Analyse on m-Governance for Better G2C Service in Ethiopia

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Abstract - The paper discusses the strongly emerging domain of m-governance and the impact on Ethiopian society. We have also made an attempt to bring forward the problems limiting the use and growth of m-governance for better service delivery. Also significant contributions made by companies towards the growth of m-governance in Ethiopia are specified.

Keywords - Banking; e-Governance; m-Governance; Mobile Technology

I. INTRODUCTION

Transparency, efficiency and accountability are the key elements of a successful government. M-governance practice is in the initial stages in Ethiopia and other developing countries, with a lot to be done for its widespread usability enhancing government efficiency and citizen participation. After moving towards e-Governance, now Ethiopia is planning for m-Governance across the country. E-governance is technology-enabled processes that will help in good governance, better delivery of public services and broader interactions between citizens and government. Constant effort is being made to apply e-Governance in legislature, judiciary, or administration, in order to improve internal efficiency, the delivery of public services, or processes of democratic governance. The primary delivery models are Government-to-Citizen or Government-to-Customer (G2C), Government-to-Business (G2B) and Government-to-Government (G2G) & Government-to-Employees (G2E) (Brown, 2003) (Sharma, 2007). To achieve dreams of digital, mobile and efficient governance, not only computing resources, but infrastructure and energy will also be required. Government fulfills these resource requirements by collaborating with public and private partnership by contracting and outsourcing.

After moving towards e-Governance, now Ethiopia is planning m-Governance across the country for better delivery of public services, or processes of democratic governance.

II. M-GOVERNANCE

M-governance is part of a broader phenomenon of mobile-enabled development (m-development) or leveraging the mobile revolution to enable development impact using electronic devices and making them available via mobile technology. It extends the benefits of remote delivery of government services and information to those who are unable or unwilling to access public services through the Internet, or who simply prefer to use mobile devices (mgovworld.org, 2010). Mobile phones allow citizens to get access to government services virtually in any place covered by a mobile network at a lower cost as compared to internet services. Even most urban local bodies in Ethiopia have a poor understanding of and access to the enormous potential that information and communication technologies (ICT) hold in improving the functioning of these organizations and better services to citizens.

III. USAGE SCENARIO

Ethiopian Telecommunication (ETC) subscriber base has almost reached the astounding figure of 5 million making mobile phones the most accessible tool of communication available to such a large population enabling the delivery of government services at the doorstep of the citizens. Services relating to health, education, employment, police, tax, judicial and legal systems, election campaign and many more can be easily made available via mobile service. This has immensely improved scope of e-democracy and e-participation, engaging in democratic decision-making through various polls. Possible m-Government Application Areas are

- Notifications by civic authorities
- Payment of utility bills
- Support to government healthcare and education information campaigns
- General access, submissions of service requests, complaints etc. by the citizens
- Notifications/alerts for payment of taxes
- Broadcasting of critical information regarding traffic condition and other events etc.
- Crisis/Disaster management

IV. LIMITATIONS AND REMEDIES

M-government has great potential to vastly expand access to public services to the poorest segments of the population in areas where wired telecommunications and ICT services do not exist but it has many limitations and restrictions. Some of the limitations are stated below:
Small size of mobile phone: due to this the characters are small in visibility and limited in words restricting the amount of information access.

Charged SMS: In some areas the SMS charges are high constricting the service of mobile technology.

Rural Ethiopia: Due to low literacy rate, the use of this technology for governance is further reduced.

Payment mode: The billing of mobile usage is usually done through credit cards, bank accounts, customer centre etc. which is unavailable for all mobile users.

Architectural Gaps: The design, functions, features and services of mobile devices have a wide gap in theory and real time usage. Often a mobile 'solution' is designed for a problem that never existed at first.

Security and authentication process for safe-guarding of critical data and ensuring the privacy of information is a subject of concern. Scalability and high availability of information on demand needs more effort both at technology and government front.

The government has initiated SMS alerts on disasters, funds inflow and outflow, information about health camps and pulse polio campaigns will be sent to and from between the state departments, block development offices. The department for rural development is seriously working towards setting up Common Service Centre (CSC) at villages, block and district levels in order to provide better G2C service at even rural regions of the country. To have more information access via mobile phones, look at mobile devices that combine computing with mobility and are affordable. Another challenge in this area is to develop applications that can be offered in local languages for nation wide users. Door to door mobile billing facility or separate mobile billing centre for rural areas even helping them with its usage for G2C delivery should be set up. An important aspect of the architectural mobile-governance framework to be considered is the capture of existing knowledge about processes and work-flows and its mapping into an abstraction that can be translated into a set of services.

V. MODELS & EXAMPLES

m-Governance is not a new concept. The private sector has been greatly leveraging the use of mobile phones for delivery of value added services for the following which however are mostly SMS based:

- Banking
- Media
- Airlines
- Telecom
- Entertainment
- News
- Sports
- Astrology
- Movie Tickets Etc.
- We have also seen a few initiatives in Government sector using mobile innovatively which again are all SMS based:
  - Food & Civil Supplies
  - Examination Results and Mark Lists
  - Agriculture
  - Weather Reports, Market prices, seed availability etc.

International initiatives…a few examples include:

M-Dubai – 4488 – Push & Pull service
- Civil Aviation – Flight timings
- Police – Fines
- Notification of Expiry of Trade Licenses etc.

Singapore
- Trade Licenses
- CPF contributions
- Road Tax Renewal
- Passport Renewal
- Government notifications
- Consumer Price Index
- Performance of the Singapore economy
- Court Hearing
- Track Traffic Information
- Live traffic images
- Public Works monitoring etc.

Estonia
- Mobile Parking
- Mobile Transport Ticketing
- Mobile Payments in Shops.

South Africa
- Cell-Life Update: Using Mobiles to Fight HIV/AIDS
- Disease Surveillance with Mobile Phones in Uganda
- Other initiatives
- Emergency services
- Traffic Information
- Payment of Government fees
- Child’s Absence from School

VI. M-GOVERNMENT BENEFITS AND CHALLENGES

m-Government can bring potential benefits for the public sector, but it also faces challenges, as discussed below.

A. Benefits

The main benefit that m-government brings is its boundary-breaking potential: truly allowing working on anywhere, anytime basis and helping to create a truly integrated digital nervous system for government. Because of its immediacy and convenience, it also reduces the barriers to public service operations, encouraging citizens or service providers to make use of the technology where previously barriers were discouragingly high.

These core benefits can be seen reflected in a broader set of m-government benefits, including:

Increasing the productivity of public service personnel: m-government allows public servants to enter data into digital
systems exactly where they are in the field. Not only does this move data-gathering closer to real-time operations, it also reduces the time public servants spend on data activities, thus releasing more of their time for value-added, service-related activities. For example, where previously reports would be noted on paper in the field and then retyped back at base, they can now be entered direct, not only removing duplication of effort but also reducing the number of data errors. Increasing the effectiveness of public service personnel: public servants in the field currently have to make do with the data they carry around with them – in their heads or in portable files. With m-government, they can take the whole of digitised government with them into the field, allowing them to make much better-informed decisions and actions. Improving the delivery of government information and services: m-Government can deliver data and services whenever and wherever the citizen is. This has a benefit to citizens – they can get immediate access to whatever they want no matter where they are. It also has a benefit to governments – for example in sending terror alerts or other very time sensitive information, m-government provides the greatest chance of getting through quickly and directly. Increasing channels for public interactions: m-government (where not used to substitute for other channels) provides an additional channel for interactions all stakeholders in governance – service deliverers, policy makers, service consumers, civil society representatives. This provides greater choice. Lower costs leading to higher participation: the hope in relation to the political process is that, by reducing the time and effort of communication, m-government will encourage more communication, from e-voting, to contributions to political debates, to complaints or queries.

B. Challenges

m-Government does face a number of challenges:

Cost: m-government tends to be yet one further channel for e-government, in which case it will create additional costs. This will continue until m-government can truly substitute for other delivery channels. Such substitution will be viable for applications within government. At least some governments have been able to adopt innovative costing strategies, for example, using fee-sharing arrangements that avoid the public sector having to provide many up-front costs.

mDigital divide: as just noted, not everyone has a mobile phone. In particular, older and poorer groups in society tend to be excluded from this technology. If there are benefits to be had from m-government, these groups will be denied them, and a challenge to m-government is to ensure it is not just one more way in which the "haves" benefit at the expense of the "have nots".

Mobile mindsets: mobile devices – cell phones particularly – are seen by many as tools more for fun and entertainment than for serious activities. Yet politics is a serious business involving difficult choices. Aligning these two mismatched worlds may be difficult. One sign already emerging of this underlying tension is the use of m-government systems for playing pranks, such as hoax messaging, encouraged by the anonymity that many mobile devices (which are often unregistered) offer.

Trust/security: if m-government is to encompass m-payment systems or other transactional public services, then it must have good security and must be trusted. As yet, there is still a credibility gap to be crossed for many mobile device users.

Data overload: mobile devices increase the pressures of a world in which users are permanently connected: "always on". These permanent connections increase the number of messages circulating and can create a blizzard of communications – some valuable, some not – in which public sector communications can come to be devalued or lost.

C. M-Government Guiding Principles

Some guiding principles as discussed below.

Firstly, recognize that m-government is not a substitute for e-government. Not all applications can run on mobile devices nor should they. Not all wireless connections are cost competitive compared to wired connection.

m-Government should be conceived and developed as part of the overall e-government strategy and programme. The exact mix of m-government and traditional e-government applications depends on the unique conditions of each country. An important determinant would be the state of the nation’s information infrastructure. It is easy to build expectations but difficult to regain trust. Citizens who are turned off by their experience with m-government are not only harder to lure back but will also bad mouth it to other. Thus it is important to: Choose m-government applications wisely. Make sure they are nontrivial but also be careful that they are not the most difficult. Make sure that the application is user-friendly. Balance your need for information with the comfort (or frustration) level of the user with the technology.

In deploying m-government applications ensure that citizens get exactly what the application claims to be able to deliver in the shortest possible time. If it is a channel to receive complaints, be sure to regularly get back to the complainants about the status of their complaint until it is resolved. Boiler plate messages will not satisfy your citizens. Ensure that there are suitable back-office systems in place to deliver on m-government promises. Partnerships, particularly with telecommunication companies (telcos) offering cellular services, matter. Telcos bring to the table greater knowledge about security, reliability, ease of use and affordability issues related to mobile applications.

CONCLUSION

Mobile-government can marshal in a approach to delivery of government services to the doorstep of the citizens thus bridging the gap. The primary characteristic of these m-governance solutions should be that of capturing skill levels, services and devices required to offer faster, cost-effective and scalable solutions. Mobile technology usage in governance is
empowering the masses and creating awareness at the grassroots thus enabling citizen centric services

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