Chapter Six

e-Government Divide: Implications for sub-Saharan Africa

Stephen M. Mutula
School of Social Sciences, University of KwaZulu-Natal, SA

1. Introduction

e-Government is increasingly implemented around the world as part of the continuing efforts to bridge the digital divide between developed and developing countries in order to enhance access to digital technologies by the majority of the people who are currently excluded. The World Summit on Information Society (WSIS) Action Line C10 on ethical dimensions of the Information Society considers access/accessibility an ethical issue that must be addressed (WSIS, 2005). Many governments believe e-Government has great potential to address the problem of access/accessibility within their jurisdictions.

e-Government has been defined in literature in a variety of ways. Ngulube (2007) cites 12 different definitions of e-Government and concludes that the concept has many interdisciplinary homes and is firmly integrated in the humanities, social sciences, arts, information technology, management and many other academic fields. The United Nations (UN) e-Government Survey (2010) defines e-Government as a means of enhancing the capacity of the public sector, together with citizens, to address particular development issues. In this regard, e-Government is aimed at strengthening the performance of government and public administration with the ultimate goal of achieving economic and social development (Anttiroiko & Malkia, 2006). Heeks (2004) defines it as an online government that deploys any of the following technologies: Internet, telephone, fax, Short Message Service (SMS), Multimedia Messaging Service (MMS), wireless networks, Bluetooth, television and radio. Curtin, Sommer and Vis-Sommer (2003) assert that e-Government is the use of any and/or all forms of ICTs by governments and their agents to enhance operations; deliver public information and services; engage with citizens; engender public participation; and the very process of governance. The World Bank (2007) defines e-Government as the use, by government agencies, of information technologies (such as wide area networks, the Internet and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. According to the United Nations Educational Scientific and Cultural Organisation (UNESCO) (2004), e-Government is the public sector's use of ICTs in order to improve information and service delivery, encourage citizen participation in decision-making processes and make government more accountable, transparent and efficient. Recently, social media are being applied in government. e-Governance, a derivative term of e-Government, connotes the application of ICTs to facilitate social governance processes or objectives, such as information for political participation, consultation and consensus-seeking among governments, public servants, politicians and citizens (Sheridan & Riley, 2006). Both e-Government and e-Governance aim to enhance service delivery by simplifying bureaucratic procedures, enhancing efficiency and transparency, improving information sharing and innovation of service, and increasing the level of citizen empowerment.

e-Government implementation has become the focus of many governments the world over, for various reasons. Firstly, the revolution in Information Communication Technology (ICT) has put pressure on governments to demonstrate social inclusivity, enhance service delivery and promote democratic and inclusive governance.

Besides, governments are being called upon by citizens, development partners, opposition
parties and civil society to demonstrate accountability and integrity in their operations to justify their continued stay in power. Farelo and Morris (2006) state that innovation in service delivery and customer focus are some of the prime motivations for e-Government projects. Moreover, globalisation and the sharing of experiences that come from increased awareness about civil rights, democracy and the role of governments in improving the quality of life of its citizens have been instrumental in e-Government growth.

Lenk (2002, 2004) states that the main focus of e-Government, in any part of the world, is the reorganisation of service processes and citizen services. Schuppan (2009), from the technical as well as service perspectives, outlines the following e-Government basic organisational principles: multichannel distribution, separation between front and back offices, and process reorganisation which avoids media discontinuity. These principles, according to Schuppan, provide the basis for governments to provide public services via the Internet, independently of space and time. They also enable governments to undertake changes in the underlying processes, decision-making structures and procedures, as well as using ICT to raise the overall efficiency, effectiveness, and legitimisation of administrative structures and decisions. Akther, Onishi and Kidokoro (2007) assert that e-Government has the potential to reduce the administrative and development problems associated with sub-Saharan Africa.

2. Research problem

The annual United Nations (UN) e-Government Surveys have repeatedly shown that most countries in Western and Eastern Europe, North America and Asia are leaders in e-Government compared to their counterparts in Africa. Despite the existing e-Government divide between the developed and the developing world, Huang, D'Ambra and Bhalla (2002) report that most, if not all, e-Government strategies and implementation plans in the developing world, including Africa, are based on the theories and experiences of developed countries. Using annual UN e-Government Surveys as the theoretical framework and analysis of e-Government literature, the purpose of this chapter is to attempt to find out why sub-Saharan African countries are lagging behind their counterparts in the developed world in e-Government. In particular, the following research questions will be addressed: What e-Government strategies and best practices are applied in the developed world? What is the status of e-Government in Africa? Why is Africa lagging behind the developed world in e-Governance? How can Africa overcome e-Government barriers in order to improve its global ranking?

Akther, Onishi & Kidokoro (2007) assert that addressing the different institutional and cultural contexts must be considered when implementing e-Government in sub-Saharan Africa. They also note that simply transferring ICT solutions and related organisational concepts from developed to developing countries is inappropriate. Besides adopting Western-developed e-Government models, additional effort is needed when implementing e-Government in developing countries. They state that the laggard position of Africa in e-Government in the world is a state of failure or lack of capacity. Bannister (2007) and Janssen, Rotthier and Snijkers (2004) separately found that with the exception of South Africa, e-Government services in sub-Saharan Africa are rare to come by, although this does not suggest that pockets of advanced usage are not recorded in some places.

3. Methodology and theoretical framework

This chapter is based on the content analysis of the UN e-Government 2008, 2010 and 2012 Surveys, as well as empirical and theoretical literature on e-Government in primary and secondary sources. This methodological approach is chosen because e-Government, as an emerging field or practice, is still in its nascent stage of development and therefore does not have a well-established theoretical underpinning. In this regard, Titah and Bark (2006) assert that despite increased research interest in
The UN e-Government Surveys (2008, 2010, 2012) adopted a consistent framework for carrying out surveys, which provide a sound basis for addressing the research problems outlined above. The basic parameters of the UN e-Government Surveys are telecommunication infrastructure, human capital and e-participation. The telecommunication infrastructure is assessed using a composite index of five indicators, namely number of personal computers per 100 persons, number of Internet users per 100 persons, number of telephone lines per 100 persons, number of mobile cellular subscriptions per 100 persons and number of fixed broadband subscribers per 100 persons using data provided by the International Telecommunication Union (ITU). The human capital, on the other hand, is a composite index of two indicators: the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio using UNESCO data. The e-participation examines qualitative factors at the Connected Presence stage of e-Government. The e-participation factors include facilitation of information to citizens by governments (G2C) (e-Information sharing), interaction with stakeholders (e-Consultation) and engagement in decision-making processes (e-Decision making). The UN e-Government Survey (2012) states that a country’s e-participation index value reflects how useful these features are and the extent to which they have been deployed by the government compared to all other countries.

4. e-Government strategies applied by the developed world

Studies by Wilson (2004) and Zakareya, Zahir and Sarmad (2004) have shown that ICT expertise and infrastructure positively influence e-Government strategies in the developed countries. Most noteworthy is the support and active commitment of influential politicians in promoting e-Governance and the role of politics in e-Strategies implementation. The United Nations e-Government Survey (2010) reports that many countries in Europe, North America and Asia have used pull technology tools, such as websites, to avail businesses and the general public vast amount of citizen-centric information online. In addition, these countries have used more push technologies to avail government-centric information to businesses and people alike for the purpose of enhancing online interactivity and feedback. PCMag.com Encyclopaedia (2012) defines a ‘push technology’ as a data distribution technology in which selected data are automatically delivered to the user's computer or mobile device in real-time or at prescribed intervals. E-mail messages, calendar updates and text messages are examples of data that are pushed to the user. In contrast, ‘pull technology,’ in which the user initiates a request for the data each time. Browsing the Web is an example of the pull model.

In these jurisdictions, e-service delivery and access have been enhanced through the increased use of ICTs. In contrast, developing countries, especially in Africa, have yet to effectively engage their citizens using electronic means. Moreover, in most developed countries where e-Government projects have been successful, they post high e-participation indices reflecting stronger citizen-government engagement. The 2010 UN e-Government Survey identifies key indicators of successful e-Government projects as citizens’ inclusion in government decision-making processes; governments’ provision of information and knowledge; and governments’ consultation with citizens to obtain feedback and opinions.

Additionally, leading jurisdictions in e-Government have well-structured approaches to electronic government implementation. Chen, Chen and Ching (2006) outline three phases of e-Government employed by the majority of countries in the developed world. The Initiation Phase focuses on providing citizens with a single point of access to government information and web-enabling government payments with the aim of providing citizens with a minimum level of political involvement, such as knowing who represents them and what is happening on the political scene. The Second Phase of e-Government implementation, also known as the Infusion Phase, involves the
adoption of the principles of e-Government, with online reviews and payment applications becoming widely installed. At this stage, citizens can make most government payments via the Web and electronic bills presented online become the standard norm. To enhance efficiency, small governments at this phase opt for an Application Service Provider (ASP) solution, while large governments implement in-house systems. The use of ASP enables governments to create the infrastructure, acquaint governments and citizens with the concept of e-Government, and also enables governments to learn how to scale from a handful to tens of thousands of online government services. Once initiation has been attained and foundation skills and knowledge acquired, large-scale adoption can follow. The Final Phase of e-Government is customisation, because the one-size-fits-all solution cannot suffice. During the Customisation Phase, a one-to-one relationship between citizen and government is the goal, in order to improve each citizen’s efficiency by creating his or her personal profile with government.

Leading countries in e-Government have a well-developed and elaborate infrastructure. Chen et al. (2006) state that the United States (US), as the largest economic powerhouse on earth, has one of the most advanced National e-Government Infrastructures (NeIs) in the world, that is hinged on its history and culture of democratic government ideals, platforms and capitalist economic system. Besides, the US government adopted three strategic principles in the implementation of e-Government: (1) citizen-centric, not bureaucracy-centric; (2) results-oriented; and (3) market-based, actively promoting innovation. Relyea (2002) reports that the policy environment in the United States is an important feature in understanding the strategy for e-Government implementation. For instance, a set of laws such as the Privacy Act, the Computer Matching and Privacy Protection Act, the Electronic Freedom of Information Amendments, the Computer Security Act, the Critical Infrastructure Protection, the Government Paperwork Elimination Act, and the Electronic Government Act, are in place to facilitate e-Government. Apart from the US, the Republic of Korea, the Netherlands, United Kingdom, and Denmark are among other leaders in e-Governments, as demonstrated by their levels of e-Government Development Indices (EGDIs) reflected in Table 1 below:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>e-Government development index value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Republic of Korea</td>
<td>0.9283</td>
</tr>
<tr>
<td>2</td>
<td>Netherlands</td>
<td>0.9125</td>
</tr>
<tr>
<td>3</td>
<td>United Kingdom</td>
<td>0.8960</td>
</tr>
<tr>
<td>4</td>
<td>Denmark</td>
<td>0.8889</td>
</tr>
<tr>
<td>5</td>
<td>United States</td>
<td>0.8687</td>
</tr>
</tbody>
</table>

(Source: e-Government Survey, 2012)

A review of the e-Government status literature in the countries listed in Table 1 reveals common trends regarding the centrality of human capital and infrastructure development, enabling policies, citizen-centric services and others. The e-Government Development Index (EGDI) helps rate the performance of national governments relative to one another. The maximum possible value of EGDI is one and the minimum is zero. EGDI is a weighted average of three normalised scores on the most important dimensions of e-Government, namely scope and quality of online services, telecommunication connectivity, and human capacity (UN e-Government Survey, 2012).

The UN e-Government Survey of 2012 shows that no country had a true single-sign-on integrated portal. The United States, Republic of Korea, Israel, Australia, Norway, Denmark, Bahrain, Qatar, United Arab Emirates and New Zealand are among the few countries that come close to a pure one-stop shop portal with information, services and participation services integrated on one site. The single-sign-on integrated portal is a single platform that can organisationally transform the public services across the world. Most European countries follow this norm of a single-sign-on integrated
portal platform and, as a result, many of these countries are in the top 20 in the UN e-Government Index (UN e-Government Survey, 2012).

During 2008 and 2010, the Republic of Korea was top on the e-Government index, a fact attributed to its national portal being exceptional in its design and provision of features to its citizens. The portal is an integrated system allowing citizens easy access to government information and contains features for mobile alerts, forms, transactions and online consultation (UN e-Government Surveys 2008, 2010). For e-participation, users are connected to e-people, a single online service that integrates the e-services of all government agencies. The aim of e-people is to improve the transparency of government administration, improve corruption reporting and engage citizens through petitions, proposals and policy discussions. Users are connected to a secure login portal for all e-Government transactions and form submissions (UN e-Government Surveys, 2008, 2010, 2012).

Chen et al. (2006), in comparing e-Government strategies in developed and developing countries, found that the main areas of differences include history and culture; technical staff; and infrastructure – broadband, citizens and government offices. The Centre for International Development at Harvard University and International Business Machines (IBM) identified key differences between developing and developed countries in terms of e-commerce implementation (Kirkman, Osorio & Sachs, 2002), which include network access (measured by the availability, cost, and quality of information and communication technology networks, services, and equipment); infrastructure development; resources and IT support; utilisation; network learning; network economy; network policy; culture and society. Kirkman, Osorio and Sachs (2002) note that excelling in these factors has propelled developed countries into the leadership position in their e-Government projects.

A close scrutiny of the UN e-Government Survey (2010) also reveals that strategies that have worked in the developed countries include investing in streamlining the national and ministry portals and websites to offer more e-services; online service provision and use of ICT; social networking sites and more active engagement of citizens in dialogue with government electronically. Social networking tools enable governments to consult with citizens and expand opportunities for participation in decision-making processes. They can be used to garner feedback and opinions and to elicit support for public policy. To engage citizens, more countries have developed sites in the social networking arena (Carter & Belanger, 2005). Other e-Government strategies are based on regional, collaborative efforts through shared vision, objectives and an implementation approach for the short-term and long-term periods. Such collaborative strategies are commonly found in the European Union and the Persian Gulf member states, which have developed e-Government standards and structures applied in the respective regions (UN e-Government Survey, 2010).

Chen et al. (2006) and UN e-Government Surveys (2010, 2012) identify inclusive planning with citizens, prior to the implementation and delivery of services and bottom-up approaches, as critical to the success of most e-services in Korea, USA and Canada. The UN e-Government Surveys also suggest that in the developed countries, e-Government projects are focused on service personalisation. Personalised and user-driven services are provided with shared expectations and principles of social justice, as well as personal and public value. In these countries, multichannel systems such as personal computers, the Internet, mobile devices, telephone, digital TV, and kiosks, are used to offer e-Government services through technology that is simple, flexible and a right choice for people to use.

5. Status of e-Government in sub-Saharan Africa

Sub-Saharan Africa refers to an area of the African continent that lies south of the Sahara. e-Government development in the sub-region is still in its nascent stages with limited public services being processed online (Bannister, 2007; Janssen, Rotthier & Snijkers, 2004). Lam (2005) outlines a
set of 17 barriers for e-Government implementation in sub-Saharan Africa, which is organised into four categories: strategy, technology, policy and organisation. Strategy barriers include lack of common e-Government goals and objectives, delivery timeframes, ownership and governance across government agencies. Technology barriers include architecture interoperability, data standards and legacy systems. Policy barriers include citizen privacy, data ownership and policy implications. Organisation barriers include pace of government reform, legacy government processes and management and technical skills, and expanding access to information and knowledge (i.e. increasing the number of Internet users and personal computer usage; increasing the broadband capacity to allow for greater use of mobile devices for e-Government; developing content that citizens find important and useful; improving education levels so that citizens are able to use the information and knowledge provided; and encouraging citizen participation). Furthermore, data relevant to development, such as market prices and public service indices, are hardly available in good quality. Farelo and Morris (2006) note that Africa has a general skills shortage, which is exacerbated by the ‘brain drain’ caused by skilled ICT personnel and professionals leaving to work in developed countries or moving from the public to the private sector. Besides, education and training is unable to produce the essential and technical management skills that most employers seek. Informa (2012) notes that the limited functionality of entry-level mobile handsets is an inhibitor to the potential of mobile government services.

Akther, Onishi and Kidokoro (2007), lamenting the sub-Saharan African e-Government status, note that the necessary data such as land registers, residential data or geographic data is often non-existent or completely outdated. They further note that permit processes (such as building permits or property acquisition) can frequently span several years, and often no services can be received without ‘acceleration money’. The 2008 UN e-Government Survey showed that sub-Saharan Africa had the smallest number of countries that had links from the national home pages to those of local governments. One reason for this was that in some sub-Saharan African countries and other developing countries, local government websites simply did not exist. In addition, some of them did not have the financial resources to interconnect local government offices to the country’s Internet infrastructure (UN e-Government Survey, 2010).

Kaisara and Pather (2009) report that Mauritius and South Africa are at the top stage in Africa since their citizens are able to register a birth or death, apply for a social welfare grant, pay taxes, access government legislation and find information on activities of their representatives in parliament and local government without having to leave their homes or offices. According to the UN e-Government Survey (2010, 2012), the ministries of health, education, labour, finance and social services in Tunisia provide a number of e-services and a wealth of information online. Besides, the national government portal provides an online services section on the home page that provides quick access for citizens to information on services such as obtaining a driver’s licence and acquiring personal and home loans. Information regarding government services is also laid out by sector, providing quick and efficient access to comprehensive data (UN e-Government Survey, 2012). In Egypt and Libya, citizens are provided with an updated calendar of events on e-participation, enabling the public the opportunity of making a choice as to whether they want to participate or not (UN e-Government Survey, 2010).

The strategies of e-Government in North Africa as a whole stand much better than those of West Africa (UN e-Government Survey, 2010). In most African countries, and West Africa in particular, there is poor telecommunications infrastructure, low human capacity in the region, and broadband access is practically non-existent. For instance, in Cape Verde there are only 1.48 subscribers per 100 inhabitants. The survey concluded that it will be very difficult for any substantive progress to be made in e-Government development in West Africa as a result of its poor telecommunication infrastructure, low human resources capacity and the amount of investment.
required – which far exceeds the financial capacity of the region (UN e-Government Survey, 2010).

The UN e-Government Survey (2012) reports the lack of access to both ICT and education infrastructure in the developing countries (especially in Africa) as the major constraint on e-Government development. Income per capita in developing countries imposes added constraints, with lower-income countries having a higher marginal cost for a dollar spent on ICT. Besides, there is competition for resources such as safe water, rural health and basic education services and this becomes especially acute if the country has a large population, such as Nigeria, since e-inclusion demands that online service access and infrastructure be available to all. The large areas require greater investments in providing telecommunication infrastructure. Even with the ubiquity of cellular technology, connectivity remains a major challenge for far-flung rural areas.

The UN e-Government Survey (2010) draws attention to the fact that some developing countries have begun to catch up with higher-income countries, despite the challenges of infrastructure, technical staff, etc. However, all subregions in Africa fall below the world average. The e-Government Development Indices reflected in Table 2 show that the top six sub-Saharan African countries are way below world standards in e-Government rankings.

Table 2 UN e-Government development indices for Africa

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>E-Government Development Index Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seychelles</td>
<td>0.5192</td>
</tr>
<tr>
<td>2</td>
<td>Mauritius</td>
<td>0.5066</td>
</tr>
<tr>
<td>3</td>
<td>South Africa</td>
<td>0.4969</td>
</tr>
<tr>
<td>4</td>
<td>Tunisia</td>
<td>0.4833</td>
</tr>
<tr>
<td>5</td>
<td>Egypt</td>
<td>0.4611</td>
</tr>
<tr>
<td>6</td>
<td>Cape Verde</td>
<td>0.4297</td>
</tr>
</tbody>
</table>

(Source: e-Government Survey, 2012)

For example, Mauritius, Egypt and Seychelles, though leaders in Africa, lag way behind global leaders such as Canada, Korea and the US in the area of IT infrastructure and education. As already pointed out, various reasons account for these disparities between developed countries and Africa, which include low maturity levels, poor performing economies, inadequate infrastructure, limited broadband access, and low information literacy skills (Chen et al., 2006). For example, the UN e-Government Survey (2010) reports that Kenya and Ethiopia are hindered by setbacks in infrastructure to support e-Government strategies. The websites of most ministries in the region provide basic information while e-services are generally never available.

Despite limited resources, a few countries in sub-Saharan Africa have managed to improve their e-Government. In Southern Africa, the UN e-Government Survey (2012) reports that the government of Seychelles took the initiative to enhance its e-Government service offerings in line with an integrated and interdependent strategic approach that focuses on ICT infrastructure, legal and regulatory framework, human resource development, and improvements in the efficiency of the government. Seychelles has made sustainable improvement in social, economic, cultural, and good governance through the deployment and effective application of ICT. Seychelles hosts its integrated portal through its SeyGo Connect for residents, citizens and businesses, which branches out into an e-services gateway, providing a one-stop shop service ranging from thematic, sectoral, life cycle services to single-sign-on services tailored for the individual user. In West Africa, the national website of Benin features podcasting and online forums, while the Ghanaian government utilises social networking tools such as Facebook and YouTube to offer services at its Ministry of Information (UN e-Government Survey, 2010).

Farelo and Morris (2006) note that corruption, human resource development and monitoring and evaluation are core issues of concern for e-Government implementation in South Africa. However, there has been progress with regard to Government to Business (G2B) services (e.g.
availing tender documents online) and Government to Citizen services such as downloading various forms for identity, birth certificates and voter registration. Generally, South Africa has the required legal framework for e-Government, although it falls short in terms of human capital and infrastructure development (Farelo & Morris, 2006).

6. e-Government lessons for sub-Saharan Africa from the developed world

The design of an effective e-Government system must be guided by an enabling strategy that results in significant improvements in simplifying the delivery of services to citizens; eliminating layers of government management; making it possible for citizens, businesses, and other levels of government to easily find information and get service from government; and eliminating redundant systems (Farelo & Morris, 2006; Kitaw, 2006).

Lam (2005) recommends that governments should take into account language, culture, content, accessibility and alternate delivery methods in e-services to all segments of the population. Without a common set of goals and objectives, without which the joint planning of projects by multiple government agencies becomes impeded by the lack of clarity, conflict arises in the definition of roles and responsibilities and lines of ownership (Themistocleous & Irani, 2001). Farelo and Morris (2006) emphasise the importance of improved access for citizens, particularly in rural areas; a supportive telecommunications policy; internal efficiencies from a technological point of view; a people perspective; training; and creating a common purpose.

e-Government implementation strategies should align technology with development, citizens’ empowerment, and inclusion and mechanisms for the evaluation and monitoring of e-Government service delivery to the public. The strategies should also reflect relevant local content, consumer information, job opportunities, scholarships, education, access to legal services, access to credit for Small and Medium Enterprises (SMEs) and effective infrastructure for ease of access to government information. It is also important to involve citizens in e-Government policy formulations. Lam (2005) notes that security is one of the major concerns citizens have in using e-Government services. Citizens want to be assured that the information they enter online is safe, secure and remains confidential. Additionally, citizens want convenient ways of receiving e-Government information using tools that they have easy access to such as e-mail, cellular phones, PDAs and kiosk systems with voice recognition (Sharma, 2004). Gronlund, Andersson and Hedstrom (2005) point out that for e-Government projects to be effective, focus must be placed on social and economic contexts. Governments need to ensure that the ethos of e-Government is infused into poverty alleviation and service delivery programmes.

With mobile penetration growing significantly in sub-Saharan Africa, e-Government projects should leverage such new technologies, including social media, to provide citizens the opportunity to get service or receive information timeously. Governments in sub-Saharan Africa should engage with citizens that currently have little government contact. Scott, Batchelor, Ridley and Jorgensen (2004) report that mobile government (m-Government) is expected to continuously expand due to the high penetration of mobile services, especially in developing countries.

Different countries can adopt custom-made strategies to promote e-Government in their jurisdictions and accelerate electronic government services to the people. For example, the South African ICT policy prioritises Universal Service and service delivery to all South Africans. The implementation is monitored by the Universal Services and Access Agency of South Africa (USAASA). The Agency stimulates public awareness of the benefits of ICT services and builds capacity for accessing these services. USAASA makes the necessary interventions to enable underserviced communities to access ICT services (Mutula & Mostert, 2011). The government’s web portal provides information on government services and other information such as legislation, policies, etc.
The portal has translated information into all of South Africa’s 11 official languages (Farelo & Morris, 2002). The South African government has also put in place the Government Communication and Information System (GCIS) – a government information service that ensures the government has direct dialogue with people in disadvantaged areas.

With three-quarters of the population living in rural areas in most African countries, providing public services through cellular technology should be the main goal. Though mobile government has been slow to take off in most countries in Africa, governments in Rwanda, Kenya, Uganda and Tanzania have been quicker to embrace the consumer benefits of public service delivery by cellular technologies (Informa, 2012).

Since 2009, when undersea fibre optic connectivity on the east coast of Africa was completed, high speed Internet links to the rest of the world are now possible. Besides fibre optic connectivity, the mobile revolution has brought communication to hundreds of millions of people across Africa. At the end of 2001, there were just 25.6 million mobile subscriptions across the whole of Africa, representing three per cent penetration. Informa (2012) estimates that by the end of 2012 – ten years later – there would be 640 million subscriptions across the continent and SIM penetration would be close to 60%. Besides, the current household broadband penetration in Africa, of just 3%, is projected to grow to 8% by the end of 2016.

Furthermore, there is growing awareness in government and business sectors that consumers expect an anywhere, anytime service. The move from e-Government to m-Government in Africa seems inevitable, given that the number of people with access to mobile phones is growing and exceeds the number of citizens with access to the Internet by nearly five to one (UN e-Government Survey, 2012). Informa (2012) projects mobile communication to dominate broadband services in terms of user numbers, as a result of recent infrastructure investments in 3G and 4G networks on the African continent. Though fixed Internet traffic exceeds mobile Internet, the gap is reducing markedly in Africa. Consequently, it is projected that by 2015 18% of its Internet traffic will be carried by cellular networks compared to the current global figure of just 3%.

7. Conclusion

This chapter sought to redefine the digital divide through a comparative analysis of e-Government strategies in the developed world and sub-Saharan Africa. The main research question was: Why are sub-Saharan African countries lagging behind their counterparts in the developed world in e-Government? The following specific research questions were addressed as well: What e-Government strategies and practices are applied in the developed world? What is the status of e-Government in Africa? How can Africa overcome e-Government barriers in order to improve its global ranking? These questions were addressed through the review of e-Government literature and content analysis of UN e-Government annual Surveys.

The findings show that sub-Saharan Africa has largely adopted e-Government implementation strategies of the developed world, but this has not propelled the continent competitively in global ranking compared to its counterparts in Europe, North America and Asia. Sub-Saharan Africa has not prioritised putting in place an enabling strategy. Besides, it has not taken into account local context, nor provided supportive telecommunication policy, including citizen involvement in policy formulation. The completion of the undersea fibre connectivity on the east coast of Africa in 2009 and the increasing mobile phone penetration on the continent have the potential to contribute towards bridging the digital divide in sub-Saharan Africa.
References


