Challenges and opportunities of e-government in South Africa

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Abstract

Purpose – The purpose of this paper is to present challenges and opportunities of e-government implementation in South Africa with special reference to service delivery and implications for libraries.

Design/methodology/approach – The paper is based on an in-depth literature review from government documents, presidential state of the nation addresses, global and nation reports on e-government, and reports on service delivery concerns in South Africa.

Findings – The Government of South Africa has put in place enabling policies, poverty alleviation programmes, ICT infrastructures and regulatory frameworks which as yet have not been effectively leveraged to enhance service delivery to its citizens. Furthermore, libraries have yet to make any attempts to benefit from the emergence of e-government in South Africa.

Practical implications – There is a need to infuse an e-government ethos in poverty alleviation programmes in order to enhance service delivery. At the moment there is a lack of synergy between the two in South Africa. Additionally, South African ICT infrastructure is under-utilised to enhance service delivery. Libraries have the opportunity using e-government infrastructure to improve the provision of information services to the people.

Originality/value – Service delivery remains a priority for the post-apartheid South African government, and the paper reveals that a disconnect exists between the e-government vision and the poverty alleviation programmes aimed at enhancing the standard of living of the people. Libraries in South Africa have yet to leverage e-government to provide information services and the paper may assist them in doing so.

Keywords Government, Service delivery, South Africa, Libraries

Paper type Conceptual paper

Introduction

Many countries the world over, are now well aware of the benefits that e-government can bring to improve service delivery to citizens. Service delivery refers to level and quality, capacity, service continuity, availability, general management and financial management (Information Technology Infrastructure Library, n.d.). Besides, service delivery in general describes the manner in which customer needs are met. In line with world trends, the government of South Africa has, over the last decade, recognized the importance of information and communications technology (ICT) and more recently e-government in improving the standards of service quality and increasing the overall efficiencies of government. As a result, investments in ICT infrastructure have been growing steadily. Information and communication technologies are critical in fighting poverty and uplifting the socio-economic and living standards of the people. When
properly used, ICT has the potential to empower people to overcome development obstacles, address social problems, and strengthen democratic institutions. However, for a country to gain from the benefits of ICTs, technology must be implemented and used effectively.

The South African government is implementing e-government alongside several poverty alleviation programmes to improve the living standards of its people. For instance, the reconstruction and development programme (RDP) aims at meeting basic needs (such as food, housing, education, water, electricity, health, etc) of all people by 2008 and also achieving universal access to energy by 2012. The RDP further aims at bringing the private sector into a programme of service extensions to communities. The Municipal Public-Private Partnership Pilot Programme (MPPP) on the other hand, is geared towards encouraging and supporting municipal public/private partnerships, while the, Black Economic Empowerment (BEE), aims at enhancing the socio-economic status of Black South Africans (in particular) who were marginalized from mainstream economy during the apartheid government (Niekerk, 1998; Burger, 2005). E-government aims at simplifying bureaucratic procedures; enhancing efficiency and transparency; improving information; and increasing the level of citizen empowerment. Because of the benefits that accrue from the implementation of e-government, the UN and World Bank have adopted e-government as a developmental instrument (Cloate, 2007).

In modern governments, e-government and service delivery are inextricably intertwined. This inextricable relationship is underscored by United Nations Department of Economic and Social Affairs (2005) that “the application of information and communication technology … within public administration optimises its internal and external functions, [thereby providing] government, the citizen and business with a set of tools that can potentially transform the way in which interactions take place, services are delivered, knowledge is utilized, policy is developed and implemented, the way citizens participate in governance and public administration reform; and the way good governance goals are met”. The Economist newspaper and The Economist Group (2005) point out that since the 1990s, there has been optimism that rural ICTs would allow previously excluded communities to leapfrog development, information societies and a host of other electronic age applications. Indeed, the World Summit on Information Society (World Summit on Information Society, 2003) noted that the digital revolution, fired by the engines of information and communication technologies, had fundamentally brought new ways of … running government, … providing speedy delivery of … healthcare, and improving the living standards for millions of people around the world. Chadwick and May (n.d.) observe that ICTs in government make it easier for business and individuals to deal with government; enable government to offer services and information through new media like the internet; improve communication between different parts/levels of government so that people do not have to be asked repeatedly for the same information by different service providers; give staff in offices better access to information so that they can deal with members of the public more efficiently and more helpfully; and make it easier for different parts of government to work in partnership with central government.

**Policy, regulatory framework and ICT infrastructure in South Africa**

Several initiatives in policy, regulatory framework, and ICT infrastructure are being undertaken by government as part of its efforts to enhance service delivery to its
citizens. These initiatives have top-level government backing, exemplified by the Presidential National Commission on Information Society and Development (PNC on ISAD) (2005), which was established in 2001 to coordinate ICT initiatives in the country. Some of the major initiatives in this regard are described below:

Policy, institutional and regulatory framework
The Commonwealth Telecommunications Organization (2004) notes that a policy and regulatory framework is a necessary precondition for enhanced digital inclusion in an information society. South African policy and regulatory efforts include the Freedom of Information (FOI) policy, ICT policy, Universal Access policy, Vision 2014 development strategy, Universal Service and Access policy, and E-government Vision (Batho Pele). The FOI gives individuals the constitutional right to have access to information, and enables the sharing of information with the public and across government departments (Farelo and Morris, 2002). The ICT policy focuses on transforming interaction between government and society through e-government, e-services and e-business. The ICT policy has enhanced the liberalization of the telecommunications environment; giving the country leverage to increase competition and reduce prices of access to the services through electronic means. The Universal Service and Access policy aims to achieve universal service delivery to all South Africans, and its implementation is monitored by the Universal Services and Access Agency of South Africa (Usaasa). The Agency also creates an enabling environment by stimulating public awareness of the benefits of ICT services and building the capacity to access these services. Besides, the Agency makes the necessary interventions to enable under-serviced communities to access ICT services.

The e-government vision addresses three main domains:

1. e-government (G2G);
2. e-service (applications of IT to transform the delivery of public services, G2C); and
3. e-business (G2B) (Farelo and Morris, 2002).

The government has a web portal branded “Batho Pele Gateway” which 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 and Morris, 2002). This initiative is buttressed by the Government Communication and Information System (GCIS) – a government information service that ensures the public is informed of government’s implementation of its mandate through direct dialogue with people in disadvantaged areas. There is also E-Cadre, a project of the South African Post Office (SAPO), which aims to use IT graduates as volunteers in educating the public on the use of ICTs (Department of Communications, 2008a).

Government commenced implementation of the following G2G initiatives (State Information Technology Agency – SITA, 2002): Department of Justice automation of processes for state attorneys; court process pilot project for automated interaction between courts and attorneys and the sheriff; common databases for citizens; wireless internet labs for distance education; and computer centres in informal settlements using converted containers to provide training. In 2004, Government established the African Advanced Institute for ICT (Meraka) to focus on research and applications
development. This was followed in 2006 by the launch of an Inter-governmental Relations Forum (IGRF) to speed up communication and ICT deployment across the nine provinces and among traditional leadership areas. Also launched were web site projects for all municipalities. Government has also commenced deploying wireless broadband to 500 Dinaledi schools (considered centres of excellence,) and target clinics, hospitals, libraries, multipurpose community centres and post offices to help increase the uptake and usage of ICTs and help deliver inclusivity in building an information society. Besides, the government promulgated the Broadband Infraco Act in 2007. The Act establishes the new state-owned enterprise Broadband agency with the responsibility for expanding the availability and affordability of access to electronic communications networks and services, including but not limited to underdeveloped and under-serviced areas; national long-distance backbone networks; metro access networks and international connectivity networks (Government Gazette, 2008).

Telecommunications
Telecommunication services consist of various components including radio, television, landline telephone, cell phone, internet, etc. Islam and Hassan (2009) in the context of Bangladesh point out that radio is the most powerful medium as it can reach many people especially those who live in rural areas with no phones and electricity. In South Africa, Telkom is the main service provider of communications services in South Africa. It operates both fixed line and mobile communications services. Telkom’s broadband footprint of ADSL and WiMAX now covers about 90 per cent of the country (Telkom, 2007). Prices have come down, albeit marginally (fast ADSL – 348 kbps rental is ZAR 152 per month, less by 66 per cent than in January 2005; Faster ADSL – 512 kbps, ZAR 326, 52-59 per cent less than in January 2005; Fastest ADSL – 4mbps rents at ZAR 426 per month), making access still beyond the reach of many individuals and institutions. However, South Africa in general remains the leader in ICT development in Africa and is reportedly the twentieth largest consumer of information products and services in the world. The country has a network that is 99 per cent digital and includes the latest in fixed-line, wireless and satellite communications. This has been the case for many years – in the late 1990s, South Africa was, unsurprisingly, considered to have the most developed telecommunications network on the African continent (Kling, 1999). In 1999, the government established the State Information Technology Agency, SITA, to co-ordinate IT resources in government in order to increase delivery capabilities and enhance interoperability. State Information Technology Agency, SITA is a shared service provider between government departments.

Cellular/mobile industry. Cell phone infrastructure has not yet been applied in South Africa to provide e-government services, but holds great potential because of its ubiquity and high adoption rate among the country’s citizens. South Africa has, over the last decade, experienced tremendous growth in the cellular phone industry following the liberalization of various segments of the telecommunications sector. Today, the country has four mobile phone operators, namely Vodacom, MTN, Cell C and Virgin Mobile. The 2007’s estimate of the population with cellular phones based on sim-card penetration was 89 per cent. Some of the cellular phone providers are involved in promoting access to rural communities. For example, Vodacom has deployed more than 90,000 community-service telephones to South Africa’s under serviced areas, where they have become invaluable sources of entrepreneurial activity for hundreds of
community phone-shop operators. Since its launch in 1994, the Community Phone Shop concept has expanded into that of communication centres in which entrepreneurs, job seekers and schoolchildren access essential business communication services such as faxes, e-mails and the internet daily (Department of Communications, 2008a, p. 116).

**Undersea fibre optic broadband cabling**

In partnership with other African countries, the South African government is involved in a number of projects to construct several broadband fibre optic undersea cables to form a ring around Africa and link the continent to Europe and Asia. The Eastern African Submarine Cable System (Eassy) is currently under construction and is due for completion in 2009. It will link South Africa from Durban to Sudan and provide landing stations in countries along the coast of East Africa. This would enhance communication within South Africa and the rest of Africa and other countries outside the continent (Department of Communications, 2008a, p. 116). The government is also involved in building a West Coast Marine Cable to link South Africa to Europe and another cable to the Americas. Known as UhuruNet, this west coast of Africa undersea broadband fibre optic cable will ride on a two-fibre link from Nigeria to Portugal (Hamlyn, 2008).

Meanwhile, SEACOM – another undersea fibre optic cable system – is being constructed on the East coast of Africa to connect South and East Africa to global networks in India, the Middle East and Europe. In particular, SEACOM will connect South Africa, Mozambique, Madagascar, Tanzania and Kenya to India and Italy, where other international cables currently exist. These recent infrastructure initiatives add on to the already existing SAT-3/WASC or South Atlantic 3/West Africa Submarine Cable, linking Portugal and Spain to South Africa, with connections to several West African countries along the route. All these developments are expected to provide affordable bandwidth that would encourage volume discounts and large bandwidth growth, which Africa badly needs.

**Multi-purpose community centres (MPCC) and internet access**

Multi-purpose community centres are known by different names especially in developing countries. Such labels as telecentres (the most generic name), village knowledge centres, infocentres, information kiosks, community information centres, cyber community centres and more are common (Islam and Hassan, 2009). Multipurpose community centres provide different user groups within a community with a wide range of services for education, business, health, weather, market prices, farm practices, sale of farm inputs, etc. By way of definition, multipurpose community centres, are perceived as public places where people can access computers, the internet, and other digital technologies that enable them to gather information, and create, learn, and communicate with others while they develop essential digital skills (Benjamin, 2000) or as centres where modern IT facilities are shared by the citizens of a specific local community within a rural or deprived urban area (Engvall, 1999 as cited by Islam and Hassan, 2009).

Multipurpose community centres present several opportunities as well as challenges. The opportunities they engender may include: facilitating sharing of information, offering a chance to reduce social isolation and marginalization experienced by rural communities, providing a means of dialogue between rural communities and decision making bodies, enhancing literacy through distance
education, etc. With regard to challenges, experience from Bangladesh show that the aims of multipurpose community centres are hampered by poor literacy, limited local content, lack of ICT skills, financial constrains, poor infrastructure such as electricity and telecommunication services (Islam and Hassan, 2009).

The concept of telecentre is reported to have originated over three decades ago when it was known as a teleport – an access facility to satellite communication systems (Raitt, 1986 as cited by Islam and Hassan, 2009). However, a telecentre as we know it today was first established in a farm in Sweden in the 1980s to provide services, training and jobs to the local community through computers and modern telecommunication equipment (Mahmood, 2005 as cited by Islam and Hassan, 2009). In Africa, telecentres were first initiated through the efforts of the Canadian-based International Development Research Centre IDRC in such countries as Uganda, Mozambique, Senegal and South Africa. In South Africa it is estimated that there are about 355 Multi-Purpose Community Centres (including cyber labs in schools with ICT equipment to enable internet access and provide multimedia services) that provide ICT services particularly to rural areas (Farelo and Morris, 2002). Besides, the South African Post Office has installed public information terminals in about 800 post offices throughout the country, especially in settlements without internet cafes or other forms of access to the internet (Department of Communications, 2008a, pp. 115-118).

The benefits of multi-purpose community centres especially in developing countries cannot be underestimated. Islam and Hassan (2009) note that information and communication activities are a fundamental element of any rural community development. Rural communities are often characterized by information poverty and information and communication technology can greatly facilitate the flow of information and knowledge within such environments. With regard to internet infrastructure, South Africa has in place fixed lines and broadband ADSL. The number of internet users was in 2007 estimated at 3.9 million (Department of Communications, 2008a, pp. 115-118).

**Challenges of e-government in South Africa**

Despite South Africa’s significant investment in ICT infrastructure, policy and regulatory framework to effectively roll out e-government services, the country faces a number of challenges. The UN e-government survey for 2008, ranked South Africa at 61st position out of 192 UN member states (Perry, 2008). This was a drop from 58th position in 2005. It would seem, South Africa has not effectively leveraged the policy, regulatory framework and expansive infrastructure to roll out e-government programmes to improve the living standards of its people. Service delivery in South Africa is guided by the principle of public service for all under the brand “Batho Pele” (translated to mean people first). The eight Batho Pele principles serve as an acceptable policy and legislative framework regarding service delivery in the public sector. These principles include (Department of Public Service and Administration, 1996); consultation (engaging with customers in terms of what they want); service standards (continually improving services); access (enabling disadvantaged persons to access services, speaking in understandable languages, etc); courtesy (being polite, courteous and friendly to customers); information (reaching all customers to make sure they are well informed about the services government departments provide); openness and transparency (being open and honest about every aspect of work by publishing
annual reports to tell citizens how resources were used, how much everything costs, including costs for staff, equipment delivery, services, etc; redress/dealing with complaints (providing a mechanism for customers to record when they are unhappy with a service, etc); and best value (giving customers the best service using all the resources, eliminating waste, fraud and corruption; and finding new ways to improve services at little or no cost).

Despite well articulated service delivery principles, South Africa is faced with a number of challenges in terms of service delivery, including problems of poverty, inequality, corruption, insecurity, illiteracy, skills shortage, etc. Meyer (2007), in a study of the users’ use of internet at provincial and local level, found that most were unhappy with the level of success in using the internet to seek services. The low level of success discourages them from using these facilities meant to enhance service delivery. A study by the Business Leadership Group on 15 well performing economies worldwide found that ADSL (broadband) costs in South Africa were 139 per cent higher than the average rate in the nations surveyed (Naidoo, 2007). On 3 June, 2008, South Africa’s Minister of Communications told parliament that with regard to uptake as well as access and the cost to communicate “… we face great challenges … our goal in making these services universally affordable is yet to be achieved … the costs still remain high” (Matsepe-Casaburri, 2008). Furthermore, 45 per cent of South Africa’s population is estimated to be living in rural areas, where ICT infrastructure is far less developed than in urban areas. In addition, PC penetration is quite low (Geness, 2004).

South Africa, during the better part of 2008, experienced a deficit in its electricity supply. President Thabo Mbeki in his State of the Nation Address (Mbeki, 2008) noted that the national emergency presented by the recent power outages posed the challenge … to the entirety of the [South African] nation … In essence the significant rise in electricity demand over the last two years outstripped the new capacity that was brought on stream. The resulting tight supply made the overall system vulnerable to any incident affecting the availability of energy. Without access to sufficient, quality and reliable energy, every social and development activity is critically constrained. Besides shortage of electricity, Farelo and Morris (2002) point out that South Africa lacks a comprehensive and easily accessible evidence base to support strategic policy decision-making and programme design to leverage ICTs for South Africa’s information society development. This negatively affects the timely detection of service delivery challenges in order to effect corrective action, thereby impinging on the ability of the state to deliver effectively and efficiently in terms of the ICT development agenda. On the technical front, there are many challenges – particularly with legacy systems and the need to implement transversal systems – in order to achieve the horizontal integration required for cross-departmental integration.

The Department of Communications (2008b) points out that the central challenge to the implementation of the Information Society Development Plan (ISAD) in South Africa is the serious shortage of ICT skills and the state’s limited capacity to deliver the necessary task force. This skills shortage 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. The 2000 School Register of Needs Survey reveals that the number of schools that used computers for teaching and learning was 12.3 per cent, and those that had access to
e-mail and the internet was only 6.9 per cent. Moreover, the 2003 Human Resource Development review showed that over the last ten years, only 12 per cent of the graduates obtained postgraduate qualifications in ICT. United Nations Development Programme (2003, p. 57) observes that government has not yet succeeded in building the human resource base at local level because most efforts are directed at national and provincial level. Moreover, no effective ways of attracting and retaining critical skills have been put in place by government. Additionally, government business and administration processes have been dogged with problems related to the lack of a central accessible information pool for important personal details on citizens, resulting in the unnecessary duplication and wastage of manpower.

Geness (2004), writing in the context of South African e-government initiatives, noted that the delivery of services was largely hampered by “...lack of equal access to all citizens especially with regard to rural-urban divide in the distribution of national resources”. Meyer (2007), in a study of the utilization of multipurpose community centres identified, among other constraints, the long distance travelled by users to the nearest centre (on average, users travelled up to seven kilometres); the shortage in the skills necessary to use the internet, read or understand the content; long waiting times to use the internet; and the high costs of access. This is exacerbated by the growing theft of copper cables, which has the effect of undermining the implementation of unbundling policy in South Africa as well as being a threat to the country’s security and socio-economic development (Matsepe-Casaburri, 2008).

E-government failures in South Africa
Within the wider African context, e-government projects have tended to fail because of adopting technologies without the accompanying human skills and capacities to manage, integrate and sustain them; centralizing the use of technologies by national governments without extending the benefits to intermediary institutions such as local government, parliament, civil society, etc; not linking good governance to the broader and more inclusive democracy; high levels of digital illiteracy; and inadequate resources (Cloate, 2007). Although South Africa has made significant strides in e-government, it does not seem to be leveraging the opportunities offered by such government systems. During 2005, SADC member states (including South Africa) were part of 180 countries that were reviewed on Digital Opportunity Index (DOI). The DOI is used to measure and evaluate the opportunities, infrastructure and utilization of ICTs by government and its people. DOI monitors recent technologies, such as broadband and mobile internet access, the falling price of broadband, and increasing broadband speeds (World Information Society Report, 2006). The DOI ranking of SADC member states in general showed that although great opportunities exist for most member states to employ e-government, little was being done to take advantage of such opportunities. For example, South Africa was ranked 91st in the world behind Seychelles and Mauritius in the SADC region.

Benjamin (1999), in the context of post-apartheid South Africa, has shown how community-based ICT projects have not had remarkable success. For instance, Golaganang (coming together), a 2002 joint initiative between the South African government (represented by SITA and the Department of Public Service and Administration) and the private sector (HP, Telkom, CS Holdings, Standard Bank, and Microsoft), was conceived to provide public service employees with affordable
computer bundles (multimedia PCs, operating systems, application software, modem and internet connectivity, a printer, three year extended warranty and interactive tutorial software). Each school in the Golaganang community was also set to receive a computer. It was expected that through this project, inequitable access to technology would in part be addressed, and the digital literacy of public servants and utilization of ICT in their work would improve; thus bringing benefits of employment. The project was premised on shared risks and benefits. Cabinet approved the project on the 17 April 2002, but the project failed to take off when HP asked government to give guarantees to the value of US$73m to allow the project to go ahead, which government did not do and so the project failed. However, other than financial sustainability, there was a lack of trust because much emphasis was placed on partnerships without any focus on where financing would be raised from. Moreover, for a project of such a large scale, it was negligence on part of the organizers not to first conduct a pilot. Although the project did not take off, it failed in the eyes of public servants because they were already aware of the project, and had heightened expectations (Levin, 2008).

Kekana and Heeks (2008) found that the introduction of IT into the National Welfare Agency, which administers social security funds to the National Pension Fund (NPF) (paid to those who retired normally from work) and the Workers’ Compensation Fund (WCF) (paid to those forced to retire for various reasons) in part failed. The purpose of the project was to integrate and decentralize the previously separate manual-based operations of NFP and WCF. The computerized system would address problems associated with payment delays, incorrect recording of figures, and the lack of communication between the two agencies. The initial plan was to computerize 100 per cent of the system in three years, but six years down the line, only 40 per cent of the system is computerized. Cost cutting did not happen because of hiring consultants, and costs moved from US$43m to US$60m. However, the project had some partial success because lead times were reduced. For example, the processing of funeral grants, which used to take three months, were reduced to 30 minutes; monthly bills became accurate and timely, making debt chasing faster; the number of complaints diminished; and timeous status reports became available to managers.

E-government successes in South Africa
Despite the challenges and complete failures of some e-government projects in South Africa, there have been some notable success stories. The Independent Electoral Commission (IEC) successfully developed an e-procurement system that allows for open and transparent bidding of government tenders aimed at preventing corruption. Moreover, the IEC leverages tools of multi-access to promote free and fair elections. In 2004, for example, IEC, in partnership with cell phone service providers, enabled voters to short message service (SMS) their identity number, and in return receive a message back indicating their eligibility to vote and the voting station’s details. Moreover, a satellite-enabled network made it possible for the commission to register voters; relay, collect and verify ballots; and relay results across the country. Besides, the tabulation database system was linked via a wide area network to all district collation centres (Coleman, n.d.). Custom-designed handheld scanners captured information from bar-coded ID books and greatly streamlined the process of voter registration. The other successful e-government project is the South African Revenue Services’ (SARS) e-filing
system which provides a way to conduct transactions related to tax returns on the internet between government and business (G2B).

The National Traffic Information System (eNaTIS) an e-government initiative that is used for the application for driving licenses and the registration and licensing of motor vehicles; notification of change of ownership/sale of motor vehicles; and application for learners licenses has been a successful project. The transactions and services can be provided by most transport offices across the nine provinces in the country (National Traffic Information System, 2008). During the first six months of 2008, more than 75 million transactions were performed on eNaTIS. With the exception of routine maintenance outside of business hours, downtime was virtually non-existent in the first half of the year, and phenomenal system processing time was experienced. The eNaTIS processed 96 per cent of all transactions in less than two seconds, 99.8 per cent in less than 10 seconds, and 99.95 per cent in less than 60 seconds. Before e-NATIS was launched on 12 April 2007, its predecessor (Natis) managed an average of 300,000 transactions a day. Now, the average rate of daily transactions is 600,000 (Segar, 2008).

The UN Global E-government Readiness Survey for 2008 (United Nations, 2008) observes that South Africa has a strong online presence. In particular, the web site of the Department of Labour is an excellent example of a public agency web site that is well tailored to the needs of its stakeholders. The web site is noted for being attractive and simple in design, allowing users to easily find the information they are looking for. In addition, there are various online filings/registrations, and the posting of online vacancies is available. Perry (2008) notes that the Department of Labour’s web site is a fully featured site that is a one-stop shop for labour issues.

Implications of e-government for libraries in South Africa
E-government implementation is an indication of some form e-readiness of a community or country to partake in the global information society. From the point of view of libraries and information services the importance of e-readiness need not be over-emphasised. Many countries especially in the developed world are striving to attain some measure of e-readiness. This is motivated by the belief that a high level of e-readiness status would enable the countries become to inclusive global information societies where all persons without distinction were empowered to create, receive, share and utilise information for their economic, social, cultural and political development. By harnessing the potential of ICTs, in all areas of human life, national and local governments could provide new and better responses to vital long standing issues such as poverty reduction, wealth creation as well as education, equity and social justice (Mutula and van Brakel, 2006). Similarly, an understanding of the e-readiness of a country or community was essential for providing baseline information that could be used for planning and also for making comparisons across regions, countries, and organisations. Moreover, e-readiness assessments could be used as an information gathering mechanism to assist governments when planning strategies for ICT integration and also in making improvements on specific components of e-readiness (Mutula and van Brakel, 2006). The role of libraries in an e-government environment is therefore significant.

The role of libraries and e-government are also inextricably intertwined. The first government online services were bibliographic networks. These early experiences made libraries important players in e-government implementation especially with regard to
content organisation and management (Mutula, 2005). Libraries in the developed world such as Australia, Canada and the USA have made progress in using e-government infrastructures to enhance access to information in government web sites. Within the Florida State in the USA, the “enhanced citizen access to e-government information act 2007” envisages a nationwide network of public libraries that is specifically designated as a national e-government information and service centres to help citizens in how to access and use e-government information and services (Library Journal, 2007). In Canada, government has among other agencies connected libraries to the internet as part of an e-government initiative by providing them with computers especially in remote areas where connections to the net is not readily available. These efforts are aimed at ensuring that Canadians have access to the internet and in bridging the digital divide. It is envisaged that the impact of e-government and e-democracy will be significant on libraries especially with regard to direct access to government information. The impact of e-government on Canadian libraries include reduction in collecting less government materials thus, saving on storage space. School libraries have benefited from increased access to government information given that they traditionally do not collect such information (Pare, 2002). In Taiwan, Huang and Shyu (2008) explain how e-government infrastructure provides its citizens and organisations with convenient access to government information and services.

Comparatively, in South Africa, the opportunities of e-government have yet to receive attention from the library fraternity. This perhaps is attributed to the lack of awareness or a champion (to spearhead consensus building about implication of e-government to libraries) among library professionals to promote the use of e-government in the provision of library and information services. South African libraries must necessarily become part of e-government ongoing efforts in the country in order for them to deliver electronic and integrated public services from a one stop point. Rather than for users to visit different government offices to obtain information in the expansive country of about 50 million people, they can gain access to different sources of information such as obtaining permit, completing tax form, applying for a job or completing a tender request from the convenience of the library in the neighborhoods. Through e-government, the South African libraries can contribute to bridging the digital divide between the urban and rural communities where such gaps continue to widen. The libraries can also enhance their image by extending their services closer to the communities as well as deepening democratic participation by citizens through enabling access to government held information. Libraries in South Africa can through e-government contribute to the government poverty reduction programme – the Black Economic Empowerment by enabling small and medium-sized enterprises (SMEs) to gain access to information about businesses, government opportunities, credit, etc.

Through e-government, libraries can provide internet access to the public (as they provide the hardware and software to people often free of charge), educate users on the use of e-information, assist clients in completing various government forms, help in interpreting information retrieved from government web sites to the clients, as well as helping them navigate through governments web sites that are often disorganised (Berryman, 2004, p. 4). Libraries in South Africa will inevitably have to embrace e-government if they have to provide value-added services to their clients in the face of decreasing budgets for equipment and infrastructure development. As libraries get
involved in providing e-government services, they will increasingly get involved in the management of e-records. Experience from Australia has shown that libraries require both legislative and budgetary support to assist in their efforts to capture and preserve the digital heritage and also to help organise its preservation. Through e-government, libraries will increasingly be required to collect, distribute record and archive electronic resources. The challenges of the libraries will be how to handle the e-collection, preserve and archive government documents (Kasianovitz, 2003, p. 1; Cunningham and Phillips, 2005, p. 9). The libraries will have to deal with the challenges of a national legislation that is skewed towards printed materials especially with regard to depositing such materials with the national library as legal deposit. There is no provision yet of legal deposit of electronic resources found on government web sites. This raises the issue of what then happens when such information disappears? The libraries will have to ensure that such information is made available. The major strides that have been made in e-government are compelling for libraries to be part of this national initiative that has significant implications in the way they provide information now and the future.

The way forward for South Africa
The government of South Africa has an enabling environment in policy, infrastructure, regulatory framework and poverty alleviation programmes that would enable leveraging e-government to enhance service delivery to citizens. However, concerns about poor service delivery continue to be voiced unabated. Gronlund et al. (2005) point out that for e-government projects to be effective, focus must be placed on social and economic contexts. Government need to ensure that the ethos of e-government are infused into poverty alleviation and service delivery programmes. Moreover, there is a need for government to establish coordinating mechanisms to monitor e-government implementation. Government could consider the recommendations of the Common Market of East and Southern Africa’s (COMESA) e-strategy (covering all major aspects of e-applications, including e-government, e-commerce, e-education, e-health, e-agriculture etc). The recommendations, which were released in 2004, espouse the promotion of ICT usage; enhancement of connectivity, especially among the rural poor; encouraging public-private partnerships; developing a nation-wide backbone; enhancing universal access and rural telephone networks; human resource development (university education, research and technology support networks, introduction of ICTs at secondary school level); and regulation (liberalizing ICT sectors) (Economic Commission for Africa, 2005). Government should also investigate new ways through which e-government can be deployed, using mobile phones, which are highly pervasive in the South African society, but have hardly been used for e-government. On their part, libraries have now a window of opportunity which they have never had before to take advantage of the pervasive e-government infrastructure to enhance the provision of information services to the people. Excuses such as lack of network or internet infrastructure will no longer be convincing.

Southwood (2005) poses the following questions to consider when implementing e-government systems to enhance service delivery that may inform the South African e-government implementation strategy: Are data systems infrastructure-ready? Are management systems, records and work processes in place? Is the legal infrastructure ready (i.e. do we have the laws and regulations required to permit and support the
move to e-government and facilitate the acceptance of digital signatures)? Are the institutional infrastructures needed to facilitate and drive e-government in place? Is our human infrastructure ready (i.e. do we have in place the attitudes, knowledge and skills required to initiate, implement and sustain e-government initiatives)? Is our technological infrastructure ready? And is our leadership and strategic thinking ready (i.e. is there the internal authority and vision to drive forward e-government)?

The extent to which these questions are answered in the affirmative would determine the level to which South Africa is prepared to leverage e-government to enhance service delivery, particularly to those who live in rural areas.

**Conclusion**

The pace of e-government implementation across the world in general and in South Africa in particular is gaining momentum. The South African government is making significant investments by putting in place policies, poverty alleviation programmes, regulatory framework and ICT infrastructure development in keeping with global trends and practice to enhance service delivery to its citizens. Despite these efforts, concerns about poor service delivery to citizens remains of critical concern in South Africa. This suggests that government’s investment and commitment to improving the lives of its citizens with regard to service delivery through e-government has largely not yielded the desired outcomes. In order for service delivery to be enhanced beyond mere enabling policies and legal frameworks, mechanisms of monitoring and evaluation are required. Moreover, e-government ethos must be infused in poverty alleviation programmes. There is also the need for a national information infrastructure to be established to act as the backbone for service delivery consisting of physical infrastructure, such as internet access points extending beyond multipurpose community centres into convenient places such as public libraries, shopping malls, government offices, hospitals, clubs and relevant public places for the citizens to use free of charge. There is therefore a need for a complete paradigm shift in South Africa’s e-government strategy in order to improve service delivery to the citizens. Libraries must also move in tandem with e-government implementation efforts to position themselves strategically to play their rightful role in the information society.

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Further reading


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