

Review

E-government implementation in Nigeria: An assessment of Nigeria's global e-gov ranking

A. B. Adeyemo

Computer Science Department, University of Ibadan, Ibadan, Oyo State, Nigeria. E-mail: sesan_adeyemo@yahoo.com.

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Nigeria is a country that has always posed a paradox to the international community in terms of its level of development vis-a-vis its economic potential. This is also reflected in the low ranking index it gets in international surveys despite the effort to develop its infrastructure and human capital. Nigeria has the fastest growing and most lucrative telecommunications, and Information and Communications Technology (ICT) market in Africa, yet in spite of this obvious and significant progress is still being ranked low in e-government provision to its citizen. This paper reviews the aim and methodology used by the ranking agencies, takes a survey of Nigeria's performance in global e-government surveys, identifies areas of deficiencies which have contributed to the low e-service delivery in the country despite the success recorded in the country's ICT and telecommunications sector and suggests how this situation may be improved.

Key words: E-government, information and communications technology, Nigeria.

INTRODUCTION

E-government (e-government or e-gov) refers to the use of internet technology as a platform for exchanging information, providing services and transacting with citizens, businesses, and other arms of government (UN e-government survey, 2004, 2005, 2008). E-government may be applied by the legislature, judiciary, or administration, in order to improve internal efficiency, the delivery of public services, or processes of democratic governance. However, the primary delivery models are Government-to-Citizen or Government-to-Customer (G2C), Government-to-Business (G2B) and Government-to-Government (G2G) and Government-to-Employees (G2E). Within each of these interaction domains, four kinds of activities take place. These are: Pushing information over the Internet (for example: regulatory services, general holidays, public hearing schedules, issue briefs, notifications, etc.); two-way communications between the agency and the citizen, a business, or another government agency (In this model, users can engage in dialogue with agencies and post problems, comments, or requests to the agency); conducting transactions (for example: Lodging tax returns, applying for services and grants); governance (for example: online polling, voting, and campaigning). The most important anticipated benefits of e-government in a developing

country include improved efficiency, increase in transparency and accountability of government functions, convenient and faster access to government services, improved democracy, lower costs of administrative services and these benefits can be realized in the following ways (Kamar and Ongo'ndo, 2007):

1. The citizens get connected to the government more easily using electronic means of communication. This results in better efficiency in public service delivery through faster dissemination of government information to a larger audience.
2. A reduction in corruption cases as accountability and transparency is increased. This derives from the limited physical contact between citizens and government service providers and their activities can be easily monitored.
3. Equal opportunity is given to all to access information irrespective of the person's physical location or disability and the elimination of the bureaucracy experienced in government offices.
3. The interdepartmental exchange of information and merger of related services is enhanced between government agencies with an accompanying reduction of transaction costs, time, space and manpower.

The following factors have been identified (Kamar and Ongo'ndo, 2007) as barriers to effective E-Government implementation in developing countries:

1. A reluctance to share information which has resulted in policies that deny access to information and the creation of "empty" government ministries websites with information of little value.
2. The government being faced with management challenges in the implementation of E-Government. The uncoordinated E-Government activities result from low level of public administration of E-Services as well as low quality and insufficient E-Content information from grass-roots levels.
3. Low information technology literacy in a country which slows down the process of E-Government.
4. The uneven distribution of Internet facilities, high cost of connection and in some cases low penetration of high speed connectivity to the Internet.
5. Digital Divide which is experienced between the urban rich and poor, the rural and urban citizens, the IT literate and the IT illiterate. This manifests also in the language in which web site content is delivered which can only be understood by a minority elite.
6. Insufficient allocation of financial resources due to financial constraints and mixed government policies which has slowed down the rate at which E-Government is introduced.
7. E-government implementations failing due to a mismatch between the current and future systems resulting from the large gap between physical, social, cultural, economic and other contexts between the software designers and the place in which the system is being implemented.

It was proposed in Matthias and Gaëlle (2003) that the ultimate benefits of e-government can only be derived when e-governance has been achieved. E-governance is composed of three basic elements, namely e-government, e-regulation and e-democracy, yet is more than the simple addition of these three elements. e-government deal with issues relating to how the state makes use of Information and Communication Technology (ICT) in order to provide better services, often in partnership with the private sector and civil society organizations. e-regulation deal with issues that relate to how the state makes use of ICT to better regulate and provide public service (price, quality, accessibility). e-democracy deal with issues that relate to how the state make use of ICT to improve its rule-making function, that is, involving the various societal actors in its decision making process. Hence e-governance has been described (UN e-government survey, 2004, 2005, 2008) as the public sector's use of the most innovative ICTs, like the internet, to deliver to all citizens improved services, reliable information and greater knowledge in order to facilitate access to the governing process and

encourage deeper citizen participation. It is an unequivocal commitment by decision-makers to strengthening the partnership between the private citizen and the public sector.

This paper reviews the concept of e-government and e-governance and considers the United Nations (UN) model of e-government implementation which is used as the basis for ranking the 192 member nations of the UN in its global e-government surveys. It considers the intention and methodology used by ranking agencies and in particular the UN global surveys and makes a comparative study of Nigeria's performance in global e-government surveys in the period 2004 -2008. It highlights the success recorded in the country's ICT and telecommunications sector, identifies areas of deficiencies which have contributed to low E-Service delivery in the country and offers suggestions on how this situation may be improved.

THE STAGES OF E-GOVERNMENT

A couple of models have been proposed for the different stages in the evolution of e-government services (Benchmarking e-government, 2002; Matthias and Gaëlle, 2003; Kaaya, 2004; Okot-Uma and Rogers, 2004). The United Nations e-government global survey has adopted a five stage e-governance model (UN e-government survey, 2004, 2005; 2008), these are:

Stage 1 - Emerging presence: In this stage a country commits to becoming an E-Government player. A formal but limited web presence is established through a few independent government websites which provide users with static organizational or political information.

Stage 2 - Enhanced presence: In this stage, a country's online presence begins to expand as the number of official websites increase, with more dynamic and specialized information content that is frequently updated. The interaction is still primarily unidirectional with information flowing essentially from government to the citizen.

Stage 3 - Interactive presence: In this stage a country's presence on the internet expands dramatically by entering the interactive mode with access to a wide range of government institutions and services.

Stage 4 - Transactional presence: In this stage two-way interactions between the citizen and the government is included.

Stage 5 - Networked (or fully integrated) presence: This stage represents the most sophisticated level in the online e-government initiatives. It is characterized by an integration of G2G, G2C and C2G (and reverse) interactions. The government encourages participatory deliberative decision making and is willing and able to involve the society in a two-way open dialogue (UN global e-government readiness Report, 2004).

E-GOVERNMENT SURVEY INDICATORS

According to Mahan (2007) during the last couple of years, ICT indicators have become increasingly popularized and prominent in mainstream discourses. These indicators can help policy advocates and policy-makers to assess how likely different communities are to integrate ICT into their work and social trajectories, which are commonly referred to as e-readiness. A robust set of indicators is difficult to achieve. The countries and stakeholders must agree that the exercise is useful and there has to be an agreement on the indicators to be collected, that in terms of what is perceived as useful information.

Indicators, while being useful, are not neutral and express different things (Mahan, 2007). Indicators are an abbreviated language or device: they point, but do not explain. So it is useful to know who is doing the pointing, as well as their motivation for pointing in the first place, and the evidence used to legitimize their authority to point convincingly. Often, we accept the authority of many indicators without delving into their methodologies. They provide a snapshot of progress in the context of the particular world view of their creators and contain their own inherent values and can contribute to three main aspects of ICT policy development: needs assessment, monitoring progress in different economic and social sectors, and providing evaluation and feedback for specific programmes and initiatives. They are essential for setting policy priorities, measuring progress towards targets, and benchmarking results. The definition, design and measurement underlying indicators must be effected in reference to how they are intended to be used. Otherwise, indicators can be false and misleading measures.

Indicators should be explicit with regards to their respective methodologies (Mahan, 2007). It is often the case that methodological statements remain unread; indeed, many users of indicators lack the necessary background in quantitative methods necessary to understand the complex statistics or do not have the time to consider the raw data. Therefore, complex calculations bundled into a single index number that is offered at face value is not best practice and does not leave open the opportunity for subsequent analysis and scrutiny.

The United Nations global (UN) e-government readiness index (UN e-government survey, 2004; 2005; 2008) is a comparative ranking of the countries of the world according to two primary indicators: the state of e-government readiness; and the extent of e-participation. It is a composite measurement of the capacity and willingness of countries to use e-government for ICT-led development. By ranking the performance of countries on a relative scale, the index provides a valuable input for policy making and agenda setting for the future and serves as a benchmarking tool for monitoring progress of countries as they progress towards higher levels of digital public service delivery in the future. However, it is also

stated that the survey does not suggest that 'higher' rankings are necessarily a 'better' outcome or even a desirable one. Therefore each country has to decide upon the level and extent of e-government initiatives in keeping with its indigenous development framework.

The UN global e-government readiness index (UN e-government survey, 2004; 2005; 2008) is a composite index comprising the Web measure index, the telecommunication infrastructure index and the human capital index. A description of the parameters that make up the index as presented in the UN e-government survey (2004; 2005; 2008) is presented.

Web measure index

This is based upon a five-stage model described earlier. For countries that have established an online presence, the model defines stages of e-readiness according to a scale of progressively sophisticated citizen services. Countries are ranked in consonance with what they provide online. The web measure survey assessments are based on a survey instrument, which allows for only a binary value to the indicator based on the presence or absence of specific electronic facilities or services available. The primary site used for the assessment is the National Portal or the official homepage of the government. Where no official portal is available, additional government sites are assessed.

Telecommunications infrastructure index

This is a composite weighted average index of six primary indices based on basic infrastructural indicators, which define a country's ICT infrastructure capacity. These are: PC's/1000 persons; internet users/1000 persons; telephone lines/1000 persons; online population; mobile phones/1000 persons; and TV's/1000 persons.

Data for the UN member of states are taken primarily from the UN International Telecommunication Union (ITU) and the UN statistics division, supplemented by the World Bank. The telecommunications infrastructure index is constructed as a composite measure which assigns a 20% weight to the first three variables and 5% to the remaining two. However in the 2008 report the indices have been adjusted to five primary indices which are: Internet users /100 persons, PCs /100 persons, main telephones lines /100 persons, cellular telephones /100 persons, broad banding /100 persons. The telecommunications infrastructure index is then constructed as a composite measure which assigns each variable a 20% weight.

Human capital index

This index is a composite of the adult literacy rate and the

combined primary, secondary and tertiary gross enrolment ratio with two third weight given to adult literacy and one third to gross enrolment ratio. The data for the adult literacy rate and the gross enrolment ratio was drawn primarily from the United Nations Educational, Scientific and Cultural Organization (UNESCO). This is supplemented with data from the UNDP Human Development Report.

Whereas, the web measure index assesses the availability of information and services online, the e-participation index (UN e-government survey, 2004; 2005; 2008) measures 'how useful' are these services and how frequently they appear. The index attempts to qualify if these tools and materials are conducive to an online deliberative and participatory process between the government and the citizen. It is composed of three parts which are: E-Information, E-Consultation, and E-Decision making. These three are the qualitative equivalent of the quantitative web measure survey.

E-information

This assesses national websites and portals to determine if governments are providing the basic information that serves as the foundation for citizen participation. This includes elements such as the online publishing of the official e-participation policy, listings of opportunities for online participation and electronic notification mechanisms to involve citizens.

E-consultation

This assesses the interactive methods employed to solicit citizen opinion, feedback and input, such as online channels, including informal polls, bulletin boards, chat rooms/instant messaging and weblogs (blogs), as well as formal online consultation.

E-decision making

This evaluates the extent of a government's commitment to e-participation, as evidenced by the definitive acknowledgement of an individual citizen's input and by a stated commitment to take it into account when making decisions.

The e-participation index (UN e-government survey, 2004; 2005; 2008) complements the raw data, and is therefore, an important and valuable means of evaluating both the efforts of governments and the actual quality of the information and services provided.

NIGERIA'S E-GOVERNMENT RANKING

A comparative study of the E-Readiness Index of the first

five West African countries performance in the 2004, 2005 and 2008 UN global e-government survey report was carried out. Table 1 presents the Global ranking (and Index) of the first five West African countries out of a total of 192 UN member countries surveyed. Tables 2, 3 and 4 presents the breakdown of the E-Readiness, E-Participation and Service Delivery (percent utilization by stages) reports for Nigeria.

While it is to the country's credit that its Global ranking among the 192 member nations of the United Nations had improved from the 141st position in 2004 to 136th position in 2008, this is still a far cry from Cape Verde which still ranks first in the West African sub-region with a ranking of 104 in 2008. The West African region had the lowest regional index in the 2008 Survey. The region scored a 0.2110 in 2008 as compared with the world average of 0.4514. Cape Verde (0.4158) continues to lead the region, with Nigeria (0.3063) and Ghana (0.2997) taking the top three spots.

EXAMINING THE E-GOVERNMENT RANKING

While there is no doubt that the government is fully committed to the development of ICT and telecommunications infrastructure, and considering the improvements in the sector over the past couple of years the country's infrastructure ranking should have improved tremendously and it has. Table 2 shows that the country's Infrastructure Index has moved up from 0.0013 in 2004 to 0.0492 in 2008. Some of the reasons for the improvement in Nigeria's infrastructure index are the success recorded in the Nigerian telecommunications sector. Nigeria has a population of 140 million people, 70% of whom were said to be living in underserved and remote areas of the country (Dada, 2007), however, it now has the fastest growing and most lucrative telecommunications and ICT market in Africa and third in the world behind China and Brazil (Aneke, 2009). As a virgin market experiencing rapid growth, Nigeria has become a preferred destination for international technology investors from South Africa, Middle East, Europe, Asia and North America yet by the year 2000 Mongolia and Afghanistan were the only 2 nations with worse teledensity figures than Nigeria.

Records show that Nigeria's telecommunication and ICT infrastructure has grown astronomically from teledensity figures of 0.4 lines per 100 inhabitants in year 2000 (with 400,000 connected lines and 25,000 analogue lines), to teledensity figures of 42 lines per 100 inhabitants (representing 59 million active subscribers) in October 2008 (Ndukwe, 2008). Highlights of some of the gains in the telecommunications sector are:

1. The licensing of various digital mobile operators, fixed wireless access and long distance operators, internet service providers and a second national carrier by the

Table 1. West African countries e-government readiness index 2004/2005/2008.

		Index 2004	Index 2005	Index 2008	Global ranking in		
					2004	2005	2008
1	Cape Verde	0.3442	0.3346	0.4158	107	116	104
2	Nigeria	0.2485	0.2758	0.3063	141	139	136
3	Ghana	0.2369	0.2758	0.2997	143	133	138
4	Senegal	0.2328	0.2238	0.2531	145	153	153
5	Gambia	0.171	0.1736	0.2253	162	163	159

Table 2. Nigeria e-readiness/e-participation index 2004/2005/2008.

Year	Web measure index	Infrastructure index	Human capital index	E-gov. readiness index	E-gov. readiness rank	E-participation index	E-participation rank
2008	0.2241	0.0492	0.648	0.3063	136	0.0682	116
2005	0.2231	0.0143	0.59	0.2758	139	0.0794	39
2004	0.143	0.013	0.59	0.248	141	0.0656	33

Table 3. Nigeria infrastructure index.

Year	Internet users index	PC index	Tel Lines index	Online pop index	Mobile subscription index	TV sets index	Broadband index	Infra structure index
2008	0.067	0.01	0.013	Not Used	0.156	Not used	0	0.0492
2005	0.009	0.009	0.0066	0.001	0.0214	0.072	Not Used	0.0143
2004	0	0	0	0	0	0.1	Not Used	0.013

Table 4. Nigeria (Service delivery by stages (percent utilization)).

Year	Stage 1 emerging	Stage 2 enhanced	Stage 3 interactive	Stage 4 transactional	Stage 5 connected	Total (%)
2008	8	32	27	0	0	67
2005	100	24	26	5	9	21.17
2004	87.5	12.6	20.2	0	3.7	13.5

Nigeria Communication Commission since 2001.

2. A submarine fiber optic cable link that is being managed by the country's government owned telecoms provider Nigerian Telecommunications Limited (NITEL).
3. Fiber optic cable links are now being laid to link various parts of the country by the telecoms companies, for example, Globacom Telecommunications which is the country's second national carrier has laid fibre optic cable links from Lagos to Kano, and Zaria to Jos.
4. A second submarine fiber optic cable connection project funded by the African Development Bank (ADB) has been approved. The fiber optic cable link will involve the laying of 7,000 kilometers of submarine fiber optic cable between Lisbon in Portugal, Accra in Ghana, and Lagos in Nigeria. The 1.92 terabytes per seconds of available bandwidth will be leased wholesale to telecom operators and internet service providers on an open access

basis.

- 5 The National Space Research and Development Agency (NASRDA) had launched the country's first communications satellite in 2007 (after the launch of the country's first earth resources satellite) with a second communication satellite (and second Earth Resources Satellite) already in the pipeline.
6. In the ICT sector, Nigeria had 117 internet service providers with 1.52 subscribers and 6.75 users per 100 inhabitants at the end of 2007. With the growth in the mobile subscriber base and practically all the telecom networks offering Internet browsing services more customers are now using their mobile phones to access online resources.
7. The Computers for All Nigerians Initiative (CANI) which is a programme which aims to improve Nigerians' access to computer hardware by providing a funding mechanism

whereby civil servants are able to purchase computers and pay back the loan at a low rate of interest.

8. The Petroleum Technology Development Fund (PTDF) and the Education Tax Fund (ETF) are also building and equipping computer centers in both secondary and higher education institutions across Nigeria.

Nigeria's Human Capital Index also showed an increase from 0.59 in 2004 - 2005 to 0.648 in 2008. Although the data used for computing this metrics is from International agencies, it shows that the efforts of government in developing education is starting to yield positive dividends.

Nigeria's Web Measure Index has moved from 0.143 in 2004 to 0.2241 in 2008, but the increase has not matched the improvements recorded in Infrastructure. The UN 2001 benchmarking e-government report (Benchmarking E-government, 2002) had given a detailed assessment of Nigeria's E-Readiness status, stating that Nigeria's government web sites were primarily for public affairs issues, with very little dynamic information to the citizens. The unofficial government web site is the Presidency. Quotes about combating corruption and allegiance to the presidency appeared on the page and the site itself did not provide direct access to all ministries and legislative or judicial issues, including laws and regulations or court decisions. The report further stated that Nigeria had no ministries online, and instead provided links to an array of agencies and departments concerning export regulations, ports authority, public enterprises, corporate affairs, and investment promotions. Information (or sites) relating to education, social services, health care or women and children specifically were conspicuously absent. It also observed that this pattern of unbalanced implementation was common among developing countries.

The subsequent reports (2004, 2005, 2008) published as the UN global survey reports only presented assigned index (and ranking) without specifically giving any indication of what the assessors found wrong with the country's e-government implementation strategies, apart from the general comment that most of the countries in the West African region continued to lag behind (at the bottom) because of low scores in the education, infrastructure and web assessment indices.

Nigeria's Web Measure Index should have improved more than what is indicated in Table 2 because the growth of ICT and the telecommunications system has transformed business practices, making business more cost effective, developing financial markets, E-learning (including open and distance learning) and the increased use of online financial transactions systems (E-Payment). For example, practically all the nation's leading banks and financial institutions, tertiary educational institutions, examination agencies and key governmental agencies like the Customs Service, Immigration Service and even The Nigerian Law School have ported their operations online, and this includes information dissemination, form

processing and the opportunity to carry out financial transactions online. The list of organizations cuts across both private and public sector organizations.

However, as can be observed from Table 4 which shows the breakdown for the service delivery by stages (percent utilization) index, the country was scored zero in the implementation of stage 4 and stage 5 of that e-government indicator in 2008, while the ranking for the previous years at this two stages were not better. The service delivery by stages (percent utilization) index is very important because it explains our poor ranking in the e-participation Index. Hence our use of ICT tools and materials has not been in a manner that provides a conducive environment for e-government service delivery processes (or e-governance).

IMPROVING E-GOVERNANCE SERVICES IN NIGERIA

Okot-Uma and Rogers (2004) identified four generic milestones which can serve as a "checklist" of salient features for any initiative leading to e-governance implementation, namely:

1. Stakeholder statement of requirements: This is based on consultations between key stakeholders in government, business /private sector and civil society, with a view towards the derivation of a mechanism for soliciting the views of the key stakeholders, and obtaining feedback from them.
2. Baseline assessment: This is an assessment of the state of e-readiness or e-preparedness, which is composed of the baseline assessment of critical success factors, existing ICT infrastructure, existing ICT info structure and public private partnerships. The baseline assessment of critical success factors is of a multidimensional nature that has a number of factors which are necessary initial conditions for a successful e-governance initiative. These include: Top-Level Commitment, Organizational Responsibility, E-Governance Policy "Orientation" and "Scope". Top level commitment implies that there is a formal recognition for the need to have in place a comprehensive e-governance strategy and a manifestation of presidential (or Ministerial) commitment with specific, directed responsibility for invoking and driving action on the delivery and implementation of an e-governance strategy, which is backed by an adequate budgetary resource allocation.
3. Blue Print for E-Governance: This implies that there will be a national e-governance masterplan which is the result of the articulation of stakeholders' statement of requirements (Stakeholder Expectations) and baseline assessments for e-governance. the plan should identify the strengths, weaknesses, opportunities and risks for e-governance implementation with recommendations for strategic options and an action plan for e-governance implementation. The recommendations should address

some of the following: Implementation as a Project Management Process, incorporating recommendations for resources, timelines, milestones and strategies; implementation as change management process, incorporating an Action Plan to effect changes that may arise from the introduction of an e-governance initiative in an otherwise traditional national economic environment; regulatory framework setting; and standards framework setting.

4. Implementation: This is viewed as a combined project management process and a change management process for e-governance. change management may be perceived as a critical aspect of enabling the implementation of an e-governance masterplan. The change management process will commence with Process enablement (which looks at the existing manual processes in each area defined for e-governance implementation and establishes solutions for computerizing and/or automating) followed by people enablement (which will verify whether the right human resources are in place for managing and driving the change). People issues like artifacts, skills, heuristics, experience, natural talent, social networks and training. Qualifications should be looked at in the context of change management to be able to determine, for example, ICT staff retention strategies for those change agents who would have been identified to see the process to a successful completion. People enablement is followed by Infrastructure Enablement which is the determination of the nature of infrastructure that e-governance applications and systems will be running on. Infrastructure enablement is followed by system enablement, which involves the procuring of ICT equipment and making it run on the established infrastructure in line with the business requirements of the e-governance vision. Change takes time and for people enablement this implies efforts aimed at changing practices, knowledge and skills, behavior, beliefs and values. The service of an e-governance change manager is imperative. The implementation of ICT initiatives, namely, ICT Infrastructure, ICT infostructure and their associated concomitants, must be managed as a programme of action running multiple, sequential and parallel projects. Therefore the successful implementation of an e-governance masterplan lies in the creation of a change management system, driven under the aegis of a change manager for e-governance.

The Nigerian government has in the last couple of years taken steps at the federal government level to give the country a sense of direction and harmonize the efforts of the disparate organizations and stakeholders in the development of, and utilization of ICT in Nigerian. The Federal Executive Council (FEC) approved a national information technology policy in March, 2001 and began the implementation with the formation of the National Information Technology Development Agency (NITDA) in April, 2001 and recognized the private sector as the

driving engine behind the IT sector. While NITDA has established the platform for ICT development, significant G2G awareness and set up a basis for e-government initiatives in Nigeria the government also adopted a private-public partnership of a tripartite joint venture registered as National E-Government Strategies Limited (NeGST), comprising government (5%), consortium of banks (15%) and a strategic partner (80%). The joint venture has a mandate "to create a practical strategy and a single architecture to guide the evolution of digital government solutions with consistent standards, operating platforms and applications across agencies and government systems". The launching of the e-registration of teachers in Nigeria project in May, 2006 was the first rollout of NeGST services.

The Nigerian government, recognizing the need to review the national information technology policy in the light of global changes in the IT sector internationally and in Nigeria, set up the "ICT for development" strategic action plan committee to develop a new ICT plan. NITDA in 2008 announced that the committee had finished its work and the country's new "ICT for development" tagged ICT4D was now ready. The national ICT4D plan is targeted at using ICT to achieve the government's seven point agenda and 'Vision 20: 2020,' thereby deploying ICT to achieve Nigeria's Millennial Development Goals, NEPAD development initiatives and the world summit on information society's plan of action. It contains actionable programs for short, medium and long term implementation by identified stakeholders (in conjunction with local and/or international private organizations).

While the government continues to improve upon the existing ICT Infrastructure through the activities of NITDA, NCC and other state owned and private organizations, and has taken the initiative to invite all stakeholders to formulate an ICT Masterplan for the country, Nigeria should have an e-government leader (or change manager) responsible for implementing the national e-government policy and ensuring that all the national government websites and e-government policies are integrated and coherent. This responsibility could be assigned to any of the two governments sponsored agencies responsible for charting a course for Nigeria's ICT and e-government services projects (or any other agency that the government wants to put in charge). The e-government leader (or agency) will be responsible for the design, implementation and maintenance of an integrated and coherent national e-government portal which will serve as a gateway for the provision of e-governance services by the government.

The need for a government agency to take charge of the development and maintenance of a National E-Government portal is illustrated with the example of the Hukoomi e-government portal (ictQUATAR, 2008) that was launched by Qatar (a developing country like Nigeria) in February 2008. Hukoomi is a one-stop shop for a wide-variety of government information and

services. It is a government-wide effort coordinated by iqtQATAR, and forty-eight government entities were reported to have been involved in the development of the portal. The user-friendly portal allows citizens, residents, businesses and visitors to easily access government information and services at any time of the day or night. From the portal all current online e-government services, new commercial registration services, and detailed information on government entities, including ministries, councils and authorities can be accessed. It houses nearly 275 services and 56 e-services. On the portal homepage users can find a variety of services and information relevant to them and to commonly used e-services, such as payments for electricity and water bills, health card application and resident permits. Portal users can also use the "search" feature on the website to quickly find pertinent information and services.

A plan for the coordinated implementation of e-governance services under the supervision of the e-government leader should be put in place. The plan should specify deliverables like resource acquisition and usage, timelines, milestones and strategies for e-governance implementation. Although the needed resources (ministries, state and local government web sites/portals, communications infrastructure etc) are being put in place by both private and/or public agencies, these should be coordinated and integrated within a nationally planned e-governance system. The plan should move the country beyond the "digitization or substitution stage" (Matthias and Gaëlle, 2003) which is characterized by the digitalization of the service delivery mechanisms thereby substituting the traditional interface with a digitalized one. For most of the less developed countries and some of the more developed countries, e-governance is still very much about computerizing existing government businesses and, to a lesser or greater extent, reengineering Government processes, systems and structures (Okot-Uma and Rogers, 2004). The plan should introduce substantial changes in the way services are being produced. It should provide the possibility for enhance transaction services like online bidding for public contracts, online tracking of permits, online form submission, online financial transactions with all security issues adequately addressed, and the inclusion of e-consultation and e-decision making which will allow two way communication between the government and the citizens in a secure manner.

We can also intentionally work towards improving our low ranking in the Web Measure Index when the Global Survey reports are being prepared by noting the indicators that the assessors are really scoring. These are:

1. The availability of E-Government services among five key ministries, namely: Health, Education, Welfare, Labor and Finance. These are the primary government sites being used for the survey.

2. Countries that have online consultation as part of their e-government services scored high in e-participation. For instance the United States of America scored the highest (1.0000) on the e-participation index in 2008 due to its strength in e-information and e-consultation, which enables citizens to be more interactive with their government while the United Kingdom experienced the biggest drop in ranking from the previous survey, descending from the leader position in 2005 to 24th in 2008 and this was mainly due to the migration of e-participation products and services from its national portal to local government portals. The e-participation survey does not take into account regional and local portals or websites, but only national portals or websites and selected ministries.

3. The methods used for the computation of the Indices will continue to change as new technologies are deployed, as happened in the 2008 report and this will continue to affect our ranking. This implies that we must keep abreast of the new innovations in E-Service delivery (like the increased use of Web 2.0 tools which can be used to develop two-way communication with the citizenry) and deploy them also.

CONCLUSION

The main challenge of e-government implementation in any developing country is whether the intended objective of reaching the citizens is actually achieved. E-government should reach all the people who need government services regardless of their location, age, status, language, or access to the Internet. The e-government global survey is a means by which governments can assess their level of preparedness for the provision of services to their citizens using modern ICT and telecommunication techniques. This can be achieved by the provision of adequate ICT infrastructure, improving online services and citizens' access to these services and dedicating itself to improving the country's literacy level. A country will benefit if it critically examines its present state and then identifies those areas that it needs to improve. Nigeria still needs to improve further on its ICT services and telecommunications systems. Mobile telephony holds some promise for increasing access for marginalized sectors of the population and there has been an exponential growth in mobile subscriptions and all Nigerian states now have some form of mobile coverage, however, there are still millions of Nigerians with limited or no access to ICT services due to lack of network infrastructure. ICT infrastructure cannot work without a regular source of electrical power. More effort should be devoted to improving the country's epileptic power supply. The nation still needs to commit more resources into the development of its Human Capital, address the internal digital divide between the literate and illiterate citizens, while the nation's websites

set up by government and private agencies should be integrated and reviewed to make them e-service compliant within the context of a national portal.

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