

Towards a Framework for eGovernment Development in Nigeria

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Abstract: Globally eGovernment is associated with providing opportunities to increase the connection, availability and modes of interactivity between governance at multiple levels and the citizen. It is also associated with transforming current governmental services in ways to increase efficiencies, improve processes and automate tasks previously undertaken by governmental employees. Growing demands at national government level (often subsidised by public money) and amongst citizen groups across the world lead to a greater focus on the provision of eGovernment services. Often governmental demands for improvements to service clash with citizen requirements. Governments which want to remain relevant to their citizens must take an active role in the implementation of eGovernment. Citizens have witnessed the advances in personalisation of service, accessibility and greater use of technology in the private sector that has created an expansion of innovative ICT solutions and they are now demanding that their governments do the same. This creates an environment where the provision of eGovernment services must be approached with seriousness and with the consideration of the requirements of all stakeholder groups. The aim of this paper is to detail research undertaken to examine the path towards implementation of mature eGovernment services in the country of Nigeria. The research has included a comprehensive benchmarking activity in relation to the content analysis of state government websites in Nigeria and comparison to equivalent provision of council websites in the UK. Following this an eGovernment services requirements survey targeted at citizens was conducted to determine from a citizen perspective the present need for and evaluation of eGovernment services across Nigeria and the UK. In terms of findings, the content analysis demonstrated significant shortcomings with existing state government websites in Nigeria with only 30% of websites analysed providing basic mechanisms for citizens to interact with government services. The analysis of citizen requirements found that amongst those user groups targeted there was a high level of expectation in relation to the provision of eGovernment services and also found that the Nigerian citizens surveyed were more engaged with the benefits that eGovernment could bring to their nation.

Keywords: eGovernment framework, eGovernment analysis, citizen requirements, Nigerian eGovernment, e-Services, eGovernment development

1. Introduction

eGovernment has been defined and re-defined by a large number of previous studies. However, at its heart eGovernment's focus is on the provision of governmental services via the use of information technology. In general terms successful eGovernment aims to improve service level relationships between government and its various stakeholder groups, such as the citizen, businesses, tourists and other governmental agencies (UN 2005; Seifert, 2003; Stoica and Llas, 2008). Of major concern should be a requirement for eGovernment services to meet the demands and requirements of stakeholder groups and be driven by these, rather than by internal mechanisms (Cook, 2000; West, 2004; UN 2005; Seifert, 2003). For example, citizen requirements for eGovernment services should be gathered and utilised in decisions made over services to provide via Information Technology, rather than an internal choice made with limited consultation.

Too often the drive to electronic services is to cut costs whether in the public or the private sector. Clearly, cost reduction features as a part of the provision of electronic services but transformational eGovernment may come at substantial cost, with the capability (and expectation) of eGovernment to provide a wide range of new services to the citizen. If the services provided by government are truly for the benefit of the citizens then it makes sense for government to find out what the citizens' wants, desires and what their expectations are concerning eGovernment services (Cook, 2000). The level of input from the citizen is a factor that promotes the development of eGovernment services in a country (Abdel-Fattah and Galal-Edeen, 2008). Therefore if a government just goes ahead and provides services without due consultation with the citizens then it is possible to assume that their aim is too not only modify their relationships with citizens, but also to use these sites as tools to reinforce their power in policy debate via presenting information (Abdel-Fattah and Galal-Edeen, 2008; Cook, 2000; Borrás, 2004).

Indeed according to Chen et al (2006) "eGovernment is a permanent commitment made by government to improve the relationship between the private citizen and the public sector through enhanced, cost effective, and efficient delivery of services, information and knowledge". However, as Cook (2000) has also pointed out even if "the study of eGovernment at its heart is about changing the way people and businesses interact with government", it is essential that government actions are in line with this statement because when it comes to citizens, "it only makes sense to find out what they want, expect, do not want, and worry about" (Cook, 2000), therefore if the needs of the citizens are not taken into account as eGovernment is being developed in a country then we would ask who actually is eGovernment for? Without the willingness of citizens to adopt eGovernment initiatives these are bound to fail, the success of these initiatives then depends on bringing the citizens onboard from the outset, understanding what factors could influence citizen adoption of the initiatives and ensuring that their requirements are met (Carter and Belanger, 2005).

Governments around the world are at various stages of eGovernment readiness and implementation as confirmed by the United Nations eGovernment readiness reports such as (UN, 2010), with European countries generally taking the top spots and in the 2010 survey the first African country coming in at a very low 66th position. Indeed, across the entire African continent the regions fall well below world averages for eGovernment development. Identified in earlier studies, eGovernment at national level down to individual governmental organisations can be categorised in relation to levels (studies differ on numbers of levels) of eGovernment. These services range from the lowest point of static provision of information to the highest point of transactional services requiring online payment for services provided (Seifert, 2003; West, 2004; West, 2006; Stoica and Llas, 2008; Abdel-Fattah and Galal-Edeen, 2008; Borrás, 2004; Hiller and Belanger, 2003). It is useful as a starting point for any conversation regarding the improvement of eGovernment services to analyse existing service in relation to classification of existing service levels.

This study is being undertaken because there is concern about eGovernment and whether it matches citizen expectations and requirements. There is also concern that the provision of eGovernment services will have clear cultural biases and what is right for developed countries in the West may not necessarily be appropriate for less well developed countries in Africa. According to Carter and Belanger (2003) there have been a lot of studies carried out to identify user adoption of services provided online by businesses via e-commerce but none to identify factors that would make citizens use eGovernment services. This could be as a result of not having been consulted on the types of services they would like to see. This is evident from the results of a survey carried out on government agencies by Carter and Belanger (2003) which revealed that of the 74.2% of government agencies which had websites, 90.5% of them did not conduct a survey to find out what citizens and businesses wanted on the websites. The success of eGovernment initiatives depends on bringing the citizens, businesses and all stakeholders onboard from the outset, understanding what they require and ensuring that these requirements are met. Then developing eGovernment initiatives and frameworks from these requirements (Carter and Belanger, 2005; Yonazi et al, 2008, Cook, 2000).

This paper starts in section 2 with an overview of background information and literature related to the research contained within this paper. Section 3 outlines positive and negative factors affecting the implementation of eGovernment in Nigeria. The methodology for the content analysis and the citizens requirements survey is then presented. Following this the results from the content analysis and the citizen's requirement survey are detailed and in some cases graphically depicted. A framework built on the results of the analysis is then presented dealing with the different levels of eGovernance in Nigeria. Finally we finish with conclusions and further work.

2. Background and literature review

2.1 Government readiness

E-readiness, is defined by different studies as the preparedness of a country for eGovernment in terms of its technological infrastructure, human resource development, and telecommunication infrastructure. It is also about the willingness of the government to take advantage of the opportunities made available by advancement in technology to improve the quality of life for the citizens (UN, 2005). Being e-ready involves having the necessary legal and regulatory framework available to support eGovernment and ensuring positive end user perspectives towards eGovernment. This can

make citizens embrace and be more willing to participate in eGovernment (UN, 2005; Bagchi, Gallup and Cervený, 2006). Due to its effectiveness managers in government and non-governmental organisations (NGOs) have been urged to measure and prepare for ICT integration by assessing the e-readiness of a society.

Figure 1 below shows the differences in the eGovernment readiness of different regions. From this it can be seen explicitly that Europe is clearly ahead of all other regions and Africa is far behind.

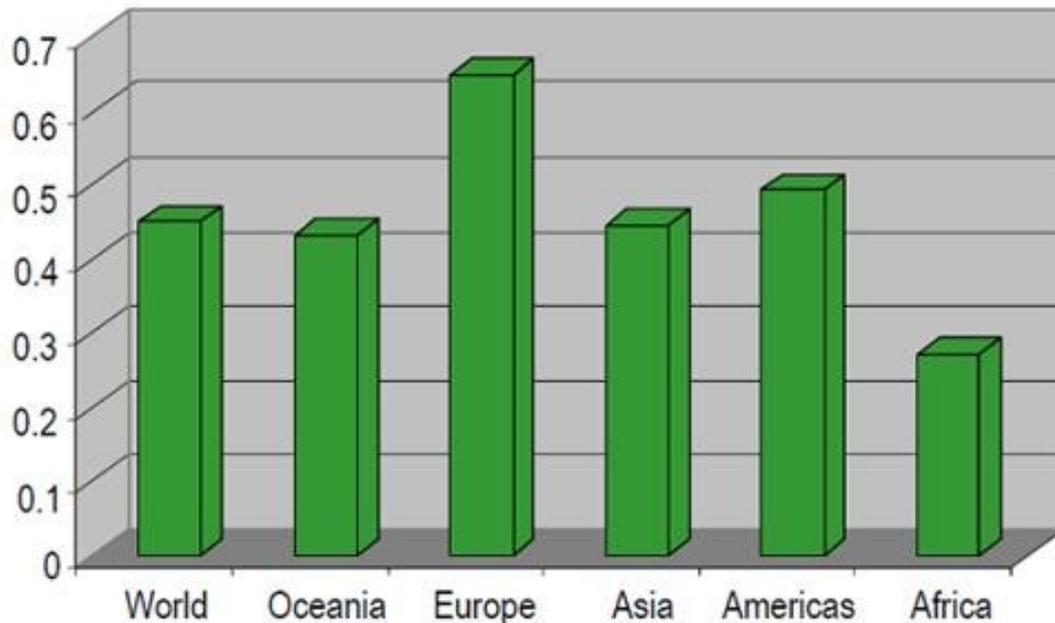


Figure 1: (UN, 2008) Regional average of eGovernment readiness

Different stages of eGovernment have been outlined by the various studies that have been carried out in the field. According to Parajuli (2007) these various stages or models all reflect a transformation that starts from a nascent static online presence to fully integrated and interactive maturity. According to West (2004) there are four general stages of eGovernment development while Hiller and Belanger (2001) present five stages in their study. The stages in both studies are similar, focusing around simple presentation of information, through transactional level services (including the provision of two way communications), through the clear integration of systems (with eGovernment services not being separated from the whole) to real transformational eGovernment made possible through services providing the capability for clear citizen participation in governance.

2.2 Citizen requirements for eGovernment

Citizen requirements are a very key part of eGovernment and at its heart lies the desire to change the way people, businesses, companies tourists etc. all interact with government (Cook, 2000). According to Cook (2000) it is very sensible to ascertain what citizens want and expect from their government and also what they don't want and what they worry about. This is a valid point because as many governments all over the world are developing and implementing strategies for the delivery of efficient and quality services to citizens it is important for them to examine how the public feel about the digital content of eGovernment beyond other things that exist such as its financing, content and responsiveness (West, 2004; Borrás, 2004). According to Wang, Bretschneider and Gant (2005) recent trends in the development of eGovernment are the creation of "citizen centric websites" whose content and services are built in line with the anticipated needs of web visitors therefore understanding citizen requirements will take the government even further and enable it to apply involved planning in the design and deployment of initiatives which citizens would more likely be able to adopt (Yonazi, Sol and Boonstra, 2008; Carter and Belanger, 2005).

A survey administered by the international city/county management association (ICMA) to chief administrative officers at government agencies, according to Carter and Belanger (2003), reveals that 74.2% of the agencies developed websites without conducting a survey to determine what the citizens wanted on the websites. Furthermore there have been cases where plans to have citizens vote on policies were dropped before they reached the city councils for fear that they would support plans the city was not interested in fulfilling (Kolsaker and Lee-Kelley, 2009). This shows that there is the possibility that governments are proceeding with the implementation of eGovernment initiatives without getting the views of the citizens. Further findings of studies showed that there exists an absence of political, managerial and financial interest and support for proactive engagement of citizens through the web. This attitude where governments are not responding to what citizen needs are, in the development and adoption of eGovernment, is common to both developed and developing nations as sometimes the aspirations of the leaders are not in line with the expectations of the people (Heath, 2000).

There are various services which governments provide for their citizens through eGovernment. Many governments, according to the definition by Hiller and Belanger (2001) are continuously optimizing service delivery to ensure that the services offered are at par with the type of relationship between the government and the user at the time of interaction and the stage of integration at which the government website has reached. If it is at the first level of eGovernment then the services offered are more static and require further actions from the user such as going in person to city hall to submit complaints or applications. At the last stage, then fully functional eGovernment is in place and would not require the user to go beyond their computer systems, so from the convenience of their homes or offices, users can, for example, renew driving licenses, make job applications, view ongoing road works in the city, check car park availability, make complaints online and contribute in some way shape or form to local democracy, among other things (Hiller and Belanger, 2001; West, 2004). These services provided by the government through their websites have "many benefits" (Hiller and Belanger, 2001) both for the government and its citizens or users of the websites. Both parties are able to save time, money and energy to be invested elsewhere. By providing the services the government appears to have a more human face by providing links to government officers and offices, attending to citizen complaints and responding to their suggestions. Government is also able to save money on paper work and labour while at the same time providing the services required by citizens in an efficient and timely manner. Citizens are then also able to interact with government when they want to and from anywhere they choose (Layne and Lee, 2001; Hiller and Belanger, 2001). Also it is thought that in some nations eGovernment could help citizens to benefit from a less corrupt government due to increased transparency, reduced corruption and greater accountability (Ndou, 2004).

2.3 Challenges to eGovernment

There are a number of challenges which every government has to face in the process of eGovernment implementation and even though they will vary from country to country there are a few which are common to all with relatively few differences.

2.3.1 Technical issues

A primary problem in the implementation of eGovernment is the lack of basic information technology in most parts of the world or rather the disparity of technological quality between developed and developing nations (Norris, 2001; Jaeger and Thompson, 2003; Ndou, 2004). There also exists a shortage of IT skills and knowledge in the implementation of eGovernment and at the same time there exists a lack of standards for IT. The costs of internet usage in many countries still remains too high for a majority of the people and these people regard internet usage as a luxury they can't afford (Backus, 2001). If the costs of internet usage are not brought down then the people for whom the government is going online for will not be able to benefit from it (Backus, 2001; Ndou, 2004).

There are also problems relating to the design of systems which support eGovernment. In designing systems for eGovernment, designers, developers and business analysts have to contend with the portability and compatibility of present systems with new technologies; this is because there is great uncertainty regarding new technology and the rate at which it changes (Lau, 2003; Signore, Chesi and Pallotti, 2005). With the plethora of government services which can have an online presence, all have varying demands, requiring different levels of resources to function. The formats and differences

in user interface from one agency to another should also be considered and it must be that these systems all have interoperability both with new and with existing systems (Layne and Lee, 2001; Signore, Chesi and Pallotti, 2005). Regardless of the urgency of implementing eGovernment it should be noted that all “necessary technological infrastructure” (Jaeger and Thompson, 2003) must be present to provide services to the citizens (Jaeger and Thompson, 2003). Therefore the development of the basic infrastructure should not only be a priority but alternative methods such as “remote access by mobile phones, satellite receivers or thorough kiosks” should also be considered (Ndou, 2004). It is also noticeable amongst citizen groups from the principal author’s experience in interviewing citizen groups that there is a growing feeling amongst certain sub-sets of society that the provision of e-Services and advantages provided by knowledge of how to interact with them cause forms of discrimination amongst those less able to (through age, education or economic background).

2.3.2 Privacy and SECURITY CONCERNS

The privacy and security of citizens when they use government services is also another challenge. If citizens feel their privacy and security is at risk by participating in eGovernment then they will be reluctant to use these services (Lau, 2003). In their interaction with government online citizens will at times be required to provide personal information. Therefore the government must guarantee the privacy and security of this information. In addition to this, the government must also ensure that technical solutions are applied and that there is a “transparency of procedures and possibly independent auditing” (Lau, 2003). The coordinators and implementers of eGovernment must respect accepted privacy principles while at the same time “allowing the benefits of the internet and other technologies to flow to citizens” (Lau, 2003). It would also be a step in the right direction if governments take an active role in the development of policy related to privacy and security (Lau, 2005). With a proper security and privacy policy in place with accompanying technology which ensures this, transactions involving personal details and payment for services could be more easily conducted on eGovernment websites (Signore, Chesi and Pallotti, 2005). As evidenced in previous research (Tolley and Mundy, 2009) however this is not the case at least in the context of the UK.

2.3.3 Citizen expectations

Another difficulty that governments face in the development of eGovernment is that of understanding and meeting citizen expectations (Lau, 2003). As governments actualise eGovernment they realise that they are unaware of what kind of eGovernment services their people want and how this will effect responses to the services offered (Lau, 2003). Therefore governments must become citizen or customer focused to ensure that their efforts are not wasted and the citizens receive the implemented initiatives.

2.3.4 Political challenges

There are numerous political challenges that have to be scaled for eGovernment to be successful. One of these is bridging budgeting barriers (particularly relevant in the current economic context), most of the time, the scope, breadth and depth of eGovernment is not properly put into perspective and does not receive the necessary monetary allocations (Lau, 2003; Backus, 2001). Many countries go into eGovernment without appropriate laws and a “lack of cyber laws” (Backus, 2001; Ndou, 2004) with which citizens can be protected. These also help to guide individuals’ use of the internet (Backus, 2001; Ndou, 2004). This lack of laws allows people to do as they will thus discouraging a large number of citizens from being a part of the online community or eGovernment (Backus, 2001). The bureaucracy within government where decision making is done at a snail pace and where there exists a “no problem owner within government” (Backus, 2001) mentality and where no one is willing to take responsibility for any issues that may arise or goes wrong (Backus, 2001). EGovernment is also affected by a “short term approach due to elections” (Backus, 2001) where due to political instability there is only a hurried implementation (Backus, 2001).

3. Factors affecting the implementation of eGovernment in Nigeria

Although the implementation of eGovernment has begun in Nigeria, there is little evidence or research to suggest that a clear framework for the adoption of eGovernment is being followed. According to (Yusuf, 2006), eGovernment activity in Nigeria is low. Most government websites are in the publish stage and a few government organisations are at the transact stage. Some organisations have even by-passed the interact stage, as captured in Table 1, thereby giving no opportunity for citizen requests or feedback (Yusuf, 2006). Like many other African nations, there are some clear problems which

influence the implementation of eGovernment in Nigeria. Problems impacting on web implementation for Nigeria are outlined below, however, there are significant other problems such as maturity of governmental processes and lack of other physical infrastructure:

3.1 Electricity supply

Nigeria at present generates less than 3000MW of electricity for a nation of over 140 million people, this is very low thereby forcing many households and companies operating in the country to depend on generators for their electricity (Ayo and Ekong, 2008). This would have adverse effects on the implementation of eGovernment in the country. It would not make a lot of sense if eGovernment is introduced and the people to benefit from it cannot access it to make use of it. An option for the government would be to find an alternate source of energy such as solar power for devices such as kiosks and for internet cafes so that they can function always regardless of the power situation.

3.2 Teledensity

According to statistics from the Nigerian Communication Commission (NCC) there are more than 67 million phone users in Nigeria as at April of 2009 and a teledensity of 47.98. The telecoms industry in Nigeria is the fastest growing in Africa and the third in the world going from a teledensity of 0.73 in 2001 to 47.98 in 2009 (Ayo and Ekong, 2008). This will definitely have a positive impact on the implementation of eGovernment in the country.

3.3 Internet diffusion

Internet diffusion in Nigeria was virtually non-existent in 1999 and it has now risen to a population of over 10 million users, second only to Egypt with an online population of 10.5 million (Ayo and Ekong, 2008). Although the figure seems very little considering the population on the country it is expected to keep growing, this does not take into account the number of people who go online from their mobile devices. The key to successful implementation of eGovernment is the level of internet diffusion in the country therefore more has to be done to improve on this.

3.4 Adult literacy rate

According to Ayo and Ekong (2008), adult literacy rate in Nigeria is above average and therefore would be a good factor in the implementation of eGovernment in the country. Furthermore with the introduction of initiatives such as the Universal Basic Education scheme (UBE) which ensures free education for children till 15 years of age, the literacy age is likely to improve in the near future (Ayo and Ekong, 2008).

3.5 Unemployment rate

The rate of unemployment in Nigeria is a factor that has remained high due to the absence of basic infrastructure, good electricity and proper implementation strategies for government initiatives. This also has the potential to adversely affect the implementation of eGovernment in Nigeria.

4. Methodology

In order to formulate a grounding for the proposal of a eGovernment strategy for Nigeria this study focused on the analysis of two separate factors; content analysis of existing state government websites and comparison with equivalent provision in the UK through benchmarking with UK council websites; and the analysis of citizen requirements for eGovernment. In relation to the content analysis of eGovernment websites, there are a large number of existing mechanisms for assessing and categorising eGovernment websites according to levels of eGovernment. To carry out the analysis of the eGovernment websites this study closely followed the models adopted by Stoica and LIs (2008) and West (2006) as described in their various studies of government websites. Their studies consisted of evaluating government websites using various components with measures to determine the levels of eGovernment for the environments they were studying.

This study evaluated state government websites in Nigeria in relation to council websites in the United Kingdom. This was done by following an incremental model of development through all the stages of eGovernment. The components of the criteria used for assessing the websites were privacy and security, online services, accessibility, public outreach/digital democracy, usability, website content,

and Ads and user fees closely linked to those looked for in the research by Stoica and Lis (2008) and West (2006). The complete list of survey components is too exhaustive to present in full within this context, however, questions asked in relation to one area (Online Services) are presented within Figure 2 and the full list of criteria are available on request from the authors of this paper.

Online Services (services initiated and completed online)

- Are online services available for citizen to government transactions
- Are online services available for business to government transactions
- Are online services available for tourists
- Can complaints be made online

Major Services

- Can taxes be paid online
- Do notifications about ongoing work in the city exist online
- Do Community services exist online i.e. planning, permissions etc.
- Can reports be made online i.e. if trash collection is missed, problem with city services
- Can community services be paid for online i.e. trash collection, permits
- Can community services be applied for online i.e. trash collection, building permits
- Can community services be booked online

Figure 2: Online services Indicators for analysis

For the study a sample size of ten state websites were chosen from Nigeria and five council websites from the United Kingdom. Ten state websites were chosen from Nigeria to accurately represent the six geo-political regions of the country, the largest state in the country (Lagos) and the Federal Capital Territory (Abuja). Five councils were chosen from the United Kingdom because these would be sufficient to be used as bench-marks for the Nigerian websites. States and councils were chosen because of the similarities in the types of services offered at these levels of government. This analysis was carried out between the 11th and the 18th of July 2009. In relation to the analysis of citizen requirements for eGovernment The survey mechanism closely followed the model described by West (2006), where a survey was also conducted, following a website analysis, to determine how citizens felt about eGovernment. It was necessary to compare the findings from the content analysis carried out with what the citizens' actual requirements and expectations were, relative to eGovernment. To do this a survey was conducted using an online questionnaire. The questionnaire, which can be found in covered a broad range of categories under eGovernment. It was given to respondents in the United Kingdom and in Nigeria. Twelve of the questions were based on a four scale Likert item where the respondents were asked to choose from four options i.e. unimportant, little importance, moderate importance and very important. The questions raised in the survey were each chosen to represent various stages of eGovernment. They were also chosen to represent various types of services provided at those stages. For the various stages the following questions were asked.

5. Analysis

The following sections outline the findings from the content analysis and survey of citizen requirements for eGovernment.

5.1 Privacy

From the analysis carried out none of the Nigerian websites evaluated had a privacy or security policy in place and 80% of the websites installed cookies on the users system. This is in direct contrast to the websites in the UK where 100% of the sites had visible privacy policies in place although only

20% of the sites had a visible security policy in place. All the UK sites used cookies but explicit statements concerning the use of cookies were made in their privacy policies.

5.2 Public outreach/digital democracy

The analysis of public outreach and digital democracy showed that only 40% of the Nigerian sites had an option of online feedback and only 40% had the option of contacting officials other than the webmaster. Also only 20% of the sites had an online poll. There was no possibility of rating government or registering citizen satisfaction, no email updates or newsletters and also no official participation of any form. On the other hand the UK websites contained the majority of features looked for in the content analysis. However 40% of the UK sites had no online opinion polls although there were avenues for users to register complaints. 40% of the UK sites didn't have email updates but people could follow them on the social networking site or through RSS.

5.3 Website content

The Nigerian websites considered scored low when their page contents were evaluated. Only 20% of the websites advertised job vacancies and only 20% had audio and video clips. Also only 40% of the websites had links to websites to other ministries within the state. Other metrics looked for under website content were not available and no provision was made to accommodate them. Most of the metric looked for in this category were available on UK council websites except when it came to the availability of audio and video clips where only 20% of the websites had a 3D tour of the council. 20% of the websites didn't have the minutes of council meetings while 80% didn't have the date of last update, although it was obvious from the content that the sites were updated regularly.

5.4 Usability

Nigerian state government websites also scored low on their usability. The sizes of the homepages were within acceptable parameters not exceeding two pages, but none of the sites had a site map and only 80% of the websites had a navigation bar on each page. There was also no consideration for different categories or groups of visitors to the sites such as young people, elderly people, students, kids, disabled etc. The UK websites scored 100% in all aspects of usability, there were navigation bars on each page, the pages were of appropriate sizes, there were site maps available and different groups of users such as young, old etc. were considered in the development of the websites.

5.5 Adverts and user fees

Only 20% of the Nigerian websites had links to commercial services such as newspaper websites, other than this there were no adverts pop ups or user fees. Although users would have to download forms and mail them to the officials in charge for any services which they require. For the UK websites only 20% of the websites contained links to other services but none of the UK sites had adverts, pop ups or user fees.

5.6 Online services (initiated and completed online)

For online services we considered only those services which could be initiated and completed online. There was no support for these services on the Nigerian websites. Only 20% of the websites allow complaints to be registered and post notifications of ongoing road works in the city although the updates are not posted frequently. The UK websites considered all had complete support for online services. Although 20% of the websites did not post updates about ongoing road works but a link was provided to a site where information would be available.

5.7 Accessibility

Accessibility was determined using the online accessibility tool WAVE which is made available by WebAIM. There were many accessibility errors on the Nigerian websites. The home pages of the sites were first assessed before other pages were assessed. Four of the homepages of the five websites had more than eight errors while only one had less than five errors on its homepage. Other pages of the sites were filled with numerous errors. In general the sites all scored low on accessibility. The UK sites scored high on accessibility although the homepages of three of the sites and some of their other pages had a number of errors. Two websites were completely free of errors.

5.8 Levels of eGovernment

From the evaluation carried out only 30% of the Nigerian state websites could be described as having reached the second stage of eGovernment. These states are Lagos, Imo and Abuja. They provided services that invite citizens to interact with them such as message boards and chat forums. They also provided facilities for users to give online feedback. 70% of the state websites were still very much in the publish stage of eGovernment. Furthermore most of the published content was not updated regularly. Figure 3 is the diagrammatic representations of the levels of eGovernment that the states in Nigeria fall into. Figure 4 is the diagrammatic depiction of the level of eGovernment of councils in the United Kingdom.



Figure 3: eGovernment levels of Nigerian states

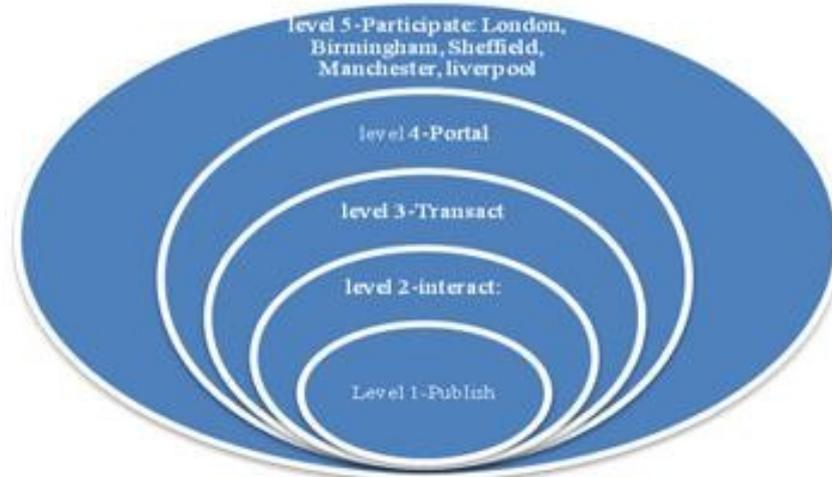


Figure 4: eGovernment levels of United Kingdom city councils

5.9 Citizen requirements for eGovernment

Nigerian and UK citizens show a willingness to engage with the government through online services and to fully participate in the act of governance. The survey carried out showed that there is a high level of expectation from the citizens' towards eGovernment and for the citizens in the United Kingdom their expectations have to a large degree been met. However, the same cannot be said for the expectations of Nigerian citizens. An account of the responses to the survey questions in regards to the importance of eGovernment services is provided in Figure 5. Respondents were also asked

about other services they would like to see online (returning a long list of services) and were asked to rate the current level of eGovernment in their country on a 1(low) to 10(high) scale. As might have been expected 70.6% of Nigerian citizens rated the level of eGovernment in Nigeria at 1 with 100% less than 5. In the UK 80% rated the level of eGovernment at 8 or above with the rest above 5.

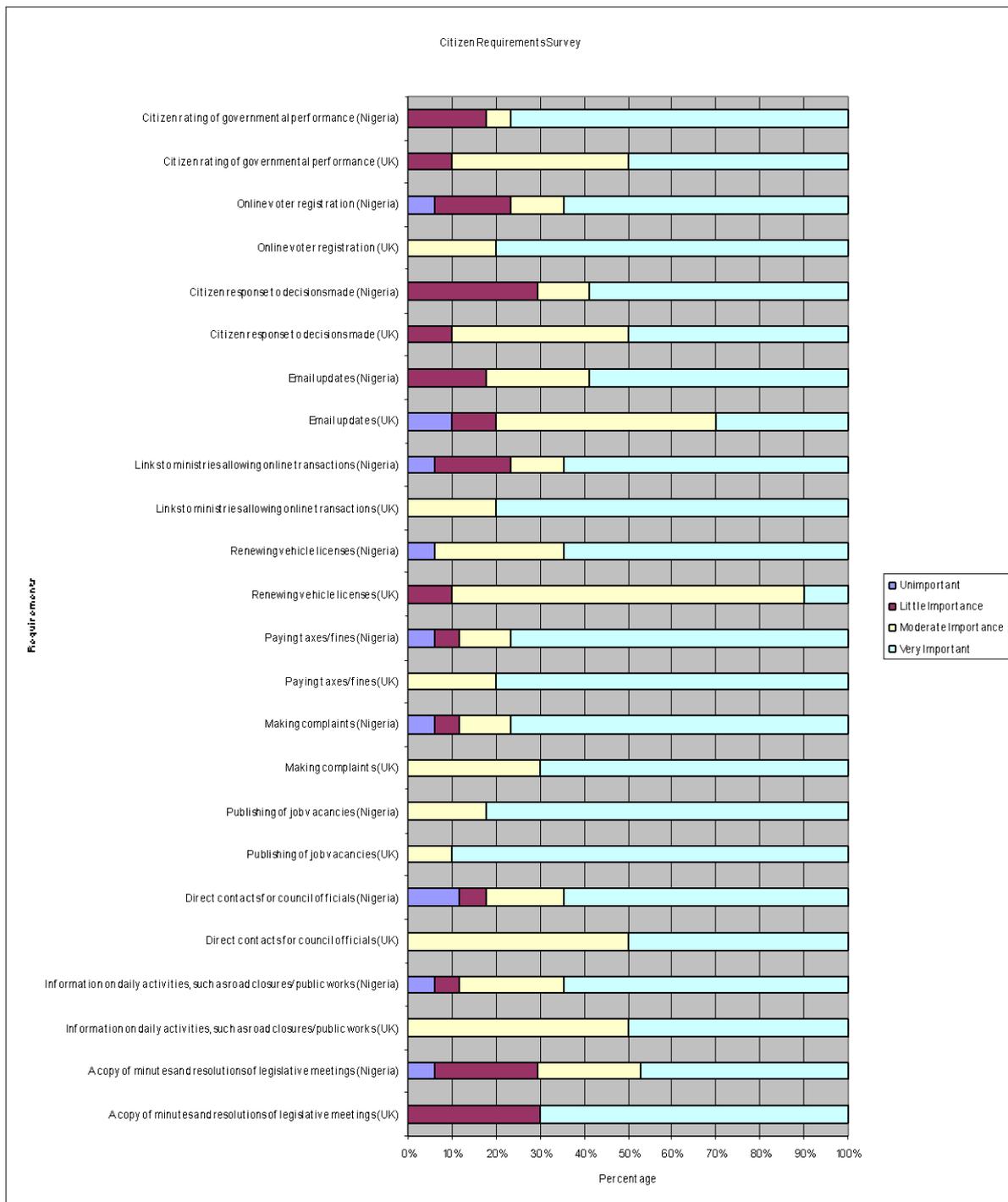


Figure 5: Citizen requirements survey results

6. Proposed framework

In developing a framework for eGovernment this study considered the findings of the citizen requirements survey. The findings of the survey show that the citizens are in full support of eGovernment and the possibilities that it has to offer. Although the citizens varied on their views as to the level of importance of the services provided, they were all in agreement that as many services as possible would be welcome. For all the services which were included as part of the survey to be

incorporated into eGovernment then there must be a stage by stage approach to the implementation of eGovernment in Nigeria. This study has developed a framework which encapsulates the necessary steps needed to properly implement eGovernment in Nigeria. This framework is captured in Figure 6.

6.1 Proposed framework for national eGovernment

The modified framework proposes that formulation of all policies, laws and strategies for implementation of eGovernment in Nigeria should be done at the federal level. This is captured in Figure 6. After the policies have been formulated other levels can then be advised accordingly. This will ensure that the other levels focus strictly on implementation of eGovernment.

The government must have specific drivers for the formulation of these policies and also for ensuring compliance in the implementation of eGovernment. This may involve setting up a committee or appointing a minister for eGovernment as is done in some countries such as the UK (Ishaya, 2008). Having an e-minister would most likely be more appropriate. It would ensure a defined role for the promotion and implementation of eGovernment (Ishaya, 2008). Furthermore the e-minister would define strategies for the stage by stage implementation of eGovernment (Ishaya, 2008). The e-minister would also oversee the formulation of policies necessary for the successful launch of eGovernment. This is also captured in Figure 4. At this level there might not be the need to give as much IT education as other levels of government. This is because most likely the private sector has ensured that most of its workforce is IT literate but this might not be the case with government ministries, agencies and parastatals. Therefore the government must ensure that extensive IT education is carried out in the civil service and all government establishments.

6.2 Proposed framework for state eGovernment

The state government level is the intermediate level of government in Nigeria and it is important that eGovernment succeeds at this level. The proposed framework for this level is captured in Figure 6.

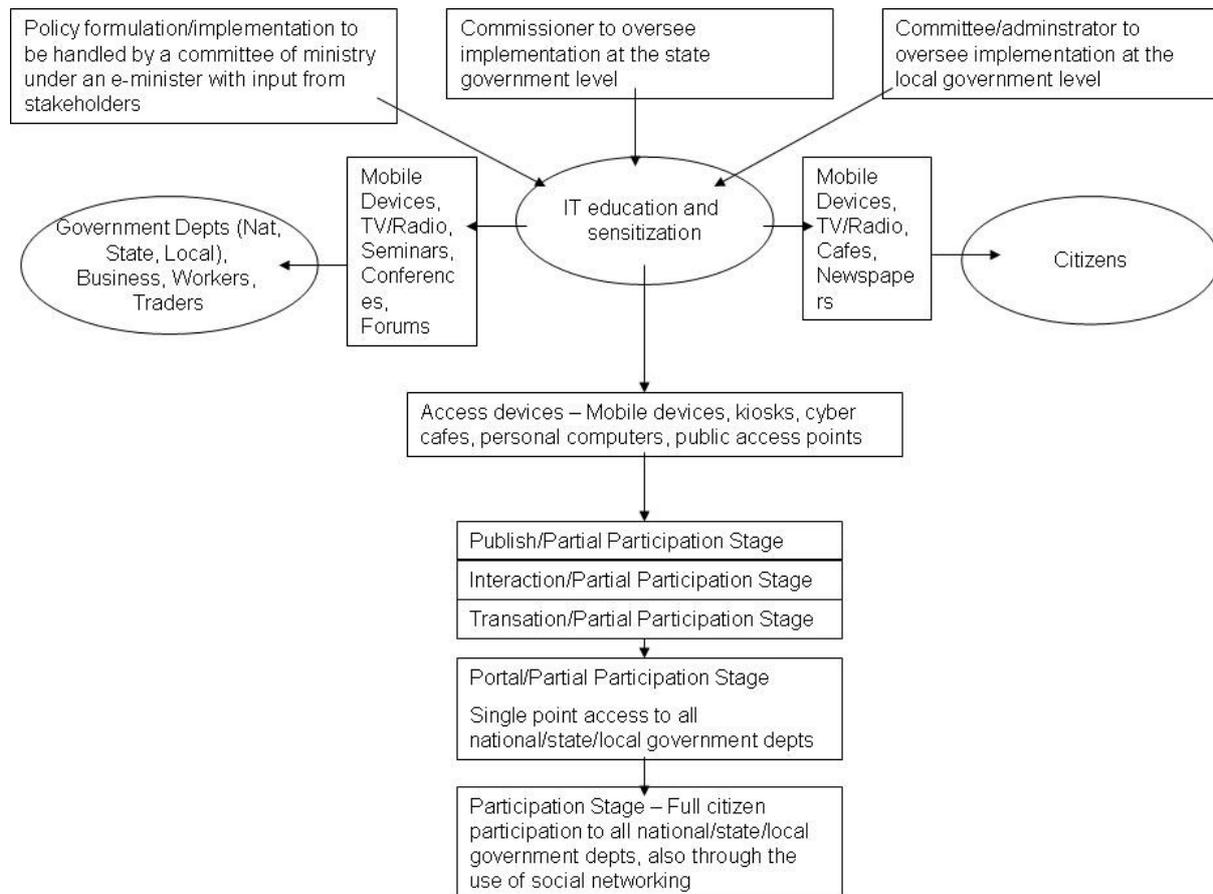


Figure 6: Framework for the development of eGovernment in Nigeria at National level

To facilitate the implementation of eGovernment at this level, this study has proposed the appointment of a commissioner to oversee implementation of eGovernment at this level. The commissioner would ensure that the policies formulated at the federal level are put in place and that a stage by stage implementation takes place.

The education of citizens with respect to IT would also be necessary at this level given the problem of literacy in Nigeria. This would go hand in hand with the sensitization of the citizens. The sensitization and IT education must spread across the state government departments and offices as well as to the civil society.

6.3 Proposed framework for local eGovernment

The local government level is the lowest form of government but also a very important level because of its proximity to the citizens. Therefore if eGovernment is to succeed at all then it must be a success at this level.

To ensure the implementation of eGovernment at this level this study has proposed that a committee or administrator be appointed by the local government to oversee its implementation. At all levels having drivers behind the implementation of eGovernment is essential for accountability. This is captured in Figure 6.

It is important that beyond sensitizing the people at the local level on eGovernment that they also be made IT literate. The knowledge of the existence and benefits of eGovernment will be of no use to the people if they cannot make use of IT equipment. Educating the citizens will ensure that everyone is carried along, both the educated and the un-educated. It is therefore necessary to incorporate this into the proposed framework for the local government level.

Although the framework captures personal computers as part of the access devices, they will most likely not be as ubiquitous as they are at other levels of government. However, from our initial investigation it is also evident that a stage before this framework would also need to be in place, that is significant concentration on developing the national infrastructure to enable IT services such as eGovernment to have a platform for growth.

7. Conclusions and further work

This paper has provided a detailed description of research conducted towards developing a framework for eGovernment development in Nigeria. It has done this through analysing and benchmarking the existing eGovernment presence in Nigeria against the UK. Following on from this, results from a survey of customer requirements for eGovernment in Nigeria and UK were detailed. The results from the technical and customer analyses have fed into the development of a framework to aid government at different levels in Nigeria in steps towards more mature eGovernment processes. This was done as eGovernment in Nigeria is at an early stage with seemingly very little strategic thought given to national implementation. It was thought by making comparisons with the UK we could seek to investigate whether or not eGovernment as it exists in Europe is wholly applicable to eGovernment in Nigeria, or whether there are certain national characteristics of value to Nigerian citizens which are not necessarily captured by following western ideals. We believe that our analysis of citizen requirements in Nigeria showed the Nigerian respondents to be aware of the perceived benefits that e-Governance can bring particularly with regards to providing more transparency in government process. We found our Nigerian respondents to be much more engaged with the idea of eGovernment potentially because UK citizens already rate their eGovernment services highly.

The principle author is currently engaged in research focused on citizen requirements for eGovernment in relation to a specific case study region (North Yorkshire) in the UK. This research follows on and complements the material found in this paper by analysing approaches to channel shift for council services through case study work. In addition to this, further work from this study could focus on an investigation of bottom up eGovernance in Nigeria through the provision of a local government service similar to studies carried out in other nations (Mila and Jimenez, 2008) this would enable us to investigate the concepts exposed by the study of a desire for transparency in local, state and national government services.

References

- Abdel-Fattah M. and Galal-Edeen G. (2008) Towards Flexible Evaluation for eGovernment Websites Quality: A Multi-Perspective Evaluation Framework, Proceedings of the 8th European Conference on eGovernment 10-11 July 2008, Ecole Polytechnique, Lausanne, Switzerland.
- Ayo, C.K. and Ekong, U. (2008) e-Voting Implementation in Nigeria: Prospects and Challenges, Proceedings of the 8th European Conference on eGovernment 10-11 July 2008, Ecole Polytechnique, Lausanne, Switzerland.
- Backus, M. (2001). E-governance in developing countries. [Online]. IICD Research Brief, (1)
- Bagchi K, Gallup S. And Cerveny R. (2006), An Empirical Study on EGovernment Readiness: The Roles of Institutional Efficiency and Interpersonal Trust, Proceedings International Conference on Digital Government Research, San Diego, California, pp371-372
- Borras J. (2004) International Technical Standards for eGovernment, published in Electronic Journal of eGovernment, Volume 2, Issue 2, 2004 (75-80).
- Carter, L.. and Belanger, F. (2003) The Influence of Perceived Characteristics of Innovating on EGovernment Adoption, Published in: Electronic Journal of eGovernment Volume 2 Issue 1 (11-20).
- Carter, L.. and Belanger, F. (2005) The Utilization of EGovernment Services: Citizen Trust, Innovation and Acceptance Factors, Information Systems Journal, Vol. 15 pp 5-25.
- Chen, Y.N., Chen, H.M, Huang, W. and Ching, R.K.H. (2006) EGovernment strategies in developed and developing countries: An implementation framework and case study, Journal of Global Information Management ,14 (1), pp. 23–46.
- Cook, M.E. (2000) "What Citizens Want From EGovernment: Current Practice Research," Center for Technology in Government, University at Albany/SUNY, Albany, N.Y.,
- Heath, W. (2000) Europe's readiness for eGovernment [online] Available: <http://www.egov.vic.gov.au/pdfs/e-readiness.pdf> [Accessed: 24/09/2010]
- Hiller J. S. and Belanger F (2001), Privacy strategies for Electronic Government [online] Available at <http://www.businessofgovernment.org/report/privacy-strategies-electronic-government> [Accessed 24/09/2010]
- Ishaya, T. (2008), eGovernance: A password to Vision 20 :2020 presented at the CTEED International Conference on Technopreneurship Practice- A key Tool for the Attainment of Vision 20 -2020 and the 7-Point Agenda, Kaduna, Nigeria, December 2008.
- Jaeger, P.T. and Thompson, K.M. (2003), EGovernment around the world: Lessons, challenges, and future directions, Government Information Quarterly 20 (4), pp. 389–394.
- Kolsaker, A. and Lee-Kelley, L. (2009) Singing from the Same Hymnsheet? The Impact of Internal Stakeholders on the Development of e-democracy, Electronic Journal of eGovernment Volume 7 Issue 2 2009 (11-20).
- Lau, E. (2003), Challenges for EGovernment Development, 5th Global Forum on reinventing Government, Mexico City, 5th November, 2003.
- Layne, K. and Lee, J.W. (2001), Developing fully functional eGovernment: A four stage model, Government Information Quarterly 18 (2), pp. 122–136.
- Mila, G and Jiminez, (2008) eGovernment and Organizational IT Adoption:The Case of the Barcelona City Council, Proceedings of the 8th European Conference on eGovernment 10-11 July 2008, Ecole Polytechnique, Lausanne, Switzerland.
- Ndou, V. (2004), EGovernment for Developing Countries: Opportunities and Challenges, Electronic Journal of Information Systems in Developing Countries, Vol 18 (1) pp. 1-24
- Norris, P. (2001). Digital divide: civic engagement, information poverty, and the internet worldwide. Cambridge: Cambridge University Press
- Parajuli J. (2007) A Content Analysis of Selected Government Web Sites: a Case Study of Nepal [online], Electronic Journal of E-Government Available at: www.ejeg.com/issue/download.html?idArticle=91 [Accessed 24/09/2010]
- Seifert, J. (2003) A Primer on EGovernment: Sectors, Stages, Opportunities and Challenges of Online Governance [online], Available at: <http://www.fas.org/sgp/crs/RL31057.pdf> [Accessed 24/09/2010]
- Signore, O., Chesì, F., & Pallotti, M. (2005). EGovernment: Challenges and opportunities. CMG Italy–XIX Conference, June.
- Stoica, V. and Lis, A. (2008) Romanian Urban eGovernment: Digital Services and Digital Democracy in 165 Cities, Proceedings of the 8th European Conference on eGovernment 10-11 July 2008, Ecole Polytechnique, Lausanne, Switzerland.
- Tolley, A. and Mundy, D. (2009), 'Towards workable privacy for UK eGovernment on the web', International Journal of Electronic Governance 2009, Vol. 2, No.1, pp 74-88
- United Nations Department of Economic and Social Affairs. 2005. Global eGovernment readiness report 2005: From eGovernment to e-inclusion [online], Available at <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf> [Accessed 24/09/2010]
- United Nations Department of Economic and Social Affairs. 2008. Global eGovernment readiness report 2008: From eGovernment to Connected Governance [online], Available at <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf> [Accessed 24/09/2010]
- United Nations Department of Economic and Social Affairs. 2010. Global eGovernment readiness report 2010: Leveraging EGovernment at a Time of Financial and Economic Crisis [online], Available at http://www.unpan.org/egovkb/global_reports/08report.htm [Accessed 24/09/2010]

- Wang, L., Bretschneider, S. and Gant, J. (2005) Evaluating web-based EGovernment services with a citizen-centric approach, Proceeding of the 38th Hawaii International Conference on System Science, 3-6 January, 2005.
- West, D. M. (2004) EGovernment and the Transformation of Service Delivery and Citizen Attitudes, published in Public Administration Review, January/February 2004, Vol. 64, No. 1
- West, D. M. (2006) Global EGovernment [online], Available at:
<http://andromeda.rutgers.edu/~ncpp/cdgp/articles/West-2004.pdf> [Accessed 24/09/2010]
- Yonazi, J, Sol, H. and Boonstra, A. (2008) Developing a Framework for Assessing Adoptability of Citizen-Focused eGovernment Initiatives in Developing Countries: The Case of Tanzania; Exploratory Phase Results", Proceedings of the 8th European Conference on eGovernment 10-11 July 2008, Ecole Polytechnique, Lausanne, Switzerland..
- Yusuf, O. (2006) Solutions for eGovernment Development in Nigeria. Accenture EIU Government Research