organisational factors have you faced while participating in E-Government implementing within and with other departments/agencies? Please indicate the level of importance as well.

34. Kindly rank these inter-organisational factors in order of priority and importance:

	1	2	3	4	5
Leadership / Management	<input type="checkbox"/>				
Capability	<input type="checkbox"/>				
Financial Matter	<input type="checkbox"/>				
Goals / Objective	<input type="checkbox"/>				
Attitude	<input type="checkbox"/>				
Network Collaboration	<input type="checkbox"/>				

Section F: Business Process Factors (BPF)

35. Business Processes: have you been forced to change your business process in order to implement E-Government services within and/or with other agencies?

36. To what extent do you agree/disagree with the following statement?

"Electronic information sharing requires a transformation not just in the technical aspect of the information systems which are in used in an aorganisation, but also change in decision making policies and in mind-set of the employees. Therefore, changes in processes and functions and the new way of management, espeially in public sector, should be considered as a key issue."

	Extremely	To a large extent	Moderately
Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not sure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section G: Change Management (CM)

37. Are you familiar with the term of Change Management in how it relates to change affecting people?

- Yes
- No

If Yes please explain:

38. There are four main reasons for resistance to change identified in literature. Please state to what extent wh agree or disagree with these reasons:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Some people are concerned with the implication of change for themselves, rather than considering the effects for the success of the organisation	<input type="radio"/>				
Misunderstanding - Communication problems and inadequate information	<input type="radio"/>				
Low tolerance to change	<input type="radio"/>				
Different assessments of the situation	<input type="radio"/>				

39. In your views, what other reasons do you think that certain people are reistance to change?

40. Which of these statements best applies to how change is managed in your organisation?

- The organisation exists in a state of rapid and continuous change
- The organisation evolves through long periods of stability with short bursts of fundamental change
- Teams/departments within the organisation deal with change incrementally and separately
- The organisation is constantly undergoing small changes

Other (please specify)

41. Please rank these requirements about change in order of importance to you, from 1 to 9.

(1 = most important; 9 = least important) *

Rank values must be between 1 and 9

<input type="text"/>	Feeling that everyone is focused on the same goals and objectives
<input type="text"/>	Knowing the project recognises organisation wide dependencies and gives caution to people, process and infrastructure
<input type="text"/>	Being able to take ownership and influence details of the change
<input type="text"/>	Awareness of who is ultimately responsible for the project
<input type="text"/>	Understanding why change is happening and why it is necessary
<input type="text"/>	Having assistance from the project owners, project infrastructure, training specialist to create a supportive environment
<input type="text"/>	Conscious that key individuals are involved in the project
<input type="text"/>	Recognise the project is being implemented by people with the necessary core skills in a clearly defined and tracked manner
<input type="text"/>	Appreciation of how the change will take place and be effectively communicated

42. Academicians and scholars have identified six change approaches. To what extent do you agree with each of these approaches?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Education and Communication	<input type="radio"/>				
Participation and Involvement	<input type="radio"/>				
Facilitation and Support	<input type="radio"/>				
Negotiation and Agreement	<input type="radio"/>				
Manipulation and Co-optation	<input type="radio"/>				
Explicit and Implicit Coercion	<input type="radio"/>				

43. Please state any comments you would like to state in respects of change management in general, and resistance to change, in particular.

Section H: Other Factors - Good Practice Guidelines

44. Pre-Implementation Stage: This is the initiation stage of a development life cycle.

How important are these factors considered as good practice guidelines for e-Government at the pre-implementation stage?

	Extremely Important	Moderate	Less Important
Strong political support from the PG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Good understanding and support from the proposed executing agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strong commitment by the PG and the executing agency to post-project asses maintenance and RCF support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A strong user / landholders demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A simple project design with a clear development objective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interest by the private sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A strong case for the selection of the proposed and appropriate technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

45. Are there other factors you would consider as good practice guidelines at the pre-implementation stage? Please state, with their level of importance.

46. Kindly rank these pre-implementation good practice guidelines in order of priority and importance:

	1	2	3	4	5	6	7
Strong political support from the PG	<input type="checkbox"/>						
Good understanding and support from the proposed executing agency	<input type="checkbox"/>						
Strong commitment by the PG and the executing agency to post-project asset maintenance and RCF support	<input type="checkbox"/>						
A strong user / landholders demand	<input type="checkbox"/>						
A simple project design with a clear development objective	<input type="checkbox"/>						
Interest by the private sector	<input type="checkbox"/>						
A strong case for the selection of the proposed and appropriate technology	<input type="checkbox"/>						

47. During Implementation: Planning and Implementation stage

How important are these factors considered as good practice guidelines for E-Government at the implementation stage?

	Extremely Important	Moderate	Less important
Focusing on sustainability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintaining per unit costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minimising per unit cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Achieving high structural completeness and operational efficiency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creating opportunities for all stakeholders to 'viva' the property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensuring that operations are transparent, equitable and fair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liaising with other government departments in simplifying legal and procedural requirements concerning land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

48. Are you aware of other factors you would consider as good practice guidelines at the implementation stage? Please state, with their level of importance.

49. Kindly rank these implementation good practice guidelines in order of priority and importance:

	1	2	3	4	5	6	7
Focusing on sustainability	<input type="checkbox"/>						
Maintaining per unit costs	<input type="checkbox"/>						
Minimising per unit cost	<input type="checkbox"/>						
Achieving high structural completeness and operational efficiency	<input type="checkbox"/>						
Creating opportunities for all stakeholders to 'viva' the property	<input type="checkbox"/>						
Ensuring that operations are transparent, equitable and fair	<input type="checkbox"/>						
Liaising with other government departments in simplifying legal and procedural requirements concerning land	<input type="checkbox"/>						

50. Post-Implementation Stage: Monitoring and Evaluation

How important are these factors considered as good practice guidelines for E-Government at the post-implementation stage?

	Extremely Important	Moderate	Less Important
Demand and commitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Structure and standard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefit assessment (Social, gender, financial, economic & environmental)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy and regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Executing agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staffing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training and capacity building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Budget and financial support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

51. Please state any other factor(s) you are aware of as good practice guidelines at the post-implementation stage? Please state, with their level of importance.

52. Kindly rank these post-implementation good practice guidelines in order of priority and importance:

	1	2	3	4	5	6	7	8	9	10
Demand and commitment	<input type="checkbox"/>									
Structure and standard	<input type="checkbox"/>									
Benefit assessment (Social, gender, financial, economic & environmental)	<input type="checkbox"/>									
Policy and regulation	<input type="checkbox"/>									
Executing agency	<input type="checkbox"/>									
Staffing	<input type="checkbox"/>									
Training and capacity building	<input type="checkbox"/>									
Technology	<input type="checkbox"/>									
Budget and financial support	<input type="checkbox"/>									
Services	<input type="checkbox"/>									

Section I: Actors involved at Development Phases

This section involves mapping and prioritising the importance of the actors involved in E-Government at different phases of the development life cycle.

53. The four main actors identified in literature as vital to any project development are: Government, technologically-advanced countries, companies and users.

Can you please map the actor(s) you believemostly influence e-Government at the pre-implementation (initiation stage):

	Government	Technologically-advanced countries	Companies	users
Legislation and regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Telecommunication infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postal infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intenational trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Establish an e-Goveremnt department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Payment system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Removing barriers from foreign investments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-Government strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low cost hardware and software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education and labour training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lowering taxations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culture, religion and values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

54. Please state any actor(s) and/or activities you believe are involved at the pre-implementation phase.

55. Can you map the actors you believe mostly influenced E-Government at the implementation phase:

	Government	Technologically-advanced countries	Companies	Users
New strategies for government and businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change business culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The use of local languages in website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging expatriate workers to return from overseas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accept credit card and international payments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transaction security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culture, religion and value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
training and education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

56. Please state any actor(s) and/or activities you believe are involved at the implementation phase.

57. Can you map the actors you believe mostly influenced E-Government at the post-implementation phase:

	Government	Technologically-advanced countries	Companies	Users
Security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring and updating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online promotions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer satisfaction and customer trust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culture, tradition and value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training and education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

58. Kindly state any actor(s) and/or activities you believe are involved at the post-implementation phase.

Section J: Closing Questions

59. In your opinion, what incentives are necessary to increase the level of local agency participation in this initiative?

60. In your opinion, what are the most important factors for successful implementation of any E-governemnt initiatives amongst federal, state and local agencies?

61. Are there any relevant information you would like to mention?

62. If you are however awre of anyone else (be it manager or staff) who might be knowlegeable about these issues within and/or in other agencies, kindly provide their contact details below:

Appendix 5: Analysis of Findings

Appendix 5a: Change Management: Resistance to Change

	E-Government Implementation: CM – resistance to Change	Questionnaire Responses (Number / Percentage)			Face-to-face Interviews (Number / Percentage)			Questionnaire +	Ranking
		Very important	Moderate	Less important	Very important	Moderate	Less important	Average score	
CASE STUDY ONE: FMLHUD	Concern with implication for self	(12) 52.2%	(11) 47.8%	(0) 0%	(6) 75%	(2) 25%	(0) 0%	63.6 %	1
	Misunderstanding – Communication problem	(12) 52.2%	(11) 48%	(0) 0%	(5) 62.5%	(3) 37.5%	(0) 0%	57.4 %	2
	Low tolerance to change	(11) 57.9%	(8) 42.1%	(0) 0%	(4) 50%	(3) 37.5%	(1) 12.5%	54%	3
	Differenct assessment of the situation	(10) 71.4%	(4) 28.6%	(0) 0%	(3) 37.5%	(3) 37.5%	(2) 25%	54%	4
	Others:							5	
	Fear of the unknown	(1) 100%							
	Security of the job				(1) 100%				
Finance									
Leadership qualities of the organisation				(1) 100%					

	Not practicing what leaders 'preach'	(1) 100%							
					(1) 100%				
CASE STUDY TWO: NESREA	Concern with implication for self	(12) 54.5%	(10) 45.5%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	71.7 %	1
	Misunderstanding – Communication problem	(12) 52.2%	(11) 48%	(0) 0%	(7) 77.8%	(2) 32.2%	(0) 0%	65% %	2
	Low tolerance to change	(11) 57.9%	(6) 31.6%	(2) 10.5%	(6) 66.7%	(3) 33.3%	(0) 0%	62.3 %	3
	Different assessment of the situation	(10) 62.5%	(5) 31.25%	(1) 6.25%	(5) 55.6%	(4) 44.4%	(0) 0%	59.1 %	4
	Others:	(1) 100%							
	Lack of motivation	(1) 100%							
	Fear of the unknown	(1) 100%							
	Lack of trust in management	(1) 100%							
	Too much familiarity with the current system				(1) 100%				
CASE STUDY THREE: SAGAMULG	Concern with implication for self	(14) 58.3%	(10) 47.8%	(0) 0%	(10) 100%	(0) 0%	(0) 0%	79.2 %	1
	Misunderstanding – Communication problem	(13) 56.5%	(9) 39.1%	(1) 4.3%	(8) 80%	(2) 20%	(0) 0%	68.3 %	2
	Low tolerance to change	(10) 58.8%	(7) 41.2%	(0) 0%	(7) 70%	(2) 20%	(1) 10%	64.4 %	3

	Differenct assessment of the situation	(12) 66.7	(6) 33.3%	(0) 0%	(6) 60%	(4) 37.5%	(0) 0%	63.4 %	4
	Others:								
	Fear of the unknown	(1) 100%							
	Too much familiarity with the current system	(1) 100%							
OTHERS: NCAA	Concern with implication for self	(5) 83.3%	(1) 16.7%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	91.7 %	1
	Misunderstanding – Communication problem	(4) 66.7%	(2) 33.3%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.3 %	2
	Low tolerance to change	(4) 66.7%	(2) 33.3%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	83.3 %	3
	Differenct assessment of the situation	(3) 50%	(3) 50%	(0) 0%	(2) 100%	(0) 0%	(0) 0%	75% %	4
	Others:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Appendix 5b: Change Management: How Change is Managed

E-Government Implementation: CM - How is change managed		Questionnaire		Face to –face Interview		Average Score
		Agree	Disagree	Agree	Disagree	
CASE STUDY ONE: FMLHUD	Teams/departments deal with change incrementally	(15) 100%	(0) 0%	(6) 100%	(0) 0%	100%
	Evolves through long periods of stability	N/A	N/A	N/A	N/A	N/A
	Constantly undergoing small changes	N/A	N/A	N/A	N/A	N/A
	Exists in a state of rapid and continuous change	N/A	N/A	N/A	N/A	N/A
	Others	N/A	N/A	N/A	N/A	N/A
CASE STUDY TWO: NESREA	Teams/departments deal with change incrementally	N/A	N/A	N/A	N/A	N/A
	Evolves through long periods of stability	(18) 52.9%		(6) 66.7%		59.8%
	Constantly undergoing small changes	(16) 47.1%		(3) 33.3%		40.2%
	Exists in a state of rapid and continuous change	N/A	N/A	N/A	N/A	N/A
	Others	N/A	N/A	N/A	N/A	N/A
CASE STUDY THREE: SAGAMU LG	Teams/departments deal with change incrementally	N/A	N/A	N/A	N/A	N/A
	Evolves through long periods of stability	N/A	N/A	N/A	N/A	N/A
	Constantly undergoing small changes	(20) 100-%		(7) 100%		100%
	Exists in a state of rapid and continuous change	N/A	N/A	N/A	N/A	N/A
	Others	N/A	N/A	N/A	N/A	N/A
OTHERS: NCAA	Teams/departments deal with change incrementally	N/A	N/A	N/A	N/A	N/A
	Evolves through long periods of stability	N/A	N/A	N/A	N/A	N/A
	Constantly undergoing small changes	N/A	N/A	N/A	N/A	N/A
	Exists in a state of rapid and continuous change	6 (100%)	(0) 0%	2 (100%)	(0) 0%	100%
	Others:	N/A	N/A	N/A	N/A	N/A

Appendix 5c: Analysis of Change Management Approaches

	E-Government Implementation: CM - Approaches	Questionnaire (No / %)					Face to –face Interview (No / %)					Average Score / Ranking
		Stongly agree	Agree	Neutral	Disagree	Strogly disagree	Stongly agree	Agree	Neutral	Disagree	Strogly disagree	
CASE STUDY ONE: EMI HUD	Education and Communication	(23) 100 %	0 0%	(0) 0%	-	-	(8) 100%	(0) 0%	(0) 0%	-	-	100% (1)
	Participation and Involvement	(18) 78.3 %	(5) 21.7%	(0) 0%	-	-	(8) 100%	(0) 0%	(0) 0%	-	-	89.2% (2)
	Facilitation and Support	(18) 78.3 %	(4) 17.4%	(1) 4.3%	-	-	(7) 87.5%	(1) 12.5%	(0) 0%	-	-	82.9% (3)
	Negotiation and Agreement	(16) 69.6 %	(6) 26.1%	(1) 4.3%	-	-	(7) 87.5%	(0) 0%	(1) 12.5%	-	-	78.6 (4)
	Manipulation and Co-option	(17) 73.9 %	(5) 21.7%	(1) 4.3%	-	-	(5) 62.5%	(2) 25%	(1) 12.5%	-	-	68.2% (5)
	Explicit and Implicit Coercion	(9) 39.1 %	(6) 26.1%	(3) 13%	(3) 13%	(2) 8.7 %	(3) 37.5%	(3) 37.5%	(1) 12.5%	(1) 12.5 %	-	38.3% (6)
	Others	N/A	-	-	-	-	-	-	-	-	-	
CASE STUDY TWO: NESREA	Education and Communication	(34) 100 %	(0) 0%	(0) 0%	-	-	(9) 100%	(0) 0%	(0) 0%	-	-	100% (1)
	Participation and Involvement	(27) 79.4 %	(7) 20.6%	(0) 0%	-	-	(9) 100%	(0) 0%	(0) 0%	-	-	89.7% (2)
	Facilitation and Support	(25) 73.5 %	(8) 23.5%	(1) 2.9%	-	-	(7) 77.8%	(2) 22.2%	(0) 0%	-	-	75.6% (3)

	Negotiation and Agreement	(23) 67.6 %	(9) 26.5%	(2) 5.9%	-	-	(6) 66.7%	(2) 22.2%	(1) 11.1%	-	-	67.2% (4)
	Manipulation and Co-option	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Explicit and Implicit Coercion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Others: i) Change is necessary if handled properly ii) Change is resisted for selfish reasons iii) Change is resisted when it adds little or no value	(1) 100 %						(1) 100%				
OTHER CASE STUDY THREE: SAGAMULI G	Education and Communication	(28) 100 %	(0) 0%	-	-	-	(10) 100%	(0) 0%	-	-	-	100% (1)
	Participation and Involvement	(25) 89.3 %	(3) 10.7%	-	-	-	(10) 100%	(0) 0%	-	-	-	94.7%(2)
	Facilitation and Support	(22) 78.6 %	(4) 14.3%	(2) 7.1%	-	-	(8) 80%	(2) 20%	-	-	-	79.3 (3)
	Negotiation and Agreement	(16) 57.1 %	(8) 28.6%	(4) 14.3%	-	-	(8) 80%	(1) 10%	(1) 10%	-	-	68.6% (4)
	Manipulation and Co-option	(14) 50%	(10) 35.7%	(3) 10.7%	(1) 3.6%	-	(5) 50%	(3) 30%	(2) 20%	-	-	50% (5)
	Explicit and Implicit Coercion	(12) 42.9 %	(10) 35.7%	(3) 10.7%	(3) 10.7%	-	(3) 30%	(3) 30%	(2) 20%	(1) 10%	(1) 10%	36.5%(6)
	Others: Change is necessary for improved standard of living						(1) 100%					
	Education and	(6)	(0)	-	-	-	(2)	(0)	-	-	-	100%

Communication	100 %	0%				100%	0%				(1)
Participation and Involvement	(5) 83.3 %	(1) 16.7%	-	-	-	(2) 100%	(0) 0%	-	-	-	91.7%(2)
Facilitation and Support	(4) 66.7 %	(2) 33.3%	-	-	-	(2) 100%	(0) 0%	-	-	-	83.4%(3)
Negotiation and Agreement	(4) 66.7 %	(1) 16.7%	(1) 16.7 %	-	-	(1) 50%	(1) 50%	-	-	-	58.4% (4)
Manipulation and Co-option	(3) 50%	(2) 33.3%	(1) 16.7 %	-	-	(1) 50%	(0) 0%	(1) 50%	-	-	50% (5)
Explicit and Implicit Coercion	(2) 33.3 %	(2) 33.3%	(1) 16.7 %	(1) 16.7 %	-	(1) 50%	(0) 0%	(0) 0%	(1) 50%	-	41.7% (6)
Others	N/A	N/A	N/A	N/A	N/ A	N/A	N/A	N/A	N/A	N/ A	

Appendix 5d: E-Government Implementation:GP (Pre-Implementation)

E-Government Implementation: Good Practice (During Implementation)		Questionnaire Responses (Number / Percentage)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (Percentage)
		Very important	Moderate	Less important	Very important	Moderate	Less important	Average score
CASE STUDY ONE: FMLHUD	Focus on sustainability	(15) 65.2%	(8) 34.8%	(0) 0%	(8) 100%	(0) 0%	(0) 0%	82.6% (1)
	Ensuring that operations are transparent, equitable and fair	(14) 50%	(14) 50%	(0) 0%	(8) 100%	(0) 0%	(0) 0%	75% (2)
	Maintaining per unit costs	(16) 57.1%	(12) 42.9%	(0) 0%	(7) 87.5%	(1) 12.5%	(0) 0%	72.3% (4)
	Achieve high structural completeness and operational efficiency	(14) 50%	(13) 46.4%	(1) 3.6%	(8) 100%	(0) 0%	(0) 0%	75% (3)
	Minimising per unit cost	(18) 64.3%	(10) 35.7%	(0) 0%	(6) 75%	(2) 25%	(0) 0%	69.7% (5)
	Creating opportunities for all stakeholders	(16) 57.1%	(11) 39.3%	(1) 3.6%	(6) 75%	(2) 25%	(0) 0%	66.1% (6)
	Liaising with other government departments	(19) 67.8%	(8) 28.6%	(1) 3.6%	(5) 62.5%	(3) 37.5%	(0) 0%	65.2% (7)
	Others							
CASE STUDY TWO: NESREA	Focus on sustainability	(20) 66.7%	(10) 33.3%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	83.4% (1)
	Ensuring that operations are transparent, equitable and fair	(21) 65.6%	(11) 34.4%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	82.8% (2)
	Maintaining per unit costs	(18) 60%	(12) 40%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	80% (3)
	Achieve high structural completeness and operational efficiency	(20) 69%	(9) 31%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	79% (4)
	Minimising per unit cost	(18) 64.3%	(10) 33.3%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	76.6% (5)

	Creating opportunities for all stakeholders	(21) 63.6%	(12) 36.4%	(0) 0%	(7) 77.8%	(1) 11.1%	(1) 11.1%	70.7% (6)
	Liaising with other government departments	(19) 65.5%	(10) 34.5%	(0) 0%	(6) 66.7%	(3) 33.3%	(0) 0%	66.1% (7)
	Others							
CASE STUDY THREE: SAGAMU LG	Focus on sustainability	(20) 71.4%	(8) 28.6%	(0) 0%	(9) 90%	(1) 10%	(0) 0%	80.7% (2)
	Ensuring that operations are transparent, equitable and fair	(18) 64.3%	(10) 35.7%	(0) 0%	(9) 90%	(1) 10%	(0) 0%	77.2% (3)
	Maintaining per unit costs	(20) 71.4%	(8) 28.6%	(0) 0%	(10) 100%	(0) 0%	(0) 0%	85.7% (1)
	Achieve high structural completeness and operational efficiency	(17) 60.7%	(10) 35.7%	(1) 3.6%	(8) 80%	(2) 20%	(0) 0%	70.4% (4)
	Minimising per unit cost	(19) 67.9%	(9) 32.1%	(0) 0%	(7) 70%	(3) 30%	(0) 0%	69% (5)
	Creating opportunities for all stakeholders	(20) 71.4%	(7) 25%	(1) 3.6%	(5) 50%	(4) 40%	(10) 10%	60.7% (6)
	Liaising with other government departments	(18) 64.3%	(9) 32.1%	(1) 3.6%	(5) 50%	(5) 50%	(0) 0%	57.2% (7)
	Others:							
OTHERS: NCA	Focus on sustainability	N/A	N/A	N/A	N/A	N/A	N/A	
	Ensuring that operations are transparent, equitable and fair	N/A	N/A	N/A	N/A	N/A	N/A	
	Maintaining per unit costs	N/A	N/A	N/A	N/A	N/A	N/A	
	Achieve high structural completeness and operational efficiency	N/A	N/A	N/A	N/A	N/A	N/A	
	Minimising per unit cost	N/A	N/A	N/A	N/A	N/A	N/A	
	Creating opportunities for all stakeholders	N/A	N/A	N/A	N/A	N/A	N/A	
	Liaising with other government departments	N/A	N/A	N/A	N/A	N/A	N/A	
	Others:	N/A	N/A	N/A	N/A	N/A	N/A	

Appendix 5e: E-Government Implementation:GP (During-Implementation)

E-Government Implementation: Good Practice (During Implementation)		Questionnaire Responses (Number / Percentage)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (Percentage)
		Very important	Moderate	Less important	Very important	Moderate	Less important	Average score
CASE STUDY ONE: FMLHUD	Focus on sustainability	(15) 65.2%	(8) 34.8%	(0) 0%	(8) 100%	(0) 0%	(0) 0%	82.6% (1)
	Ensuring that operations are transparent, equitable and fair	(14) 50%	(14) 50%	(0) 0%	(8) 100%	(0) 0%	(0) 0%	75% (2)
	Maintaining per unit costs	(16) 57.1%	(12) 42.9%	(0) 0%	(7) 87.5%	(1) 12.5%	(0) 0%	72.3% (4)
	Achieve high structural completeness and operational efficiency	(14) 50%	(13) 46.4%	(1) 3.6%	(8) 100%	(0) 0%	(0) 0%	75% (3)
	Minimising per unit cost	(18) 64.3%	(10) 35.7%	(0) 0%	(6) 75%	(2) 25%	(0) 0%	69.7% (5)
	Creating opportunities for all stakeholders	(16) 57.1%	(11) 39.3%	(1) 3.6%	(6) 75%	(2) 25%	(0) 0%	66.1% (6)
	Liaising with other government departments	(19) 67.8%	(8) 28.6%	(1) 3.6%	(5) 62.5%	(3) 37.5%	(0) 0%	65.2% (7)
	Others							
CASE STUDY TWO: NESREA	Focus on sustainability	(20) 66.7%	(10) 33.3%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	83.4% (1)
	Ensuring that operations are transparent, equitable and fair	(21) 65.6%	(11) 34.4%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	82.8% (2)
	Maintaining per unit costs	(18) 60%	(12) 40%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	80% (3)
	Achieve high structural completeness and operational efficiency	(20) 69%	(9) 31%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	79% (4)
	Minimising per unit cost	(18) 64.3%	(10) 33.3%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	76.6% (5)

	Creating opportunities for all stakeholders	(21) 63.6%	(12) 36.4%	(0) 0%	(7) 77.8%	(1) 11.1%	(1) 11.1%	70.7% (6)
	Liaising with other government departments	(19) 65.5%	(10) 34.5%	(0) 0%	(6) 66.7%	(3) 33.3%	(0) 0%	66.1% (7)
	Others							
CASE STUDY THREE: SAGAMU LG	Focus on sustainability	(20) 71.4%	(8) 28.6%	(0) 0%	(9) 90%	(1) 10%	(0) 0%	80.7% (2)
	Ensuring that operations are transparent, equitable and fair	(18) 64.3%	(10) 35.7%	(0) 0%	(9) 90%	(1) 10%	(0) 0%	77.2% (3)
	Maintaining per unit costs	(20) 71.4%	(8) 28.6%	(0) 0%	(10) 100%	(0) 0%	(0) 0%	85.7% (1)
	Achieve high structural completeness and operational efficiency	(17) 60.7%	(10) 35.7%	(1) 3.6%	(8) 80%	(2) 20%	(0) 0%	70.4% (4)
	Minimising per unit cost	(19) 67.9%	(9) 32.1%	(0) 0%	(7) 70%	(3) 30%	(0) 0%	69% (5)
	Creating opportunities for all stakeholders	(20) 71.4%	(7) 25%	(1) 3.6%	(5) 50%	(4) 40%	(10) 10%	60.7% (6)
	Liaising with other government departments	(18) 64.3%	(9) 32.1%	(1) 3.6%	(5) 50%	(5) 50%	(0) 0%	57.2% (7)
	Others:							
OTHERS: NCA	Focus on sustainability	N/A	N/A	N/A	N/A	N/A	N/A	
	Ensuring that operations are transparent, equitable and fair	N/A	N/A	N/A	N/A	N/A	N/A	
	Maintaining per unit costs	N/A	N/A	N/A	N/A	N/A	N/A	
	Achieve high structural completeness and operational efficiency	N/A	N/A	N/A	N/A	N/A	N/A	
	Minimising per unit cost	N/A	N/A	N/A	N/A	N/A	N/A	
	Creating opportunities for all stakeholders	N/A	N/A	N/A	N/A	N/A	N/A	
	Liaising with other government departments	N/A	N/A	N/A	N/A	N/A	N/A	
	Others:	N/A	N/A	N/A	N/A	N/A	N/A	

Appendix 5f: E-Government Implementation: GP (Post-Implementation)

	E-Government Implementation: Good Practice (Post-Implementation)	Questionnaire Responses (Number / Percentage)			Face-to-face Interviews (Number / Percentage)			Questionnaire + Interviews (Percentage)
		Very important	Moderate	Less important	Very important	Moderate	Less important	Average score
CASE STUDY ONE: FMLHUD	Demand and commitment	(18) 78.3%	(5) 21.3%	(0) 0%	(7) 87.5%	(1) 12.5%	(0) 0%	82.9% (1)
	Structure and standard	(17) 73.9%	(4) 17.4%	(2) 8.7%	(7) 87.5%	(1) 12.5%	(0) 0%	80.7% (2)
	Technology	(15) 65.2%	(6) 26.1%	(2) 8.7%	(5) 62.5%	(3) 37.5%	(0) 0%	63.9% (6)
	Benefit assessment (demography, gender)	(16) 69.6%	(7) 30.4%	(0) 0%	(6) 75%	(1) 12.5%	(1) 12.5%	72.3% (4)
	Training and capacity building	(17) 73.9%	(6) 26.1%	(0) 0%	(5) 62.5%	(2) 25%	(1) 12.5%	68.2% (5)
	Policy and regulation	(18) 78.3%	(4) 17.4%	(1) 4.3%	(6) 75%	(2) 25%	(0) 0%	76.7% (3)
	Budget and financial support	(17) 73.9%	(6) 26.1%	(0) 0%	(4) 50%	(2) 25%	(2) 25%	62% (8)
	Services	(15) 65.2%	(6) 26.1%	(2) 8.7%	(4) 60%	(3) 37.5%	(1) 12.5%	62.6% (7)
	Staffing	(17) 73.9%	(4) 17.4%	(2) 8.7%	(3) 37.5%	(3) 37.5%	(2) 25%	55.7% (9)
	Executive Agency	(16) 69.6%	(5) 21.7%	(2) 8.7%	(3) 37.5%	(2) 25%	(3) 37.5%	53.6% (10)
Others:								
CASE STUDY	Demand and commitment	(22) 71%	(9) 29%	(0) 0%	(9) 100%	(0) 0%	(0) 0%	85.5% (1)
	Structure and standard	(20) 66.7%	(7) 23.3%	(3) 10%	(9) 100%	(0) 0%	(0) 0%	83.4% (2)

	Technology	(18) 66.7%	(9) 33.3%	(0) 0%	(8) 88.9%	(1) 11.1%	(0) 0%	77.8% (3)
	Benefit assessment (demography, gender)	(21) 65.6%	(9) 28.1%	(2) 6.3%	(8) 88.9%	(1) 11.1%	(0) 0%	77.3% (4)
	Training and capacity building	(18) 69.2%	(8) 30.8%	(0) 0%	(7) 77.8	(1) 11.1%	(1) 11.1%	73.5 (5)
	Policy and regulation	(20) 66.7%	(9) 30%	(1) 3.3%	(7) 77.8	(2) 22.2	(0) 0%	72.3% (6)
	Budget and financial support	(23) 69.7%	(10) 30.3%	(0) 0%	(6) 66.7%	(2) 22.2	(1) 11.1%	68.2% (7)
	Services	(21) 65.6%	(11) 34.4%	(0) 0%	(6) 66.7%	(3) 33.3%	(0) 0%	66.2% (8)
	Staffing	(20) 66.7%	(10) 33.3%	(0) 0%	(5) 55.6%	(3) 33.3%	(1) 11.1%	61.2% (9)
	Executing agency	(16) 57.1%	(8) 28.6%	(4) 14.3%	(4) 44.4%	(3) 33.3%	(2) 22.2	50.8% (10)
	Others:							
CASE STUDY THREE: SAGAMU LG	Demand and commitment	(23) 82.1%	(5) 17.8%	(0) 0%	(9) 90%	(1) 10%	(0) 0%	86.1% (1)
	Structure and standard	(20) 71.4%	(7) 25%	(1) 3.6%	(8) 80%	(2) 20%	(0) 0%	75.7% (2)
	Technology	(18) 64.3%	(10) 35.7%	(0) 0%	(8) 80%	(2) 20%	(0) 0%	72.2% (3)
	Benefit assessment (demography, gender)	(18) 64.3%	(8) 28.6%	(2) 7.1%	(7) 70%	(2) 20%	(1) 10%	67.2% (5)
	Training and capacity building	(20) 71.4%	(8) 28.6%	(20) 71.4%	(7) 70%	(3) 30%	(0) 0%	70.7% (4)
	Policy and regulation	(18) 64.3%	(9) 32.1%	1) 3.6%	(6) 60%	(3) 30%	(1) 10%	62.2% (7)
	Budget and financial support	(19) 67.8%	(8) 28.6%	(1) 3.6%	(6) 60%	(4) 40%	(0) 0%	63.9% (6)
	Services	(20) 71.4%	(8) 28.6%	(0) 0%	(5) 50%	(5) 50%	(0) 0%	60.7% (8)

	Staffing	(21) 75%	(7) 25%	(0) 0%	(4) 40%	(3) 30%	(3) 30%	57.5% (10)
	Executing agency	(19) 67.9%	(6) 21.4%	(3) 10.7%	(5) 50%	(5) 50%	(0) 0%	59% (9)
	Others:							
OTHERS: NCAA	Demand and commitment	N/A	N/A	N/A	N/A	N/A	N/A	
	Structure and standard	N/A	N/A	N/A	N/A	N/A	N/A	
	Technology	N/A	N/A	N/A	N/A	N/A	N/A	
	Benefit assessment (demography, gender)	N/A	N/A	N/A	N/A	N/A	N/A	
	Training and capacity building	N/A	N/A	N/A	N/A	N/A	N/A	
	Policy and regulation	N/A	N/A	N/A	N/A	N/A	N/A	
	Budget and financial support	N/A	N/A	N/A	N/A	N/A	N/A	
	Services	N/A	N/A	N/A	N/A	N/A	N/A	
	Staffing	N/A	N/A	N/A	N/A	N/A	N/A	
	Executing agency	N/A	N/A	N/A	N/A	N/A	N/A	
	Others:	N/A	N/A	N/A	N/A	N/A	N/A	

Appendix 5g: E-Gov Key Actors & Main Activities (Pre-Implementation)

E-Government Implementation: Key Actors & Main Activities (Pre-Implementation)		Questionnaire Responses (Number / Percentage)				Face-to-face Interviews (Number / Percentage)				Others (Please specify)
		Government	Technological	Companies	Users	Government	Technological & advanced	Companies	Users	
CASE STUDY ONE: FMLHUD	Legislation and regulations	*				*				
	Telecommunication infrastructure	*	*	*		*	*	*		
	Postal infrastructure	*	*			*	*			
	International trade	*	*			*	*			
	Establish an e-government department	*	*		*	*	*		*	
	Payment system	*			*	*			*	
	Removing barriers for foreign investments	*				*				
	E-government strategy	*	*	*		*	*	*		
	Low cost hardware and software	*	*	*		*	*	*		
	Education and Labour training	*	*	*	*	*	*	*	*	
	Lowering taxations	*				*				
	Culture, religion and values	*	*	*	*	*	*	*	*	
	Others:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
CASE STUDY TWO: NESREA	Legislation and regulations	*				*				
	Telecommunication infrastructure	*	*	*		*	*	*		
	Postal infrastructure	*	*			*	*	*		
	International trade	*	*			*	*	*		
	Establish an e-Government department	*				*	*	*	*	
	Payment system	*		*	*	*	*	*	*	
	Removing barriers for foreign investments	*				*	*			

	E-Government strategy	*	*	*		*	*	*		
	Low cost hardware and software		*			*	*			
	Education and Labour training	*	*	*	*	*	*	*	*	
	Lowering taxations	*				*				
	Culture, religion and values	*			*	*			*	
	Others: Ministries, FBOs, Traditional institutions									
OT CASE STUDY THREE: SAGAMULG	Legislation and regulations	*	*			*	*			
	Telecommunication infrastructure	*	*			*	*			
	Postal infrastructure	*				*				
	International trade				*				*	
	Establish an e-Government department	*		*		*		*		
	Payment system		*	*			*	*		
	Removing barriers for foreign investments	*	*			*	*			
	E-Government strategy		*				*			
	Low cost hardware and software	*				*				
	Education and Labour training	*	*	*	*	*	*	*	*	
	Lowering taxations	*				*				
	Culture, religion and values	*	*			*	*			
	Others:									
OT	Legislation and regulations	N/A								

Telecommunication infrastructure	N/A									
Postal infrastructure	N/A									
International trade	N/A									
Establish an e-government department	N/A									
Payment system	N/A									
Removing barriers for foreign investments	N/A									
E-government strategy	N/A									
Low cost hardware and software	N/A									
Education and Labour training	N/A									
Lowering taxations	N/A									
Culture, religion and values	N/A									
Others:	N/A									

Appendix 5h: E-Gov Key Actors & Main Activities (During Implementation)

E-Government Implementation: Key Actors & Main Activities (During Implementation)		Questionnaire Responses (Number / Percentage)				Face-to-face Interviews (Number / Percentage)				Questionnaire + Interviews
		Government	Technologically-	Companies	Users	Government	Technologically-advanced	Companies	Users	Average score
CASE STUDY ONE: FMLHUD	New strategies for government and businesses	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Change business culture	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	The use of local languages in website	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Encouraging expatriate workers to return from overseas	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Accept credit card and international payments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Transaction security	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Security	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Culture, religion and value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Training and education	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Others:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
CASE STUDY TWO: NESREA	New strategies for government and businesses	*				*				
	Change business culture			*				*		
	The use of local languages in website		*	*	*		*	*	*	
	Encouraging expatriate workers to return from overseas	*	*			*	*			
	Accept credit card and international payments	*	*	*		*	*	*		
	Transaction security	*	*			*				
	Security	*				*				
	Culture, religion and value				*				*	
	Training and education	*	*	*	*	*	*	*	*	

	Others: Info' dissemination; FBOs; Traditional institutions									
CASE STUDY THREE: SAGAMULG	New strategies for government and businesses	*				*				
	Change business culture			*				*		
	The use of local languages in website		*				*			
	Encouraging expatriate workers to return from overseas	*				*				
	Accept credit card and international payments				*				*	
	Transaction security				*				*	
	Security	*				*				
	Culture, religion and value	*				*				
	Training and education	*	*	*	*	*	*	*	*	
	Others:									
OTHERS: NCA	New strategies for government and businesses	N/A								
	Change business culture	N/A								
	The use of local languages in website	N/A								
	Encouraging expatriate workers to return from overseas	N/A								
	Accept credit card and international payments	N/A								
	Transaction security	N/A								
	Security	N/A								
	Culture, religion and value	N/A								
	Training and education	N/A								
	Others:	N/A								

	Customer satisfaction and customer trust	N/A								
	Culture, tradition and value	N/A								
	Training and education	N/A								
	Others:	N/A								

Appendix 6: Framework of the Research Studies

