The application of WEB 2.0 Technologies by the South African Government

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ABSTRACT

Various governments, for example those of the United States of America, Canada, Finland and France are already making use of Web 2.0 technology (social websites such as blogs, wikis, Twitter, Facebook and "second life"") to interact and communicate with citizens. The aim of this article is to explore the use of Web 2.0 technology by South African government institutions. Through a review of scholarly literature and internet sources a general overview of the development of information technology is given, examples of selected governments that are already making use of Web 2.0 technology are assessed, and the current use of information technology in South Africa is reviewed. This article has shown Web 2.0 to be an application with the potential to change the way citizens interact with government, governments provide information to citizens and include citizens in government processes and debates.

INTRODUCTION

Technology has the potential to influence societies, governments and economies in ways reminiscent of the printing press and more recently the steam engine, railroad and electricity. Consequently various authors wrote extensively about technology (Klay 1982:1–13; Kraemer & Northrop 1986:447–453; Snellen &

Van de Donk 1998; Landsbergen 2001:206–220; Peled 2001:414–436) and the meaning of technology (De Beer 1991:105; Hickman 2001:11; Schroeder 2007; Ihde 1979). A review of this literature reveals that the concept *technology* has different meanings, of which the following as identified by Hickman (2001) are examples:

- techniques, tools, and artefacts (equivalent to De Beer's concept technical objects or apparatus)
- systems that "exhibit and depend on such things" (equivalent to De Beer's domain of the technical or the concept *technique*)
- the application of scientific theories (equivalent to De Beer's concept technical activities)
- systematic inquiry "into such things" (equivalent to De Beer's logos about the technical the concept *technology*)

For the purpose of this article the concept *technology* refers to techniques, tools, technical objects or technical apparatus. With this meaning in mind, technology is not just restricted to the development and use of the computer, but can include various technical objects, for example administrative procedures, forms, the telephone, cell phones and Internet facilities on cell phones. This article focuses on one type of technology, namely information technology, which includes the use, study, design, development, implementation, support or management of computer-based information systems, particularly software applications, for example Web 2.0 and computer hardware. Web 2.0 is thus a computer-based information system with the potential to communicate with citizens 24 hours a day, seven days a week. Within the context of Public Administration this article will assess the use of Web 2.0 as an application to provide information, implement policies and offer public services quickly and easily (See Klay 1982:7; Snellen & Van de Donk 1998:5; Spaulding 2009; Bustamante 2009).

The internet which has been developed as part of the Web 1.0 generation to share information and text seems still to be widely used in South Africa. Web 2.0, the next generation of web use, focuses on social networking that includes the use of interaction, blogs, wikis and the virtual world that can be found in second life (IBM 2009:online). The development of Web 2.0 and the virtual world provide new opportunities and benefits for government to interact with citizens and to provide new and improved public services. This article will have a closer look at some governments (in countries such as France, the United States of America and Canada) as examples of how Web 2.0 is being used by governments.

The aim of this article is to explore the application of Web 2.0 technologies (for example blogs, wikis, Facebook, second life and the virtual world) by South African government institutions. This study includes a literature and internet study

providing a general overview of the development of information technology (including an explanation of the development of the different generations of web technology), the study of the examples of selected governments that are already making use of Web 2.0 technology and a review of the current use of information technology in South Africa.

AN OVERVIEW ON THE DEVELOPMENT OF INFORMATION TECHNOLOGY AND THE INTERNET

In order to understand Web 2.0 as a technical application, it is appropriate to give an overview of the development of information technology and the internet, specifically with regard to the development of the electronic computer. The latter resulted from efforts to develop a better computational device for calculations. Consequently, an elaborate and "sophisticated" computer, known as a mechanical differential analyser because of its ability to solve differential equations, was built in 1930 at the Massachusetts Institute of Technology (MIT) by Vannevar Bush (Flamm 1988:32). A prototype of an experimental electronic computer was created at Iowa State University in 1939 by John V Atansoff, followed by an upgraded model in 1942. During 1941 Atansoff demonstrated his computer for physicist John W Mauchly that wrote a memorandum proposing the construction of an all electronic general purpose computer (Pavlichev & Garson 2004:18).

The Electronic Numerical Integrator and Computer (ENIAC) that was developed in the United States of America combined for the first time the high speed of electronics with the ability to programme many complex problems. ENIAC was able to add or subtract

5 000 times a second, a thousand times faster than any other machine. The construction of ENIAC lasted from 1943 till 1945 (Wikipedia Encyclopaedia 2010:online). ENIAC led to a number of ideas and developments that promoted computer development for the next two decades. The first generation of computers (1952–1958) was characterised by its big size and was very expensive but lead to the development of the second generation of computers. The second generation of computers (1959–1963) was distinguished by individualised transistor circuits and magnetic storing space which paved the way for the development of the third generation of computers (Pavlichev & Garson 2004:19). The third generation of computers (1964–1975) saw the development of small, low cost computers that could be owned by individuals or small businesses (Wikipedia Encyclopaedia 2010:online). The fourth generation of computers was microprocessor based computers with increased processing power and storage capacity. Most of today's computers belong to this generation (Wikipedia Encyclopaedia 2010:online).

The development of the internet forms part of the development of computer networking projects that started in the 1960s. The Advanced Research Projects Agency funded the development of ARPANET. ARPANET, a large area network that was the predecessor of the internet, could send communication along a predefined route, could break down the communication into smaller units and deliver the communication to individuals through the best path available (Pavlichev & Garson 2004:18). ARPANET became operational in 1969 and continued to evolve and develop. The File Transfer Protocol (FTP) that allowed for the transfer of files from one computer to another was developed in 1971. E-mail was developed in 1972 as the internet continued to expand and develop (Pavlichev & Garson 2004:19–20). By the early 1990s the internet was used by thousands of people around the world. The simultaneous development of the World Wide Web (WWW) broadened the use of the internet to move beyond the transfer of text multimedia exchange. The release of the World Wide Web started the first generation of web use known as Web 1.0 that was used from 1991 to 2003. Web 1.0 was characterised by providing text or written information to users (Deloitte 2009:online). Web 1.0 had a one way flow of information with personalised websites with read only text and focused on information sharing. This generation of web use reflected widespread computer illiteracy and slow internet connections (Wikipedia Encyclopaedia 2010:online). However, especially in developing countries, web 1.0 has introduced citizens to the internet and the possible advantages of sharing information around the world and of improved communication between citizens in remote and isolated areas. Web 1.0 thus did lead the way for the development and transformation of the internet to improve computer literacy and internet speed to make better use of web 2.0 and social networks.

The second generation of web use known as Web 2.0 (2004 to present) can be characterised by being user centred, interactive and a social web. Web 2.0 includes web-based communities, social networking sites, video sharing, wikis and blogs (Nations 2010:online). The difference between Web 1.0 and Web 2.0 is that Web 2.0 allows the user to interact with other users or to change website content that is in contrast with Web 1.0 that was limited to the passive viewing of information. Deloitte (2009:online) states that unlike Web 1.0 that mainly provides text or written information to users, Web 2.0 technology enabled citizens to enter a phase including low cost collaboration tools having a major impact on communication between citizens and governments. These collaboration tools have enabled citizens to instantly communicate with government through Web 2.0 technologies such as blogs and networking sites from anywhere in the world, and to get fast feedback and responses. Web 2.0 tegnologies view the internet as a platform to create new ideas, design new policies and to provide services. It creates the opportunity for more interaction, collaboration, citizen

participation and the sharing of ideas (Deloitte 2009:online). It also provides citizens the opportunity to use government blogs for sharing their views on new policies, planned government activities or the lack of services. The creation of a virtual world in Web 2.0 thus provides new opportunities for communication and interaction on the internet. According to IBM (2009:online) virtual worlds have now come to the fore as the most interactive form of engagement available on Web 2.0. This is confirmed by Wikipedia Encyclopaedia (2010:online) that the number of people using virtual worlds is increasing at a rate of 15% every month indicating its growing popularity amongst citizens.

Virtual worlds seems to be a new way of gathering people together and communicating in real time, in a customised environment, the metaverse. The metaverse is known as our collective online shared space, created by the convergence of virtually enhanced physical reality and physically persistent virtual space and presents new possibilities for the public service of reaching and communicating with citizens. The virtual world that was created in second life, a three dimensional world has residents known as avatars that help to build the virtual world. An avatar is a computer user's representation in the virtual word (Wikipedia Encyclopaedia 2010:online). In the virtual world aspects like gravity, real time actions and real time voice communication with other avatars is possible (IBM 2009:online). Virtual world allows governments to interact with citizens where they are in the virtual world in new and exciting ways by making use of avatars or by creating virtual government departments in second life that provides real government information in the virtual word. This implies that governments will have to change the way they currently communicate and will have to adapt to a growing virtual world where communication and interaction takes place 24 hours a day seven days a week through avatars instead of traditional public servants.

Nations (2010:online) speculates that Web 3.0 could be in future the next generation for internet use – completely virtual and three dimensional. IBM (2009:online) predicts that by the year 2020 virtual worlds will be as widespread as the internet is currently and may actually replace the internet. The website South African Scenario 2025 (2008:online) states that by the year 2025 billions of people will have access to information technology that will allow users to network and connect in dynamic new ways. The expectation is that by being connected continuously to networks and having 24 hour access to technology, citizens will experience improved productivity as well as improved relationships and interaction with government. Cordis (2009:online) predicts that in future citizens will live in a world of networks where citizens will be permanently connected from anywhere to all information, networks and the rest of the world. Information will expectedly change faster and technology will become cheaper and benefit more citizens by getting immediate access to government services.

Since the development of the first computer to the development and use of Web 2.0 and possibly the development of Web 3.0, technology is providing new opportunities to governments to interact and communicate with citizens as can be seen next.

THE USE OF WEB 2.0 BY SELECTED GOVERNMENTS

This section will provide an overview of the various examples, reported in the literature, of how governments are already making use of Web 2.0 technology. Accenture (2009:online) observes that citizens are becoming more vocal about their needs and the pressure to improve public services is increasing with high expectations being placed on governments throughout the world. Improvements in private sector goods and services have lead people to expect better, more personalised, responsive and efficient public goods and services as well. The development and use of technology like Web 2.0 that has been used very successfully by the private sector to communicate with customers could also assist the public service in this regard (Accenture 2009:online). Chang and Kannan (2008:online) suggest that governments should meet citizens where they are online making use of social networks (eg. Facebook, blogs and wikis) rather than placing information on a government website that few people visit. These social networks are not only visited regularly by citizens, but they can be made more interesting for citizens by including video and live chat rooms to communicate instantly with public servants (Accenture 2009:online). The French government is already making use of a Web 2.0 website and created a discussion forum with wikis and videos to increase debate on government issues and to get citizens participating in government (Accenture 2009:online).

Osimo (2008:online) observes that Web 2.0 technologies are currently not just being used for soft issues like public relations and public service announcements by governments, but also for core internal tasks for example intelligence services, reviewing patterns of technology use by citizens and for enabling public participation in government decision making. Furthermore, social networks are increasingly used by politicians in Europe to support their campaigns (Accenture 2009:online). The candidates in the 2008 Presidential election campaign in the United States of America also used information technology and social networks including blogs, Twitter, Facebook and text messaging very successfully (Accenture 2009:online). Since the election, citizens and government departments in the United States of America are encouraged to use Web 2.0 technology (Accenture 2009:online). The Department of Health and Human Services in the United States of America used Web 2.0 to create a blog about an influenza pandemic (Accenture 2009:online). This blog

was accessed by experts and citizens and created an influx of new thinking, participation and ideas for government (Accenture 2009:online).

The Government of Finland maintains a discussion forum that enables citizens to comment on government initiatives. Citizens can use a message board or connect with ministers for online chats. The Finnish Government regards Web 2.0 as an opportunity to create citizens' participation in government by also using eVoting and the electronic submission of new motions and ideas to debate in government (Accenture 2009:online). It has been shown that the use of technology and the various e-government initiatives in Finland have been taken up by 73% of population making use of the governments initiatives to include technology in government (Obi 2007:online).

The creation of a virtual world in second life (a three dimensional world) by making use of Web 2.0 provides new possibilities for governments to use virtual applications to promote government to citizens (itworldcanada 2009:online). According to IBM (2009:online) the virtual environment in, for example second life, offers the following opportunities:

- A new and unique opportunity to engage with people from around the world and to discuss a large number of topics related to politics, education or economics.
- A new way to observe how individuals interact with and react to each other.
- A unique opportunity to look at how individuals form friendships and alliances and interact on common interests and views related to good governance, politics or policy.
- An opportunity for individuals and organisations to employ social networking for both personal and professional purposes.

IBM (2009:online) states that second life has digital infrastructure including homes, vehicles, nightclubs, shops, landscapes, clothes, islands, schools, companies and governments. Furthermore it has an economy based on the so-called Linden dollars, about 265 Lindens to the US dollar. Second life is a place to meet, reach and leave messages for people on various topics including health, science, education and current issues in government (America gov 2007:online). In the United States of America various government administrations are already making use of second life. Examples of this include, The American National Oceanic and Atmospheric Administration (NOAA), The National Aeronautics and Space Administration (NASA), the National Institute of Health, the Centre for Disease Control, the Central Intelligence Agency (CIA), the US Army, the US Air Force and the US House of Representatives all form part of second life. Of all the US government agencies in second life, NOAA is the best represented with its own island where visitors can experience a hurricane, rise through the atmosphere by using a weather balloon, stand on the beach during a tsunami

or walk on a virtual glacier to explore the impact of global warming. Although the social dimension of second life may sometimes be over-emphasised in the literature, it provides clearly opportunities for citizens to directly experience government activities and to get in-time and reliable government information. One example of such information is the availability of information on the weather while being in the virtual world (American gov 2009:online).

In Canada the Vancouver Police Department uses second life to recruit new employees that are highly skilled, and who understand and use technology. The Ontario Government has two islands in second life that have helped the government to recruit and reach out to citizens in an interactive way. The first Ontario Island was the Ontario Public Service (OPS) careers island that provides information on employment in the Ontario public service. The island has a central hub with information on available public service careers and allows for five interactive job experiences. Digital Ontario Island provides visitors with information about the governments social and economic planning. Each of the government's focus areas has its own designated station to explain and demonstrate its purpose and goals. A number of images, videos, and interactive features are used to connect and communicate with citizens. Each station provides citizens with the opportunity to give feedback, ask questions and express their feelings and concerns about government activities (modern communication 2009:online). However, it is still not clear whether the 'takeup' frequency of these facilities justifies the big effort to create, maintain and develop further facilities. Bearing in mind that stagnation will lead to fewer visitors, a constant updating of information and news as well as the provision of fresh feedback to visitors, may have the effect that current visitors be maintained and new visitors be attracted

The City of Birmingham in England also established an island in second life and is using the virtual world to interact and provide services to the public. Birmingham island integrates other online applications such as Google Maps and RSS feeds, a RSS feed is known as "Really Simple Syndication" that is used to publish frequently updated information for example news headlines. RSS feeds are used on Birmingham Island to provide citizens with a map of Birmingham and a physical city centre. This also allows visitors to experience the city, get information about key buildings in the city, browse attractions and amenities and promote tourism to Birmingham (publictechnology 2009:online).

The government in Italy is also using second life to promote tourism by making use of Toscana Island where visitors can explore Tuscan art, culture and landmarks like for example the Tower of Pisa. This island includes the Intoscana Shop where virtual world visitors can purchase real world items – a good example of real benefits for commerce and tourism. Apart from tourism, a number of countries have all opened their embassies in the Diplomatic Quarter

of Diplomacy Island in second life for example the Maldives, Sweden, Estonia, Kazakhstan and Serbia (IBM 2009:online.)

Using the virtual world saves time and the cost of travelling and is better for the environment. IBM (2009:online) predicts that in 20 years' time meetings and conferences in the virtual world will be commonplace while at the same time benefiting the economy and environment. According to the web page itworldcanada (2009:online) time and space boundaries are eliminated in second life with virtual conferences taking place and meetings being scheduled in real time in the virtual world. IBM (2009:online) states that the benefits of having meetings or conferences in the virtual world include the following:

- Overcoming the isolation of workers dispersed in remote locations.
- Allowing for more interaction, collaboration and connectedness between workers in multiple sites in the virtual world.
- Reducing the need for people to travel to be able to participate in a meeting or conference.

With more than 12 million members, second life is already becoming the preferred way of communication and interacting for a new generation of technology users (itworldcanada 2009:online). This next generation of technology users will demand that governments function differently and provide services differently to meet their needs in a virtual world (itworldcanada 2009:online). It can therefore be concluded that the use of Web 2.0 applications is growing with various governments making use of the technology to communicate and interact with citizens. The next section will look at the use of technology by the South African government and if Web 2.0 is also being used to benefit this government.

INFORMATION TECHNOLOGY USE IN SOUTH AFRICA

A review of information technology applications in South Africa indicates that South Africa currently has 4 425 million main telephone lines in use with 46 436 million cellular telephone users (World Fact book 2011:online). During 2008 South Africa had 5.1 million Internet users for a population of 49 052 489 (World Fact book 2011:online). However Thlabela, Roodt, Paterson and Weir-Smith (2006:online) found that computer use largely takes place in big cities and businesses. Household use of computers and the internet are limited to only 13,6%, leaving most citizens, especially citizens in rural and remote areas in South Africa out of the information society (Thlabela *et al.* 2006:online). To improve citizen access to information and technology, the South African government initiated a number of centres with community access points

where information technology services are made available to the public. The information technology service centres include:

- Multipurpose community centres
- Telecentres and cyber labs
- Public information terminals
- Public libraries

These service centres are one-stop centres where local, provincial and national government, as well as other service providers offer services and information to local communities that probably would not have access to information technology otherwise (Thlabela et al. 2006:online). This initiative shows the government's commitment to using information technology to communicate and inform citizens (Thlabela et al. 2006:online). All universities in South Africa and 6 000 schools have access to ICT and an educational portal "Thutong" was also established to assist educators and learners to access information. According to Jensen (2001:4) South Africa has the largest information technology infrastructure on the African continent. IST Africa (2009:online) agrees and state that South African websites attract highly educated users everyday and that South Africa's internet use has grown 121% since 2007, indicating that technology has become an important part of citizens' lives in South Africa. Sanders (2010:online) state that South Africans are using the Internet and is interested in information and giving their opinion on blogs. Social websites for example Twitter, YouTube, Flickr and Facebook that are a characteristic of Web 2.0 is very popular in South Africa. According to Social Media (2010:online) South Africa currently has 3,38 million users of Facebook. If this is compared to the number of internet users in the country, South Africa has 64% of the population making using Facebook. According to Social Media (2010:online) this means that a much higher percentage of people with internet connection make use of Facebook in South Africa than in other countries, for example Germany, where only 23% of the population make use of Facebook. According to Sanders (2010:online) this high percentage of the population using Facebook is an indication that South Africans are interested in social networks. The fact that 25% of South African Facebook users are over the age of 35, is also an indication that information technology in South Africa is being used across generations (Sanders 2010:online). Apart from Facebook, in 2010 Twitter had 55 000 users in South Africa with 1,5 million tweets (a tweet is a short massage of 140 characters) being sent every month. Twitter is currently the 7th most popular visited website in South Africa (BWTH Blog 2010:online).

The South African government has also accepted the importance of the growing information society and the benefits of using technology in government (See the *Green Paper on E-Commerce* as published in November 2000;

Fraser-Moleketi 2002:online) and the E-government policy 2001 drafted by the Department of Public Service and Administration. Along with the e-government policy and the Green Paper on E-Commerce the Department of Public Service and Administration was mandated to promote the use of information technology to improve public service delivery in South Africa (DPSA 2009). Various E-government initiatives were also undertaken by the South African government to show its commitment towards the use of technology in government. An important E-government initiative that the Department of Public Service and Administration undertook, was the development of the South Africa Government Online gateway. This gateway that was initiated in 2002 is a single electronic gateway that facilitates access to all information about and services provided by the government. The South Africa Government Online gateway has since its inception increased the government information that is available to the public. After the inception of the South African Government Online gateway, other E-government projects were initiated for example, the Cape Province Gateway project, E-filing of tax, the 2010 FIFA world cup website and the Department of Trade and Industry (DTI) Broad Based Black Economic Empowerment website (B-BBEE). Currently all national and provincial government departments and many local governments have websites and e-mail addresses (Farelo & Morris 2006:online).

However, currently most of the governments' initiatives as mentioned above are based on information sharing with citizens. The South Africa Government Online Gateway is a good example of this. The gateway offers government information to citizens and a subscription service that enables citizens to request government information to be e-mailed to them on a regular basis (Gov.za 2010:online). This can be seen as Web 1.0 technology that are characterised by providing text or written information to users and a one way flow of information. Although web 1.0 is still mainly used in government in South Africa it should not prevent or stop the government from investing in the use of web 2.0 technology. Some progress has been made towards the use of Web 2.0 in government activities. The Eastern Cape Government provides a blog for the Department of Education in the Eastern Cape (Eastern Cape Department of Education 2010:online). This blog invites learners and parents in the Eastern Cape to participate in discussions about education topics that are important for them. The Eastern Cape also provides a blog for discussion of economic development, environmental management, rural development and streamlining government operations (Eastern Cape HOD Blog 2010:online). This blog also makes provision for citizens in the Eastern Cape to link their photos and RSS feeds and provides links to YouTube and Twitter. The Port St John Local Municipality is making use of social networking websites to promote the municipality. Port St John is making use of a blog, Twitter and Facebook to

keep residents informed about what is happening in the municipality (Port St John Municipality 2010:online). The Chris Hani District Municipality also has a blog where residents can leave comments for the municipality or add new topics for discussion (Chris Hani District Municipality 2010 online).

Apart from these local governments the government in the national sphere can also be found on Facebook. Information is made available to Facebook users about government activities, for example the President's New Year Address, the State of the Nation Address and the budget vote speech by the Minister of Finance. Facebook users also have the opportunity to make comments about these speeches and other government activities and give their views. Other aspects, for example the abuse of women and the health of former President Nelson Mandela were also discussed by Facebook users. To date 868 Facebook users have indicated that they like the South African government information on Facebook (Facebook(a) 2011:online).

Apart from Facebook, various South Africans are also making use of Twitter to communicate and interact with citizens. President Jacob Zuma makes use of Twitter to send short tweets to followers on a number of issues from the local government elections to supporting BafanaBafana. President Zuma currently has 28 242 followers on Twitter (Twitter.com 2011:online). Helen Zille also uses Twitter regularly and currently has 44 374 followers. This is in line with Twitter use by heads of states, for example Barack Obama has 8 480 797 followers, Nicolas Sarkozy has 4 588 followers, Angela Merkel has 16 339 followers, Vladimir Putin has 6 123 followers and Gordon Brown currently has 7 749 followers.

These are only some examples of government departments or local governments already making use of social website features. A large number of citizens is currently also making use of social websites like Twitter, YouTube, Flickr and Facebook to communicate and interact. More government departments and local governments can therefore easily include the use of Web 2.0 technologies to reach and communicate with more citizens more easily. Not only are South African citizens already using Web 2.0 technology, but government departments also start to realise the benefit of this technological application by increasingly making use of it. No evidence, however, could be found for any take-up of Second Life by the South African government.

CONCLUSION

The purpose of this article was to explore the application of Web 2.0 technologies by the South African government. This article has shown Web 2.0 to be an application with the potential to change the way citizens interact with

government. It also has shown that various governments (eg. the French, Finnish, USA, Canadian and British) are already using Web 2.0 technologies in their communication with citizens. These technologies not only make it possible to provide information to citizens and to educate citizens on government actions, policy and decision making, it increases the level of political engagement with citizens and improve transparency and accountability in government by including citizens in government processes and debates.

Even the South African government, currently mostly using Web 1.0 technology, is gradually applying Web 2.0 technologies such as Facebook. However, the existing use of Web 2.0 technology by the South African government is still limited. To improve the use of web 2.0 technology compliment will be needed by the government to ensure uptake and readiness within the government. Web 2.0 and technology use in South Africa should be viewed as an exciting new opportunity to interact with citizens and to get their feedback on a number of issues for example service delivery. Internet access and bandwidth should not be seen as an excuse not to use web 2.0 and social networks since mobile technology can easily be used. More research is necessary to determine how the South African government can optimally use Web 2.0 technologies for its unique profile of citizens. Research can also be done on how this technology can improve service delivery in South Africa to meet the needs of citizens.

The next generation of technology users will most probably demand government functions and services to be rendered differently in order to meet the needs of citizens in a virtual world (itworldcanada 2009:online). Therefore it is recommended that the South African government investigates the optimal use of already available and used Web 2.0 technologies (blogs, Facebook and Twitter) to communicate with and interact with citizens. Making use of web 2.0 technology in South Africa will not be very difficult for the government as web 2.0 technologies do not necessarily rely on an improved use of the internet, bandwidth or computer literacy. Since a large number of South Africans are already making use of blogs, Facebook and Twitter from their cell phones and smart phones, it will require from the government a willingness and a commitment to also use these technologies by interacting with citizens since cell phones are already very popular and widely used in South Africa.

This article has shown that Web 2.0 technologies are not just another collection of technical applications, but represent a new way in which people can use for example blogs to engage with each other and to share views and opinions on government policy, service delivery or the actions of politicians. If government institutions in the various spheres of government want to optimise their engagement with, and service delivery to society, it is imperative that all the available information technology applications are properly assessed for optimal application at all service delivery interfaces.

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