

Chapter 2

E-Democracy for Smart City Lagos

Femi Olokesusi and Femi Ola Aiyegbajeje

Abstract Information and Communication Technologies (ICTs) have strengthened the democratic processes of most democracies in the world. The adoption of E-democracy is to encourage good governance and to properly monitor the democratic processes for the benefits of Lagos residents. Lagos has the fastest and most lucrative ICT market in Nigeria and Africa, yet in spite of this obvious and significant progress, little is known about its E-democracy adoption. This paper provides a comprehensive review of E-democracy in order to assess the levels of E-democracy implementation, evaluate critical success factors of E-democracy implementation and discusses the successes and failures of E-democracy. The analysis of the impact of E-democracy on service delivery in Lagos is also provided. It notes that Lagos is facing a number of challenges in the introduction of E-democracy. Given the importance of the successful implementation of electronic democratic services and from a practical perspective, the paper suggests that government should take a positive position towards the factors which will bring about effective and efficient E-democracy in Nigeria, particularly in Lagos. Lagos State Government needs to widen access to ICT services and guarantee enabling environment for attracting the right level of investments. The paper concludes that there is a lot of hope on the potential of E-democracy to transform the internal efficiency of government and the relationship of government with citizens.

Keywords E-democracy • Smart city Lagos • Information and communications technology • Lagos

F. Olokesusi

College of Social and Management Sciences, Afe Babalola University,
Ado-Ekiti, Ekiti State, Nigeria
e-mail: femioloke@yahoo.com

F.O. Aiyegbajeje (✉)

Department of Geography, Faculty of the Social Sciences,
University of Ibadan, Ibadan, Nigeria
e-mail: femidavid2002@yahoo.com

2.1 Introduction

Democracy is a system of governance that establishes a social contract between the citizens and the representatives [1]. This therefore necessitated prompt responsive communication between the people and the government. Democracy as a form of governance stretches beyond campaign, voting and other electoral practices as its basic components. It also involves interaction among participants in a democratic setup. Democracy actually entails the governing of a people by the people but with the use of electronic (Information and Communication Technology), democracy becomes e-democracy. The 'people' in this context, refers to the elected people and the governed or voters resident in the state. E-democracy is the use of information technologies (such as Wide Area Networks (WAN), the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other forms of human endeavours. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. By putting a suffix "e" in front of democracy means nothing more than using information technology tools to facilitate, improve and ultimately extend the exercise of democracy [1].

E-democracy is positioned as a tool in enhancing and making the democratic process more accessible; ensuring citizen participation in public policy decision-making. E-democracy allows a broader influence in policy outcomes as more individuals involved could yield smarter policies; increasing transparency and accountability, and keeping the government closer to the consent of the governed, increasing its political legitimacy, especially considering Lagos state where residents continuously accused the state government of lack of transparency and bad governance which constitute hindrances to the development of democracy and democratic principles in the state. In this regard, representative democracy has failed and hence has led to frustration and reduced trust in democracy but the adoption of electronic based democratic practices in Lagos state has re-enacted a ray of hope. The growth of ICT does not only focus its attention on the internet but also spreads its wings to cover telecommunication, whereby people are connected and can communicate to themselves through cell phones, home personal computers and other medium. From the available statistics, the Internet facility has been discovered to be the most used medium of communication than the personal computers and the telephone put together [2]. For instance, the use of *Facebook* and *Twitter* in the last general elections of 2011 and 2015 in Lagos Nigeria was very impressive. It created a necessary platform for the contestants and the electorates to interact.

E-democracy is an attempt aimed at developing digital citizenship (Netizen) through the use of information and communication technology (ICT) to create personal contact, dialogue and consultation among participants in democracy [3]. E-democracy offers a level playing ground and bridge communication gap among administrators, citizens, associations and public and private entities across the

various tiers of government. E-democracy, presents a new form of democratic practice carried out through information and communication technology. One essential elements of E-democracy is the relevance of residents' participation in decision making. According to Azeta et al. [4], E-democracy is an innovation still in its infant stage; and is still subject to much debate and activity within government, civic oriented groups and societies around the world. Through the internet and social media, government and its officials communicate with the residents more effectively, and also aid the communication between citizens and their fellow citizens to discuss political and governmental issues which could be a resourceful contribution to the improvement of governance and most democracy. Citizen-participation in governance is at an increasing level in the nation owing to the involvement of ICT in governance. E-democracy does not just stop at the levels of the citizens, but goes as far as fostering the communication among administrators, associations, public and private entities among the various tiers of governments.

ICT has the potential to engage people in all areas of the political process such as the generation of information, enhanced deliberation among citizens, and most of all enhance participation in decision making [3]. According to Policy and Legal Advocacy Centre [5], the 2011 elections in Nigeria witnessed a remarkable use of the social media as a tool for political communication. However, in the 2015 election in Lagos, the social media became more potent and largely deployed to execute the elections in Lagos. The social media pass information freely because it is unregulated. Information pertaining to elections and campaign flew around on social media applications such as *WhatsApp*, *BBM*, *blogs*, *Facebook*, and *Twitter*. ICT is also one of the best means of bridging the communication gaps between the people and the government. Through the internet, it is now possible for the government to communicate with the residents easily via social media, and also aids the communication between residents and their fellow residents of the state to discuss political and governmental issues which could be a resourceful contribution to the improvement of governance and most democracy.

One of the most embraced aspects of ICT in Nigeria is the mobile telephone technology. A new publication *sub-Saharan Africa Mobility Report* by Ericson says that Nigeria is the largest and fastest telecommunication market in Africa with about US\$38 billion investment and active mobile subscription of over 150 million as at September 2016 [6]. Further, with respect to subscription to mobile telephone services, the Nigeria Bureau of Statistics (NBS) report of the first quarter of 2016 puts Lagos State as having the highest active mobile telephone and Internet subscribers in the country [7]. Nigeria recorded about 148.74 million active voice and internet subscribers in the first quarter (Q1) of 2016. In its quarterly report on Nigerian Telecommunications in the first quarter of 2016, the National Bureau of Statistics (NBS) revealed that the report represents the total number of active voice and internet subscribers in the 36 states of the country including the FCT at the end of the first quarter 2016 disaggregated by States. The report showed that the number of active voice subscriptions in the country stood at 148.74 million at the end of Q1 2016.

According to the NBS, out of the 36 States in Nigeria, Lagos State accounted for the largest share of active voice subscribers with 19.04 million (12.8%) of the total, followed by Ogun State with 8.53 million subscribers (5.7%), Kano State with 7.81 million (5.25%), Oyo State with 7.53 million subscribers (5.06%), then FCT and Rivers State with 6.03 million (4.05%) and 5.84 million (3.93%) respectively [7]. It is observed that all of the top five States with respect to active voice subscriptions had total subscribers in excess of their official population number as provided by the Nigerian Population Commission, except for Kano and Rivers, whose official population figures exceeded the number of active voice subscribers at the end of Q1 2016. On the other hand, the following States of the Federation; Bayelsa (1.11 million), Yobe (1.40 million), Ekiti (1.42 million) and Ebonyi (1.43 million) had the smallest number of active subscriber as of Q1 2016 [7].

Against this backdrop, the objectives of this study are to appraise E-democracy practice in Lagos city by assessing the levels of E-democracy implementation, critical success factors of e-democracy implementation, and analyse the impact of E-democracy on service delivery in Lagos state. Lagos is one of the 36 federating units of Nigeria and not a fully autonomous state because of the several provisions of the Constitution of the Federal Republic of Nigeria which does not give the Federating States absolute powers to operate as independent units of the Federation as obtained in developed democracy such as the United State of America.

2.1.1 Lagos in Brief

Lagos is one of the 36 federating units in Nigeria. It is located in the coastal part of the south-western part of the country Nigeria (see Fig. 2.1). Lagos is the largest city in Nigeria and arguably the most populous city in Africa. Lagos is often referred to as the economic capital of Nigeria. Lagos city is a huge metropolis with streaming population in the south-western archipelagos of the Nigerian coastline which includes the mainland and the surrounding Islands. Lagos is also the former capital city of Nigeria; it has since been replaced by Abuja. Abuja city officially gained its

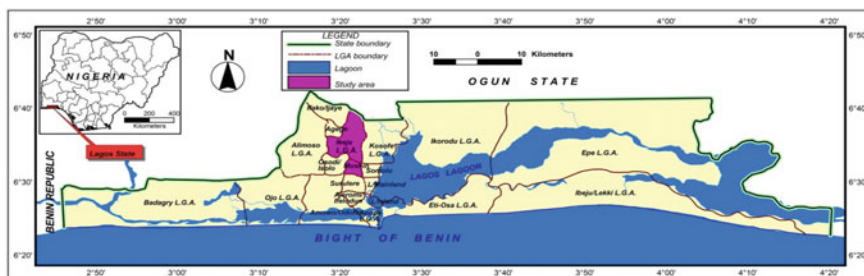


Fig. 2.1 Political map of Lagos State, Nigeria. *Source* [20]

status as the capital city of Nigeria on 12 December 1991; although the decision to move the federal capital had been made in Decree No. 6 of 1976.

The leading air and sea ports in Nigeria are situated in Lagos. The Lagos Sea Port is operated by the Nigerian Port Authority and it is divided into three main sections: Lagos port, Apapa Port and Tin Can Port, all located on the Gulf of Guinea. Oil and petroleum products provide 20% of GDP and about 95% of foreign exchange earnings in Nigeria. Lagos is also Nigeria's commercial centre as majority of the country's largest banks and financial institutions are located here. More than half of Nigeria's industrial capacity is located in Lagos's mainland suburbs, particularly in the Apapa, Matori, Ilupeju and Ikeja industrial estates. A wide range of manufactured goods are produced in the city.

2.2 E-Democracy Implementation and Achievements in Lagos-Nigeria

Basically, E-democracy represents the use of electronic communications technologies such as the Internet to enhance and advance the democratic process of a republic. In this part of the world, there exists a low attitude of participation of the citizens in governance, but with the advent of electronic communication technology, the level of awareness and participation has tremendously increased among the citizenry. The benefits of having an E-Democracy system are numerous: It reduces the success of rigging during elections. It is time saving because it reduced some undue electoral processes. It allows for easy communication between the citizens and their elected candidates. And it allows for participatory governance.

The E-democracy implementation assesses the citizens' E-participation (E-information, E-consultation, E-decision-making), E-campaign, E-voting, E-forum, and E-monitoring of projects. However, in Lagos city, only E-information, E-campaign and E-monitoring of projects have been successfully utilized. E-information involves dissemination of information about government ministries, departments and agencies while E-campaign involves the use of social media to canvass for votes. Government also uses it to disseminate vital information to the residents of the city. Electronic-monitoring of projects involve the use of the citizens residing where government projects are being executed to report to the government via a dedicated social media platform such as *Facebook*, *Twitter*, and various dedicated websites) created by government for the purpose of monitoring projects. Another important aspect of E-monitoring of projects is the use of electronic facilities to monitor the traffic situation in the metropolis. This has largely help motorists to plan their route effectively. To some extent, these techniques have been successful but not without some shortcomings such as irregular update of information, disseminating of hate campaigns against political opponents as evidenced in the 2015 elections in Lagos.

2.2.1 *E-Participation*

E-participation comprises of a participatory processes including E-information, E-consultation, E-decision-making. *E-information*: This assesses the state government's websites and portals to determine if governments are providing the basic information that serves as the foundation for citizen participation. Lagos state government has about twenty-eight (28) website addresses for the state ministries [8] and eighty-seven (87) official websites for the state departments and agencies [9]. Although these websites are not interactive, but provide vital information about government activities in the respected ministries, departments and agencies (MDAs). The major problems associated with this platform are poor or no feedback, not providing updated information on the website, and in some cases, the websites are not functioning. Appendix 1 shows few examples of the website addresses of the ministries in Lagos State Government while Appendix 2 similarly indicates the website addresses of the State Government's Departments and Agencies.

2.2.2 *E-Campaign*

E-Campaign is the utilisation of various interactive platforms on electronic communication devices by electoral candidates as promotional campaign strategies to attract more support from voters. It also provides the political parties a platform not only to disseminate their ideologies and manifestoes to the voters but also to get feedback. E-campaign of various forms includes *Facebook, Twitter, WhatsApp, E-mail, Blog, Youtube, Friendster, Myspace, SMS, Forum* and others. E-campaign in Lagos is fast gaining ground in the political space since 2007 to date. This is largely because of the wide acceptance of ICT and coupled with high number of mobile telephone users among the citizens. The use of ICT in political campaigns was highly deployed in the last previous elections of 2011 and particularly 2015 in Lagos State because most of the social media platforms were accessed via mobile telephone.

Adoption of the Internet usage as one of the promotional political campaign strategies is widespread in the developed countries. For instance, in the 1997 and 2001 UK general elections, it was asserted that the internet plays an important campaign role [10]. Similarly, the 2012 and 2016 US Presidential elections are examples in justifying the transformed use of Internet through the development of websites and email [11]. The adoption of this technology was also experienced in the 2015 governorship and state house of assembly elections held in Lagos State and some of other States of the Nigerian Federation.

The Internet technology adoption took a similar trend in the Nigeria political scene, especially in the 2011 and 2015 general elections. The application of e-campaign strategies in the Nigeria's 2011 and 2015 elections in Lagos further

raised the level of awareness among voters and citizens giving the high level of mobile telephone subscription in Lagos State (12.8%) which is the highest in Nigeria [7]. During the 2011 and 2015 general elections in Lagos, the E-campaign strategy was adopted by all electoral candidates across party lines in all the elections.

The social media was hugely deployed with more than 134 million users of mobile phones and about 70 million Nigerians on the internet, according to statistics from the Nigerian Communication Commission. It therefore explains the reason social media played an influential role in electioneering campaign in Lagos in the 2015 elections. The most accessible new media consisting of *Facebook*, *Twitter*, *Youtube*, *Instagram*, *Google Plus*, *WhatsApp* and *LinkedIn* among many others have become a veritable tool for interacting and mobilizing citizens towards active participation in the political process and democratic projects. Their flexibility, accessibility and affordability have made them attractive to the youths who are the most active users and the largest voting bloc.

2.2.3 E-Voting

The goal of any voting system is to establish the intent of the voter and transfer that intent to the vote counter. The efficiency of the voting method and the accuracy of the vote counter are the crucial determinants of the ability and capacity of the system to correctly determine the wish of the voters [12]. Electronic voting (E-voting) is the use of ICTs in the conduct of elections. This idea was adopted in Nigeria during the 2015 elections to address the major problems associated with elections. These problems include missing names of some registered voters, intimidation and disenfranchisement of voters, multiple and under aged voting, snatching or destruction of ballot boxes, miscomputation and falsification of results [13, 14]. The only aspect of the E-voting that is still practicable in Nigeria is the use of Card Reader Machine (CRM). The introduction of card reader machine and permanent voters card (PVC) by the Independent National Electoral Commission (INEC) was aimed at stemming the tides of the problems listed earlier. This card reader machine is dedicated to read the Permanent Voters Card (PVC) issued to eligible voters. The PVC is screened by the card reader machine in order to check for fraudulent practices among the voters.

Unfortunately, as beautiful and workable this initiative is, there were still some shortcomings and challenges identified in the 2015 general elections in Nigeria. These include the inability of card reader to identify some PVCs, lack of back-up batteries to power the card readers, poor electricity, people's attitude towards the technology, poor technical know-how among the INEC staff and ad hoc staff among others.

For the success of implementing the e-voting in Lagos and by extension Nigeria, the provision for the adoption of E-voting must be inserted in the constitution of the country to make it legal for conducting future elections. Also there should be a concerted effort in reviving the power and ICT sectors for quality service delivery.

The National Orientation Agency (NOA) needs to embark on a serious campaign and advocacy on behavioural change and technology acceptance of e-democracy.

Despite the foregoing shortcomings, E-voting still retains a measure of attraction for the electoral process in Nigeria. It is believed that E-voting can facilitate the processes of free and fair elections in Nigeria. The proposition on the introduction of E-voting in the electoral process of Nigeria subsequently reached the Nigerian Senate again, as component of a new Electoral Act to drive the 2015 general elections but was rejected by the Nigerian Senate April 2014.

2.2.4 E-Poll

Provides available functionalities for the creation of opinion polls for users to cast their opinion on trending issues. This is a method of assessing and evaluating government's progress and public opinion on a particular issue of interest. It is also used in determining the acceptance of electoral candidates before the election. In Nigeria, this is mainly done by both print and non-print media houses e.g. Channels Television, African Independent Television, Punch Newspaper, Guardian Newspaper etc. Sometimes, the use of mobile telephone is deployed and this involves the use of mobile telephone to send short messages (sms) to dedicated members of the public for or against an opinion.

2.3 Strengthening E-Democracy in Nigeria

Whereas, there is evidence of the diffusion of E-democracy in Lagos, E-democracy is yet to be fully deployed in the democratic space of Nigeria especially in the area of E-voting despite its immense importance. A critical area where E-democracy needs to be seriously strengthened includes provision of virile legal frameworks, because the existing legal frameworks only allows for a physical and manual voting where a voter is expected to cast his vote by thumb-printing a ballot paper and then drop the ballot paper in a ballot box provided by INEC at the polling booth. Also, the electricity provision must be enhanced and with a serious advocacy on behavioural change and technology acceptance.

All this efforts will go a long way to entrench E-democracy in Lagos and Nigeria at large. As suggested, before adopting any form of electronic voting method, a critical appraisal of such a method must be undertaken [12]. Such chosen system must as a matter of fundamental necessity possesses a certain basic attributes that will recommend it. These include among others: the system must increase and guarantee voter confidence and secrecy; must be voter and user friendly; offer the best in terms of reliability, usability and recountability; and must be secure.

2.3.1 *Success of E-Democracy in Lagos*

E-democracy has attained some level of successes in making Lagos a smart city. As earlier mentioned, one of the areas of success of E-democracy in Lagos State are in the area of E-participation, E-campaign, e-monitoring of projects, E-poll. Key among these successes is seen in the E-monitoring of projects and one major area this has contributed is the rapid growth of infrastructural facilities. This was made possible because projects are being monitored via the social media where citizens can update government officials in charge of the projects latest development without these officials being on the site. Also, by monitoring the traffic situation in the city has a way of helping to create an enabling environment for businesses to thrive because we all understand the negative impact that a chaotic traffic environment can do to businesses.

To better understand the successes and achievements what E-democracy has brought to infrastructure development in Lagos metropolis through the adoption of E-monitoring of projects concept, few critical infrastructures are critically reviewed below to buttress this fact.

2.3.1.1 **Transportation**

The transportation sector is a key factor for the economic development of any society because of the important roles it plays in the movement of people, services and information. For government to achieve this, E-democracy has helped the movement of about 7 million passengers per day [15]. The scope of E-democracy in this regard include the introduction of E-ticketing for Bus Rapid Transit (BRT), involvement of the masses in decision making via media, introduction of traffic radio 96.1 FM station to divulge information pertaining to traffic situation in all areas of the metropolis (see Fig. 2.2).

Presently, road transportation accounts for over 90% of domestic passengers and freight movement on about 30,500 km State owned roads and 129,577 km of Local government roads in Lagos State [16]. There is a daily haulage of 6 million passengers between the Mainland and Lagos Island in about 75,000 unregulated mini-buses. In a bid to reform this situation, the Lagos State Government in collaboration with the World Bank initiated the Lagos Urban transport Project (LUTP), to create an efficient and effective integrated inter-modal mass transit system in the State. The Lagos State Government in its effort to improve the public transport system has through LAMATA deliberately eased out the old para transit buses popularly called *Molues* to give way to brand new and more comfortable buses called Bus rapid Transit (BRT) and LAGBUS plying over dedicated lanes within the metropolis. The BRT Lite scheme commenced operation with a total number of 220 Ashok Leyland high floor capacity buses along Mile 12—TBS corridor from 6:00 am to 10:00 pm daily. Over 900 bus pilots/bus officers and 57 inspectors/monitoring officers were employed for BRT operations with about 106



Fig. 2.2 A typical traffic situation in Lagos during peak period. *Source* [16]

bus-stops [17] (see Fig. 2.3). In mid-2016, about 450 new buses were added to the declining fleet.

The pilot BRT Lite scheme has performed creditably with over 400 million passengers served in the last five years. Available statistics indicate that the Average daily ridership is about 180,000 passengers. This scheme has brought about a reduction of 30% in average fares and fare stability, 40% in journey time, 35% in average waiting time and reduction in exposure to robbery on public transport [17]. Since 2013, the Lagos Metropolitan Area Transport Authority (LAMATA) commenced utilisation of e-ticketing to board BRT buses [15].

All this was achieved by engaging the populace via social media and other useful medium of information dissemination. The introduction of E-ticketing is one of the useful contributions of E-democracy to transport development. Another important area of E-democracy involvements in transportation development in Lagos is the inauguration of the state's traffic radio station (96.1 FM) in a bid to rid the roads of gridlocks. The radio provides traffic news to assist motorists make the right decisions that will in turn help to decongest the roads.

2.3.1.2 Health

The Lagos State Ministry of Health in collaboration with the State's Ministry of Science and Technology has initiated the Lagos State eHealth project which is an



Fig. 2.3 BRT terminals at Tafawa Balewa Square, Lagos. *Source* [23]

interactive Hospital Information System Software in some of the State owned hospital facilities. The Health Management Information System (HMIS) is a broad based modular Hospital Administration System Database solution that allows the operational procedures and patients' flow in health facility to be harmonized for prompt and effective healthcare delivery. The pilot phase of this project commenced fully in January, 2009 at the Lagos State University Teaching Hospitals, (LASUTH), General Hospital Isolo, Lagos and currently on its second phase which involves ten (10) General Hospitals.

With this project, any patient in a Lagos State hospital will be registered on a central computer server and since it is an integrated system, the doctors treating a patient will have simultaneous access to the up-to-date medical records and treatment information. The links to the diagnostic modules ensures that tests can be ordered by doctors online while results can be returned via the same channel [18]. The e-Health strategy covers a wide range of services namely: electronic health records, telemedicine, consumer health informatics, health knowledge management, virtual healthcare teams, mobile health (m-Health), and healthcare information systems [19]. Also, a study by [20] indicated that mobile telephone technology has served as a platform to offer better healthcare management because healthcare services are still being offered to out-patients despite the fact that they are far away from the hospital.

2.3.1.3 Emergency Medical Services

Increasing urbanization and industrialization of Lagos State has led to a considerable increase in the number of road traffic, industrial and marine accidents on one hand and other domestic medical emergencies on the other hand, hence the strengthening of the existing hospital care facilities i.e. Lagos State Emergency Medical Services (LASEMS) and the establishment of the pre-hospital care service i.e. the Lagos State Ambulance Services (LASAMBUS) in 2001 (see Fig. 2.4). Both services run on a 24/7 basis. This has significantly improved the response time and quality of care with attendant improvement in morbidity and mortality rates occasioned by medical emergencies. A dedicated (easy-to-remember) phone hotline '123' was created to link the public, LASEMS, LASAMBUS and the Ministry of Health. This service provides a free treatment within the first 24 h. Fifteen ambulance points throughout the state are provided presently with plans to add five more points in the nearest future. Ten (10) units of mobile intensive care unit (MICU) ambulances (with capacity to administer advanced life support) are in the fleet of ambulances. In addition, the Marine rescue Unit was also established consequent upon increased incidence of vehicles plunging across the bridges into the lagoon [18].

In addition, as shown in Fig. 2.5, the State has launched Nigeria's first medical helipad at the Lagos State University Teaching Hospital (LASUTH). The helipad is to boost life-saving chances of the hospital, and to provide a traffic-free transport for accident victims and others. The helicopter ambulances are equipped with modern ICT gadgets to aid communication for optimum healthcare delivery.



Fig. 2.4 Lagos state ambulance point in Ikeja, Lagos. *Source* [18]



Fig. 2.5 Medical Helipad at the Lagos State University Teaching Hospital (LASUTH), Ikeja, Lagos. *Source* [24]

2.3.1.4 Housing

The way and manner land ownership, land title, documentation and transaction are structured, have a direct impact on the state's economy and general development. Therefore, government must make the processes seamless because land provides shelters, food, minerals and other resources needed for urban development. In view of this, the government of Lagos State commissioned the computerization of the land registry and the launch of the Cadastral Mapping and Geographic Information System (Geo-Spatial Information Survey) scheme in the office of the Surveyor-General of the State [21]. All these are geared towards providing better and effective service to the citizens and the business community at large.

As a result of the introduction of ICT in land registration and other processes that could aid rapid housing development, the Lagos Ministry of Housing has embarked on increasing the numbers of smart houses on a yearly basis. For instance, in 2010, a total of 2892 units of buildings ranging from one to four bedroom apartments were built in various part of the state. In 2011, 643 units of buildings were also built in various parts of the state as well. However, in 2012, 434 units of flats were built compared with the previous years [22]. The beautification of the city through the construction of many relaxation parks, roundabouts and planting of trees and grasses along major highways are parts of numerous efforts of the state government to smartly build the city. The State has completed about 116 beautification projects in the State making the metropolitan Lagos more beautiful and livable.

2.3.1.5 E-Governance-Tax Payments

The Lagos State Government Electronic Banking System of Revenue Cycle Management (LASG EBS-RCM) is aimed to Go-online with the Direct Bank Lodgment System (DBLS) of the revenue collection process and provides information for tax administration and planning while monitoring and coordinating all revenue generating activities of the state. It is an information network system linking tax stations and other revenue agencies to lodgment banks. The system uses an E-Pay messaging system for inter-bank communications by creating and maintaining a database of all revenue collection activities thus allowing for on-line tracking. This system has largely assisted the State in constantly increasing the internally generated revenue base, provides easy administration, monitoring and co-ordination of all revenue activities in the state and has been assisting to identify fraudulent debit, diversion of funds and excess charge on the state accounts [20].

2.3.1.6 Security and Surveillance

Under the flagship ‘Rapid Response Squad’ (RRS) project, the Lagos State Government has spent several billions of naira on the acquisition of ICT gadgets to assist the smooth operation of RRS. The RRS is a security outfit made up of the police and military created to respond swiftly to any security breach in any part of the metropolis. Recently, over one billion naira was realised as cash donations from various corporate organisations and individuals to support the Lagos State Security Trust Fund (LSSTF) towards advancing a safer Lagos. The fund used to acquire 10 brand new Hilux vehicles and 15 motorbikes were handed over to the Lagos State Police Command as part of the state government’s commitment to ensure a secured and investors’ friendly state. Likewise, 100 new power bikes, 10 armoured tanks and a helicopter have been acquired by the state government to reinforce security in the state. This is in addition to the purchase of 100 new squad cars for a new initiative tagged Special Operation Service (SOS), which will harmonize community policing in partnership with the RRS.

Given that we now live in an ICT driven world, the state government is already working on a scheme to incorporate technology into the state’s security system. Through this scheme, the whole of Lagos would be electronically monitored in order to prevent violent crimes, protect lives and property and to be able to prevent crisis and to manage crime situations at any location in the state. The technological device has the ability to recall events in real time at an accurate date and provide information that may lead to the detection and prosecution of criminal activities. The device is to be used in sensitive parts in the state.

2.3.1.7 Emergency and Disaster Management

The Lagos State Government has provided ambulances with a direct emergency number at strategic positions in the metropolis for immediate response to emergencies. Also, the use of ICT is being deployed in disaster managements such as fire incidences, flooding and other challenges. For instance, the Lagos Fire Service provided several mobile telephone emergency numbers to be reached in case of any fire or related disasters. Also, the Lagos State Emergency Services (LASEMS) deployed the use of ICT to disseminate information on impending flooding in 2014, 2015 and 2016. This measure went a long way to reduce the negative impact of flooding in those years. In addition, estimated properties worth N992.1 billion has been saved in the cause of fire/rescue operations Lagos metropolis, while an estimated properties worth N436.55 billion were lost [9].

2.3.2 Failures of E-Democracy in Lagos

Irrespective of the successes of e-Democracy outlined earlier, there exist some failures as well. These failures are not because E-Democracy is not a viable concept. The shortcomings are as a result of the prevailing conditions in this part of the world. The failure of E-democracy in Lagos has been largely due to poor electricity infrastructure, abuse of the concept where the idea is used to spread hate campaign. Also, the attitude of politicians towards the transparency and sanity which E-voting will bring to the political space is one major failure of E-democracy.

2.4 Conclusion

From the foregoing, e-democracy is thriving in other aspect of the electioneering processes such as E-campaign and the screening of eligible voters using CRM. Another critical area where E-democracy is contributing positively is in the area of e-monitoring of projects. This has largely being helpful in the provision of critical social infrastructure in Lagos metropolis. Therefore, the potential of E-democracy to transform the internal efficiency of government and the relationship of government with citizens is one of the ultimate panaceas that would place Nigeria's democracy on the global democratic map. However, E-democracy in Lagos is currently marked by some level of apathy arising from the constitutional framework and the history of elections in Nigeria. The history of elections in Nigeria has shown that Nigerians cannot rely on the technology as veritable means of installing the kind of leaders they want and by implication in changing the material conditions of their existence. The overarching implication is the need for government to sensitise Nigerians on the imperative of genuine transparency in the electoral process.

Appendix 1: Lagos State Government Ministry Website Addresses

S/N	Ministry	Website address
1	Ministry of Agriculture	www.agriculture.lagosstate.gov.ng
2	Ministry of Commerce, Industry & Cooperatives	www.mcic.lagosstate.gov.ng
3	Ministry of Economic Planning & Budget	www.mepb.lagosstate.gov.ng
4	Ministry of Education	www.education.lagosstate.gov.ng
5	Ministry of Energy & Mineral Resources	www.memr.lagosstate.gov.ng
6	Ministry of Establishments, Training and Pensions	www.metp.lagosstate.gov.ng
7	Ministry of Finance	www.finance.lagosstate.gov.ng
8	Ministry of Health	www.health.lagosstate.gov.ng
9	Ministry of Home Affairs	www.homeaffair.lagosstate.gov.ng
10	Ministry of Housing	www.housing.lagosstate.gov.ng
11	Ministry of Information & Strategy	www.information.lagosstate.gov.ng
12	Ministry of Justice	www.justice.lagosstate.gov.ng
13	Ministry of Local Government & Community Affairs	www.mlga.lagosstate.gov.ng
14	Ministry of Physical Planning & Urban Development	www.mppud.lagosstate.gov.ng
15	Ministry of Science & Technology	www.most.lagosstate.gov.ng
16	Ministry of Special Duties & Intergovernmental Relations	www.specialduties.lagosstate.gov.ng
17	Ministry of the Environment	www.environment.lagosstate.gov.ng
18	Ministry of Transportation	www.transportation.lagosstate.gov.ng
19	Ministry of Waterfront Infrastructure Development	www.waterfront.lagosstate.gov.ng
20	Ministry of Works & Infrastructure	www.worksandinfrastructure.lagosstate.gov.ng
21	Ministry of Youth & Social Development	www.youthandsocialdevelopment.lagosstate.gov.ng
22	Ministry of Tourism, Arts & Culture	www.tourismartandculture.lagosstate.gov.ng
23	Ministry of Women Affairs and Poverty Alleviation	www.wapa.lagosstate.gov.ng
24	Ministry of Wealth Creation And Employment	www.wealthcreation.lagosstate.gov.ng
25	Lagos State Sports Commission	www.sportcommission.lagosstate.gov.ng
26	Central Business Districts	www.cbd.lagosstate.gov.ng
27	Office of Overseas Affairs and Investment	www.overseasaffairs.lagosstate.gov.ng
28	Office of Civic Engagement	www.civicengagement.lagosstate.gov.ng

Source [8]

Appendix 2: Lagos State Government: Department/Agency/Office Website Addresses

S/N	Department/Agency/Office	Website address
1	Drain Ducks	www.drainducks.lagosstate.gov.ng
2	Lagos State Film and Video Censors Board	www.lsfvcb.lagosstate.gov.ng
3	Hotel Licensing Authority	www.hla.lagosstate.gov.ng
4	Judicial Service Commission	www.jsc.lagosstate.gov.ng
5	Kick Against Indiscipline(KAI) Brigade	www.kai.lagosstate.gov.ng
6	Lagos State Agriculture Inputs Supply Authority	www.laisa.lagosstate.gov.ng
7	Lagos State Agricultural Land Holdings Authority (ALHA)	www.alha.lagosstate.gov.ng
8	Lagos State Agricultural Development Authority	www.ada.lagosstate.gov.ng
9	Lagos State Blood Transfusion Services	www.bloodtransfusion.lagosstate.gov.ng
10	Lagos State Building Control Agency	www.buildingcontrol.lagosstate.gov.ng
11	Lagos State Security Trust Fund	www.lstf.lagosstate.gov.ng
12	Lagos State Infrastructure Asset Management Agency, LASIAMA	www.lasiama.lagosstate.gov.ng
13	Lagos State Council for Arts and Culture	www.artandculture.lagosstate.gov.ng
14	Radio Lagos	www.radiolagos.lagosstate.gov.ng
15	Eko FM	www.ekofm.lagosstate.gov.ng
16	Lagos State Electricity Board	www.electricityboard.lagosstate.gov.ng
17	Lagos State Emergency Management Agency	www.lasema.lagosstate.gov.ng
18	Lagos State Environmental and Special Offences Enforcement Unit	www.taskforce.lagosstate.gov.ng
19	Lagos State Environmental protection Agency	www.lasepa.lagosstate.gov.ng
20	Lagos State Examination Board	www.examboard.lagosstate.gov.ng
21	Lagos State Ferry Services Corporation	www.ferryservices.lagosstate.gov.ng
22	Lagos State Independent Electoral Commission	www.lasiec.lagosstate.gov.ng
23	Lagos Traffic Radio	www.trafficradio.lagosstate.gov.ng
24	Lagos State Liaison Office	www.liaisonoffice.lagosstate.gov.ng
25	Lagos State Library Board	www.libraryboard.lagosstate.gov.ng
26	Lagos State Metropolitan Area Transport Authority	www.lamata.lagosstate.gov.ng
27	Lagos State Muslim Pilgrims' Welfare Board	www.muslimpilgrims.lagosstate.gov.ng
28	Lagos State Pension Board	www.pensionboard.lagosstate.gov.ng
29	Lagos State Planning & Environmental Monitoring Authority	www.environmentalmonitoring.lagosstate.gov.ng
30	Lagos State Printing Corporation	www.printing.lagosstate.gov.ng
31	Lagos State Public Service Staff Development Centre	www.staffdevelopment.lagosstate.gov.ng

(continued)

(continued)

S/N	Department/Agency/Office	Website address
32	Lagos State Public Works Corporation	www.www.publicworks.lagosstate.gov.ng
33	Lagos State Records and Archives Bureau (LASRAB)	www.lasrab.lagosstate.gov.ng
34	Lagos State Scholarship Board	www.scholarshipboard.lagosstate.gov.ng
35	Lagos State Signage & Advertisement Agency (LASAA)	www.lasaa.lagosstate.gov.ng
36	Lagos State Sports Commission	www.sportcommission.lagosstate.gov.ng
37	Lagos State Teachers Establishment and Pensions Office	www.teachersestablishment.lagosstate.gov.ng
38	Lagos State Traditional Medicine Board	www.traditionalmedicine.lagosstate.gov.ng
39	Lagos State Traffic Management Authority (LASTMA)	www.lastma.lagosstate.gov.ng
40	Lagos State Universal basic Education Board	www.subeb.lagosstate.gov.ng
41	Lagos State University	www.lasu.lagosstate.gov.ng
42	Lagos State University Teaching Hospital	www.lasuth.lagosstate.gov.ng
43	Lagos State Urban Renewal Authority (LASURA)	www.lasura.lagosstate.gov.ng
44	Lagos State Valuation Office	www.valuationoffice.lagosstate.gov.ng
45	Lagos State Water Corporation	www.watercorporation.lagosstate.gov.ng
46	Lagos Television (LTV/LWT)	www.ltv.lagosstate.gov.ng
47	Lagos Waste Management Authority (LAWMA)	www.lawma.lagosstate.gov.ng
48	Local Government Service Commission	www.lgsc.lagosstate.gov.ng
49	New Towns Development Authority	www.ntda.lagosstate.gov.ng
50	Office of Surveyor General	www.surveyorgeneral.lagosstate.gov.ng
51	Office of the Special Adviser on Education	www.osae.lagosstate.gov.ng
52	Central Business District	www.cbd.lagosstate.gov.ng
53	Lagos State Safety Commission	www.safetycommission.lagosstate.gov.ng
54	Lagos State Technical & Vocational Education Board	www.lstveb.lagosstate.gov.ng
55	Lagos State Residents Registration Agency (LASRRA)	www.lasrra.lagosstate.gov.ng
56	Local Government Establishment, Training & Pension Office	www.lgetpo.lagosstate.gov.ng
57	Health Service Commission	www.hsc.lagosstate.gov.ng
58	Lagos State Waterways Authority (LASWA)	www.laswa.lagosstate.gov.ng
59	Office of Public Defender	www.opd.lagosstate.gov.ng
60	Lagos State Physical Planning Permit Authority (LASPPPA)	www.laspppa.lagosstate.gov.ng

(continued)

(continued)

S/N	Department/Agency/Office	Website address
61	Lagos State Market Development Board	www.marketdevelopment.lagosstate.gov.ng
62	Lagos State Public Procurement Agency	www.publicprocurement.lagosstate.gov.ng
63	Lagos State Driver's Institute	www.driversinstitute.lagosstate.gov.ng
64	Lagos State Primary Health Care Board	www.primaryhealthcare.lagosstate.gov.ng
65	Lagos State Parks and Gardens Agency (LASPARK)	www.laspark.lagosstate.gov.ng
66	Agency For Mass Literacy, Adult & Non-Formal Education	www.adulteducation.lagosstate.gov.ng
68	Office of State Auditor-General	www.auditorgeneral.lagosstate.gov.ng
69	Lagos State Audit Service Commission	www.asc.lagosstate.gov.ng
70	Office Of Transformation, Creativity & Innovation	www.otci.lagosstate.gov.ng
73	Motor Vehicle Administration Agency	www.mvaa.lagosstate.gov.ng
74	Civil Service Commission	www.civilservice.lagosstate.gov.ng
75	Lagos State Christian Pilgrims Welfare Board	www.christianpilgrims.lagosstate.gov.ng
76	Law Enforcement Training Institute	www.leti.lagosstate.gov.ng
77	Lands Bureau	www.landsbureau.lagosstate.gov.ng
78	Education District 1	www.educationdistrict1.lagosstate.gov.ng
79	Education District II	www.educationdistrict2.lagosstate.gov.ng
80	Education District V	www.Educationdistrict5.lagosstate.gov.ng
81	Education District VI	www.educationdistrict6.lagosstate.gov.ng
82	Lagos State Water Regulatory Commission (LSWRC)	www.lswrc.lagosstate.gov.ng
83	Education District III	www.educationdistrict3.lagosstate.gov.ng
84	Education District IV	www.educationdistrict4.lagosstate.gov.ng
85	Lagos State Fire Service	www.fireservice.lagosstate.gov.ng
86	Lagos State Mortgage Board	www.lagoshoms.lagosstate.gov.ng
87	Lagos State Material Testing Laboratory, LSMTL	www.lsmatl.lagosstate.gov.ng

Source [9]

References

1. Caldwell J (2004) E-democracy: putting down global roots. Institute for Electronic Government. <http://www01.ibm.com/industries/government/ieg/pdf/edemocracy%20putting%20down%20roots.pdf>
2. lamata.lagosstate.gov.ng
3. Briony O (2003) The potential contribution of ICTs to the political process. *Electr J e-Government* 1(1):31–39
4. Azeta A, Azeta V, Olaniyan O, Azeta A, Ayeni G (2015) Implementing an e-democracy system in Nigeria. *J Res Dev Manage* 4:2015
5. Policy and Legal Advocacy Centre (2012) Social Media and the 2011 Elections in Nigeria. PLAC
6. www.ericsson.com
7. <http://www.vanguardngr.com/2016/05/lagos-leads-latest-active-voice-internet-users-survey/>
8. <http://www.lagosstate.gov.ng/lagos-state-governmentministries-addresses/>
9. <http://www.lagosstate.gov.ng>
10. Jackson N (2007) Political parties, the internet and the 2005 general election: third time lucky. *Internet Res* 17(3):249–271
11. Williams P, Tramell K, Postelnicu M, Landreville K, Martin J (2005) Blogging and hyper linking use of the web to enhance visibility during the 2004 US campaign. *Journal Stud* 6 (2):177–186
12. Iwu MM (2008) Electronic voting and the future of the electoral system in Nigeria. *The Niger Electoral J* 2(1):1–29
13. Alabi MO (2009) Electoral reforms and democratic consolidation in Nigeria: the Electoral Act 2006. *CEU Polit Sci J* 4(2):278–304. Retrieved from <http://www.cceol.com/asp/getdocument.aspx?logid=5&id=73488cf8239a482ca21618b0bf0a4e00>
14. Ogbaudu F (2011) General election review: experience sharing, lessons learnt and the way forward—the Nigeria Police perspective. Paper presented at the review of elections security during the 2011 General Elections in Nigeria Justice Sector Reform Monograph Series
15. www.lamata.lagosstate.gov.ng
16. www.lagosstate.gov.ng/mepbbc/transportation
17. www.lamata-ng.com/brt/php
18. www.lagosstateministryofhealth.com/programme
19. Aiyegbaje FO (2016) Mobile telephone usage and physical accessibility to healthcare services in Lagos Metropolis Nigeria. An unpublished PhD thesis submitted to the Department of Geography, Faculty of the Social Sciences, University of Ibadan, p 203
20. Aiyegbaje FO, Ajayi DD (2016) Mobile telephone technology for better healthcare service provision in Lagos Metropolis, Nigeria. *Digital Transformations and Global Society*. Volume 674 of the series Communications in Computer and Information Science. Springer International Publishing AG, pp 532–543
21. The Guardian Newspapers 29/01/2009, p 19
22. Digest of Statistics (2013) Lagos Bureau of Statistics, Ministry of Economic Planning and Budget, the Secretariat. Alausa, Ikeja, Lagos
23. www.snitchngr.com/brt-to-commence-e-ticketing-on-tuesday
24. www.naij.com/924854
25. Flavio C, Eleonora P, Alberto P (2005) E-democracy: a solution for disadvantaged territories. In: *eceg2005, Conference Proceedings*, pp 101–110

E-Democracy for Smart Cities

Vinod Kumar, T.M. (Ed.)

2017, XXIV, 551 p. 176 illus., 158 illus. in color.,

Hardcover

ISBN: 978-981-10-4034-4