Since the emergence of e-government in the late 1990s, citizens have become accustomed to being able to access government services electronically (Grönlund, 2004). The dominant focus of governments in the last decade has been to automate government services to ensure they are suitable for an online environment; but strategies for service delivery have had a limited purview, neglecting numerous technology channels already harnessed by the private sector (Al-Khamaye et al., 2007). An over-dependency on personal computers and internet usage has ensured that e-government remains the preserve of wealthy countries, and consequently excluded developing countries where computer ownership and internet penetration is low.

For this reason, the promise that e-government would bring citizens closer to government (Večković et al., 2012) has not been fully realised, but there does remain a technological hinterland that is still largely unexplored by government and could potentially deliver benefits previously inaccessible to many. The explosion in the use of mobile devices, particularly in the developing world, represents a new avenue where governments can interact with their citizens, increasing opportunities to improve service delivery, reduce corruption and increase accountability. As a conduit for communication, mobile technology has the potential to transform government to citizen relationships, thus strengthening the ‘social contract’ and improving governance. However, the mere presence of mobile technology does little to improve governance indicators, and it is imperative that governments and inter-governmental agencies such as the Commonwealth first understand the opportunities offered by such devices, and second utilise them appropriately for the benefit of their citizens.

**Defining m-government**

m-government can be viewed as an extension, or supplement, to more traditional e-government models. The latter describes the use of wired technologies to facilitate the flow of information within and without public sector institutions to improve the efficiency, accountability and effectiveness of state services. Building on this definition, Kushchu and Kuscu define m-government as ‘the utilization of all kinds of wireless and mobile technology, services, applications and devices for improving benefits to the parties involved in e-government including citizens, businesses and all government units’ (2003). This definition presupposes the need for an e-government strategy, and in most cases countries are likely to utilise mobile devices as an alternate or extended delivery channel for services already offered via wired devices. However, it is the Commonwealth’s view that e-government is not a prerequisite for m-government, particularly in the developing world where mobile phone penetration often far exceeds fixed-line infrastructure (International Telecommunication Union, 2011). Mobile devices also offer a unique platform to go beyond the scope of what wired technologies can offer – for example, in providing location-based services for emergency service professionals.

However, the mere automation of government services does not fully exploit the transformative potential these technologies offer. Mobile devices, if fully harnessed, can potentially facilitate a paradigm shift by enhancing the capacity of citizens to engage with government, thereby increasing social inclusion. The latter approach is better encapsulated under the term ‘m-governance’, which implies the potential to ‘bring about a change in the way citizens relate to governments and to each other’ (UNESCO, 2005) and ‘brings forth new concepts of citizenship, both in terms of citizen needs and responsibilities’ (ibid.). Ultimately, the ‘objective is to engage, enable and empower the citizen’ (ibid.). Such a conceptualisation fits firmly within the Commonwealth’s definition of good governance, which not only emphasises democracy, accountability and transparency, but also the need for ‘Just and Honest Government’ (Harare Commonwealth Declaration, 1991).

**‘Just and Honest Government’**

In 2008, the United Nations Development Programme (UNDP) declared that ‘globally, more people now have access to a mobile device than to justice or legal services’. A remarkable statistic – not for what it implies with regards mobile device penetration, but rather for highlighting the fact that for many in the developing world ensuring access to basic rights has been neglected in favour of

---

**Naveed Somani, Programme Officer, GIDD**

m-Government

Since the emergence of e-government in the late 1990s, citizens have become accustomed to being able to access government services electronically (Grönlund, 2004). The dominant focus of governments in the last decade has been to automate government services to ensure they are suitable for an online environment; but strategies for service delivery have had a limited purview, neglecting numerous technology channels already harnessed by the private sector (Al-Khamaye et al., 2007). An over-dependency on personal computers and internet usage has ensured that e-government remains the preserve of wealthy countries, and consequently excluded developing countries where computer ownership and internet penetration is low.

For this reason, the promise that e-government would bring citizens closer to government (Večković et al., 2012) has not been fully realised, but there does remain a technological hinterland that is still largely unexplored by government and could potentially deliver benefits previously inaccessible to many. The explosion in the use of mobile devices, particularly in the developing world, represents a new avenue where governments can interact with their citizens, increasing opportunities to improve service delivery, reduce corruption and increase accountability. As a conduit for communication, mobile technology has the potential to transform government to citizen relationships, thus strengthening the ‘social contract’ and improving governance. However, the mere presence of mobile technology does little to improve governance indicators, and it is imperative that governments and inter-governmental agencies such as the Commonwealth first understand the opportunities offered by such devices, and second utilise them appropriately for the benefit of their citizens.

**Defining m-government**

m-government can be viewed as an extension, or supplement, to more traditional e-government models. The latter describes the use of wired technologies to facilitate the flow of information within and without public sector institutions to improve the efficiency, accountability and effectiveness of state services. Building on this definition, Kushchu and Kuscu define m-government as ‘the utilization of all kinds of wireless and mobile technology, services, applications and devices for improving benefits to the parties involved in e-government including citizens, businesses and all government units’ (2003). This definition presupposes the need for an e-government strategy, and in most cases countries are likely to utilise mobile devices as an alternate or extended delivery channel for services already offered via wired devices. However, it is the Commonwealth’s view that e-government is not a prerequisite for m-government, particularly in the developing world where mobile phone penetration often far exceeds fixed-line infrastructure (International Telecommunication Union, 2011). Mobile devices also offer a unique platform to go beyond the scope of what wired technologies can offer – for example, in providing location-based services for emergency service professionals.

However, the mere automation of government services does not fully exploit the transformative potential these technologies offer. Mobile devices, if fully harnessed, can potentially facilitate a paradigm shift by enhancing the capacity of citizens to engage with government, thereby increasing social inclusion. The latter approach is better encapsulated under the term ‘m-governance’, which implies the potential to ‘bring about a change in the way citizens relate to governments and to each other’ (UNESCO, 2005) and ‘brings forth new concepts of citizenship, both in terms of citizen needs and responsibilities’ (ibid.). Ultimately, the ‘objective is to engage, enable and empower the citizen’ (ibid.). Such a conceptualisation fits firmly within the Commonwealth’s definition of good governance, which not only emphasises democracy, accountability and transparency, but also the need for ‘Just and Honest Government’ (Harare Commonwealth Declaration, 1991).

**‘Just and Honest Government’**

In 2008, the United Nations Development Programme (UNDP) declared that ‘globally, more people now have access to a mobile device than to justice or legal services’. A remarkable statistic – not for what it implies with regards mobile device penetration, but rather for highlighting the fact that for many in the developing world ensuring access to basic rights has been neglected in favour of
technological progress. A state’s capacity to deliver such access is broadly determined by the quality of various governance indicators. Governance is an elusive concept but is generally defined as the traditions and institutions through which authority in a country is exercised; the capacity of the government to effectively formulate and implement good policies; and the respect of the citizens and the state for the institutions that govern economic and social interactions among them (Kaufmann et al., 1999). The Commonwealth is careful to avoid policy prescriptions but has broadly defined the typology states should aim to replicate when pursuing good governance under the umbrella term of ‘Just and Honest Government’. Such a government is built on fair and effective public institutions that emerge when a state enjoys broad support, is subject to the rule of law and constrained by a strong civil society.

The ubiquity of mobile devices in the developing world represents a development anachronism, but the very fact that they have proliferated prior to the entrenched rights does not negate their capacity in facilitating the movement to Just and Honest Government. Indeed, mobile devices can be used to enhance governance by providing transparent and accountable government services that promote citizen participation and lead to improved democracy. Improved access to information and communication channels fosters citizen participation and re-enfranchises those previously marginalised. For example, mobile technologies have afforded opportunities for people to collect and share real-time information: data collection via mobile crowd-sourcing applications and the subsequent dissemination of actionable information was used to mobilise civil society and map violence hotspots during Kenya’s election in 2008. States can and should tap into this information to enhance existing capacities for ensuring good governance – for example, by investing in mechanisms to ensure peaceful elections.

However, Johan Hellström has warned that for mobiles to be used more effectively as tools to tackle violence and corruption, states should avoid adopting generic applications that do not take account of country context (2011). Targeted programmes are needed to ensure the appropriate feedback mechanisms to monitor corruption are in place (e.g. hotlines), but also that users should trust its source and reliability. Building this trust can be achieved by gradually introducing m-government services of differing levels of sophistication. These stages will be explored later, but first those particular aspects that make m-government an attractive option for governments will be examined.

**Why m-government?**

The rationale for the development of m-government applications can be disaggregated as follows.

- **Accessibility:** Mobile phone penetration in the developing world has now reached 79 per cent, with twice as many mobile broadband subscriptions as fixed-line connections – a contrast that becomes more acute when looking at coverage among rural populations (International Telecommunication Union, op cit.). The proliferation of such devices led the World Bank to comment that ‘no other technology has been in the hands of so many people in so many countries in such a short period of time’ (2008). Most of the literature in this area equally marvels at the ubiquity of mobile devices in the developing world, but such emphasis neglects the inherent potential mobile technologies possess to improve accessibility. With the advent of so-called smart phones, users have multiple channels to access services – voice, text, video and web – and even erstwhile devices continue to be useful tools in improving governance. While internet-enabled devices are not as ubiquitous as traditional cell phones, penetration is increasing, with mobile web subscriptions growing by 45 per cent over the last four years (International Telecommunication Union, op cit.). To ensure government services are truly inclusive, it is therefore imperative that mobile delivery channels are fully exploited – even when this comes before the development of fixed-line services.

- **Affordability:** Mobile phone subscriptions in the developing world have fallen dramatically in cost over the last ten years, with a 22 per cent reduction between 2008 and 2010 alone (ibid.). Despite this fall, at 11.4 per cent of monthly gross national income per capita, costs remain relatively high compared with only 2 per cent in developed countries (ibid.). Nevertheless, compared with the high capital costs of infrastructure and devices associated with wired technologies, mobile technologies offer a significantly cheaper alternative for governments and users (Sciadies, 2005). This cost efficiency equally applies to the development of mobile applications that can be delivered with relatively little expense as opposed to more costly desktop solutions.

- **Mobility and personalisation:** Globalisation has meant that people, objects and information have become increasingly mobile with many now expecting delivery channels that fit in with their nomadic lifestyles (Vijayakumar, Sabarish and Krishnan, 2010). Wireless devices theoretically grant citizens access to government information and services 24/7, regardless of their environment. When allied with desktop services this can be particularly useful in providing alerts or the equivalent service for a mobile device. Mobility also implies a potential change with regards the physical location of the user, and the emergence of Global Positioning System (GPS) has meant geography can be accounted for when personalising services – for example, in reporting the location of a crime.

- **Interactivity and participation:** Mobile technologies provide a new platform to facilitate interaction between government and citizens that moves beyond the provision of transactional services such as e-payment applications. M-government has the potential to dramatically increase...
social inclusion by connecting government at the highest level, with citizens previously excluded from participating due to the inaccessibility of traditional communication channels. Real-time mobile interaction also allows citizens to report immediately any instance of malfeasance on the part of government officials, thereby reducing corruption and improving efficiency. In widening the availability of channels for G2C (Government-to-Citizen) and C2G (Citizen-to-Government) interaction, citizen identification with the state is likely to improve, thus strengthening the social contract between state and citizen.

It is these attributes that make mobile devices an essential delivery channel for government services but, as explained earlier, a sequential introduction is needed to ensure sustainability and foster trust among users. The various stages of m-government from ‘Push’ to ‘Participatory’ can be seen in Figure 1, which illustrates a suggested trajectory states may wish to adopt, with corollary examples from across the Commonwealth.

**Adoption factors**

In moving up through the stages of m-government, states should adopt a strategic approach that outlines a coherent path, integrated across all government ministries. This can be achieved as part of a broader e-government strategy or stand alone while allowing for the eventual incorporation into a wider ICT strategy. Regardless of which approach is taken, m-government should not be considered in isolation of any general discussions on service delivery generally, but rather as an additional channel available to government. It is also imperative that policy-makers place the requirements of their citizens at the forefront of their minds in developing applications (Hellström, 2009). The ‘Design-Reality’ gap (Heeks, 2003) has been cited as the primary reason for the failure of e-government projects, so governments should not only ensure products are addressing an identified need but also fully comprehend the hardware requirements necessary to develop notional ideas. A summary of the key adoption factors states should consider can be seen in Table 1.

**Financing m-government**

Locating sufficient funding for m-government initiatives can ultimately determine whether fledgling projects get off the ground or not. Funding arrangements should not only consider capital costs and infrastructure development, but also the technical resources required to maintain applications and financial commitments for future development. Public-private partnerships (PPPs) are often an attractive model for governments with several successful examples already well established4. However, Hellström has

---

**Table 1: Stages of m-government: Commonwealth examples**

<table>
<thead>
<tr>
<th>Stages</th>
<th>Applications</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participatory</strong></td>
<td>m-Voting; participatory budgeting; m-cognocracy; m-referenda; election monitoring</td>
<td>Participatory budgeting via augmented reality, Africa; Raise-a-Petition, India; SMS-voter registration, Kenya; M-voting, UK; Open Data, Kenya</td>
</tr>
<tr>
<td><strong>Interactive service provision</strong></td>
<td>Crowdourcing; complaint/claim filing; tele-health/education</td>
<td>GPS Report a Crime, South Africa; Geo-Tag Disaster Mapping, UN; File a Complaint, Malta; Jaroka M-Health App, Pakistan</td>
</tr>
<tr>
<td><strong>Transactional</strong></td>
<td>m-payment sites/apps; m-banking; automated SMS enquiries; m-scheduling; m-signatures; benefit application</td>
<td>Dowa Mobile Emergency Cash Transfer, Malawi; SMS Tax status enquiry, India; SMS Medical Appointment Booking, Malta</td>
</tr>
<tr>
<td><strong>Push</strong></td>
<td>WAP/3G enabled government websites; SMS alerts/notifications; MMS messaging</td>
<td>Wireless government portal, Canada; MyeCitizen SMS alerts, Singapore; m-government initiative, Malta; SMS security alerts, UK</td>
</tr>
</tbody>
</table>
highlighted the inherent conflict in partnering with the private sector by bringing out the fact that operators who thus far have driven the development of mobile applications are motivated by either profit or brand enhancement via corporate social responsibility programmes (2010). He goes on to contrast this profit motive with that of government, which he contends pursues good governance initiatives for the ‘public good’ (ibid.). The question he posits is: ‘How does one attain a balance between the two?’ (ibid.).

In arriving at an answer, one might consider the role of multi-stakeholder partnerships, a model that not only includes the public and private sectors, but also representation from civil society. Unlike PPPs, they focus on sharing, rather than shifting risks, and exploit synergies to deliver mutual benefits for all collaborating parties. The Global Knowledge Partnership has described them as ‘alliances between parties drawn from government, business and civil society that strategically aggregate the resources and competencies of each to resolve the key challenges of ICT as an enabler of sustainable development, and which are founded on principles of shared risk, cost and mutual benefit’ (2003). It is a model that has seen success in various sector-specific e-governance initiatives, and could easily be applied in the development of m-government services.

A Commonwealth perspective

That this area should be of interest to the Commonwealth is largely a reflection of our membership. The UN-Public Administration Network’s biannual E-Governance Survey (2012) ranks five Commonwealth countries in the top 20, with a recent Commonwealth intervention contributing to the Seychelles topping the index for Africa. However, 42 Commonwealth countries are ranked between 100 and 194. These statistics do not just emphasise the need for the Commonwealth to assist those lower ranked countries, but when disaggregated what is also revealed is a direct correlation between e-government ranking and development performance generally. With mobile phone penetration in the developing world already high, subscription costs falling and the need for mobility increasing, m-government offers a vital entry point for realising myriad development objectives and in particular entrenching those values described under the umbrella term ‘Just and Honest Government’.

Endnotes

1 Johan Hellström has used data from Transparency International to show that ‘in East Africa, despite the exceptional mobile phone growth in the region in the past decade, corruption levels are perceived to have increased in Kenya and Uganda since 1998, while Tanzania has only seen a slight improvement’ (see Hellström, 2011).

2 The Ushashidi platform mobilised Kenyan citizens to send reports of violence during the 2008 election via text, which were subsequently incorporated into crisis maps. It has since been used to map the impact on communities of the BP oil spill and irregularities in the Nigerian election: http://www.guardian.co.uk/news/blog/2011/apr/07/ushahidi-crowdmap-kenya-violence-hague.

3 Citizens in South Africa can report the location of a crime using GPS, as part of the wider ‘Turn it Around’ project: http://www.turnitaround.co.za/report_a_crime.

4 The ITU cites Text4Baby, a mobile health programme that promotes maternal and child health among underserved communities.

Table 1: Key adoption factors for m-government

<table>
<thead>
<tr>
<th>National level policies</th>
<th>Socio-cultural</th>
<th>Technological</th>
<th>Economic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fostering sufficient political support, with corollary human and financial resources identified</td>
<td>Bespoke content development appropriate for devices and end users, given country context (i.e. location, demographics, literacy levels)</td>
<td>Infrastructure necessary for the use of mobile devices: base stations, WAP Servers, GPRS Support Node</td>
<td>Removal of tariff/non-tariff barriers to ICT products</td>
</tr>
<tr>
<td>Building ICT competencies within government</td>
<td>Building competencies in the use of mobile ICTs</td>
<td>Device and application development</td>
<td>Formation of Multi-Stakeholder Partnerships including telcos, government, regulators, device manufacturers, infrastructure providers, citizen groups and application developers</td>
</tr>
<tr>
<td>Development of standards in mobile sector</td>
<td></td>
<td></td>
<td>Measures to align purchasing power and cost of mobile devices</td>
</tr>
<tr>
<td>Development of a ‘whole of government’ m-government strategy</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

women, delivered in partnership with Johnson and Johnson: http://text4baby.org/.

5 For example the Department for International Development’s Imfundo Programme aims to create partnerships to contribute to the delivery of universal primary education and gender equality in Africa through the use of ICTs: http://webarchive.nationalarchives.gov.uk/+/http://www.dfid.gov.uk/research/imfundo.asp

6 The Commonwealth Secretariat provided assistance to enable the Department of Information and Communication Technology in Seychelles to implement information technology service management processes.

References


