



The Role of m-Governance in Advancing Development Initiatives

Mrs. T. Vamshi Mohana Reddy

*Associate Professor, Department of Computer Science
RBVRR Women's College, Narayanaguda, Hyderabad*

Abstract

Information and communication technology (ICT) is crucial to good governance because of its implications and emphasis. The free exchange of information between citizens and the government is made possible and facilitated by ICT. Improved citizen-government relations can help to fortify democracy. In these kinds of interactions, mobile phones are thought to be a useful tool. Therefore, mobile phones are necessary for e-governance in order to facilitate all of these activities and developments. In India, e-government has become very popular, everything from an LPG gas connection to online passport services.

Not everyone in rural India will have access to a computer system or the Internet. Mobile phones make it simpler to connect with them. Since M-governance is a subset of e-governance, it guarantees that individuals can access electronic services through mobile devices. These services avoid the necessity of traditional physical networks for cooperation and communication. In the majority of India's rural areas, mobile services are regarded as both accessible and reasonably priced. It is evident that m-governance enhances e-governance rather than replacing it. Effective back office ICT infrastructure and work procedures are also essential for mobile applications. This survey paper aims to demonstrate the significance of mobile governance, its numerous applications, and its social impact.

Keywords: m-Governance, e-Governance, Mobile Services, ICT

Introduction

India is rapidly growing and developing country. To be very precise, rural population in

India was last measured at 67.63 in 2014. To reach to that major segment, the government has taken various measures to help them deal with the administrative activities. As specified, this part of the country will have a least access to the Computer facilities to gain online information. In the recent past, mobile phones have taken over the lives of Indian community at large. E-Governance is gaining lot of importance and the applications on it are making the lives of people easier. But as said and done, they should have the reach. The e-governance has come up with the implementation of m-governance, where certain governmental activities can leverage through mobile applications. Mobile phones are an integral part of one's lives. Mobile phones are considered to be an effective tool in governmental interactions. Information related to the governmental activities and services should be reachable to the citizens for a quick decision making.

M-Governance takes electronic services and makes them available via mobile technologies using mobile phones. These services will evade the need for conventional physical implemented networks for communications and collaboration. One thing is clear that, M-governance is not a replacement of e-governance but rather it complements it. Mobile applications also depend on good back office ICT infrastructure and work processes. It is a sub-domain of e-governance. M-Governance has the possibility to widen the reach of e-governance. E-Governance is the use of information and communication technologies (ICTs) to improve the activities of public as well as private sector organizations.

M-Governance has the prospects to help make public information and governance services available "anytime, anywhere" to citizens and officials. Mobile services are affordable as well



as accessible in most of the rural areas in India. M-Governance is predominantly suited for the developing countries where Internet access rates are affordable and usage of mobile phone is growing rapidly in both urban and rural areas.

Applications of m-Governance in India

Government of India has initiated in the recent past to promote various applications that involve e-Governance. It intends to promote and make use of the enormous reach of mobile phones. Government is trying to exploit the potential of mobile applications which, enables easy and round-the-clock access to public services. Government can reach the rural areas and is creating unique infrastructure as well as application development ecosystem for m-Governance in the country. Government has announced various strategies for its entire department and also to certain agencies to develop and deploy mobile applications to provide all their services through mobile devices. The main measures that were laid down are:

1. Mobile – Complaint can be lodged by the citizens through ‘One Web’ approach to all the Government Departments and Agencies Web sites.
2. In order to ensure the inter-operability of applications across various operating systems and devices, Open standards were adopted for mobile applications as per the Government Policies on Open Standards for e-Governance.
3. To ensure convenience for mobile users, a uniform and single pre-designated numbers are used.
4. Mobile applications were developed and deployed by all the Government Departments to provide Public Services through the Mobile devices.

The government has developed Mobile Service Delivery Gateway (MSDG) that is the core infrastructure for enabling the availability of public services through mobile devices. This was to ensure adoption and implementation of the scaffold in time bound manner.

There are enormous applications of m-Governance, which include: Financial Services, Business Services, Health Services, Educational Services, Agricultural Services, Infotainment Services and Mobile Seva. Indian citizens have already adapted e-Seva kendras extensively. The same is extended to them through m – Seva or Mobile-Seva. Mobile has emerged as a delivery channel of different e-governance services in India especially in the rural areas. Hence it has become vital to offer Government services over mobile-phones. This will ensure that the Government services will reach the doorsteps of general public.

When we have a closer look into m-Seva, the services include SMS based services, USSD Services and Bluetooth based services. SMS based services are the simplest services and the information is provided using Push or Pull based services. Unstructured Supplementary Services Data (USSD) is a session based service, which is basically used to store and later forward the information. It can be used by the user to send command to an application in text format. USSD acts as a trigger for the application. Bluetooth based services can be used for exchange of information among Bluetooth compatible devices in close proximity. It can be used through a compatible handset to access application on another device.

Checking the requirements needed to implement m-seva, a separate infrastructure is required like Seamless integration with backend department through existing NSDG (National e-Governance Services Delivery Gateway) / SSDG (State e-Governance Services Delivery Gateway) e-Government exchange infrastructure. This will help us to have a common interface for mobile based services (SMS (Short Message, Service), USSD (Unstructured Supplementary Service Data), IVRS (Interactive Voice Response System), CBS (Cell Broadcasting Service), LBS (Location Based Services), Mobile Internet through GPRS/3G etc).

Government sector has been using mobile very innovatively through SMS based services for the following:

1. Food & Civil Supplies
 - a. Tracking Lorry Movements
 - b. Information on availability of Ration at FP Shops
2. Irrigation / Water Resources
 - a. Reservoir Levels monitoring
3. Urban Local Bodies
 - a. Grievance Redressal
 - b. Garbage dump removals
4. Water Supply
 - a. SMS a water tanker
5. Railways
 - a. Ticket Booking
6. Examination Results and Mark Lists
7. Agriculture
8. Weather Reports, Market prices, seed availability etc.

Few more examples of m-Governance include Police department where wireless technology has always been an integral part of law enforcement. In India, the Chennai City Traffic Police introduced a SMS service and a caution system for those violating traffic rules. "Through the SMS service, the public can inform the traffic control room about traffic accidents, vehicle breakdown and traffic jams". Further, the public can even get detailed information about the vehicle before buying, if it had violated traffic rules by simply sending an SMS with the registration and engine number of the vehicle. Health and safety inspectors can also file their reports from the field through mobile or handheld devices. This eliminates paper work to a great extent. There is no need to re-enter the data collected when they get back to office. m-Governance is not only about efficiency but it also allows for citizen to be very active.

Impact of m-Governance

It is a known fact that mobile phones help create an informative, associated, pioneering, participative and converging societies. Use of m- governance in India is to have complete access, reach, adoption, interaction, cost effectiveness, and efficiency in implementing governmental activities. When we mean Access, most of the people gain access to phones through shared usage and ownership. It has a provision to access 'anywhere and anytime' to the usage. Reach is another factor which is having an impact on m-governance. Due to its mobility and network infrastructure, mobiles can reach anywhere where there is no ICT infrastructure. Interaction has become so easy as Mobile phones help a two-way dialogue compared to the traditional information of governmental schemes. When it comes to Cost, relatively lower cost of mobile phone technology has helped the rural and poor people to overcome the barriers in accessing the data or information. M-governance is highly efficient due to high access, reach, adoption and real-time interaction, mobile phones offer efficient solutions to government's communication challenges. In fact there seems to be no other option as in developing regions with poor infrastructure, going mobile may be the only feasible option.



Figure 1: Impact of m-Governance



In India, there is a remarkable potential to expand the access and reach of public services. Rapid expansion is helping India in accelerating the use of modern ICTs for improving governance. The subscriber base of mobile phone users is projected to grow in leaps and bounds. It is indeed an opportunity to expand the reach of public services to every resident, especially in rural areas.

Benefits of implementing m-governance

1. Proficiency is one factor which will help the citizens to take the expertise available through m-governance. For instance agriculture segment can have a major benefit with the information related to the latent skills and technologies available.
2. Transformation of public sector is a major impact on the society.
3. It is an added convenience and flexibility to the citizens as it is easily accessible.
4. With m-governance, citizens can be served better and improve their standard of living.
5. There is a noticeable increase in the productivity of public service personnel. The data is disseminated with ease and consistently.
6. The services rendered by the government, and the vital information is disseminated with efficiency to each and every citizen irrespective of where he lives.
7. There has been a consistent increase in channels for public interactions. Stakeholders are able to interact with service deliverers, policy makers, service consumers, and civil society representatives with the help of m-governance.

Challenges faced by m-governance

1. Cost is a major challenge as creating the applications exclusively for m-governance is indeed an additional expenditure under e-government.
2. Citizens will be divided based on the digital access as we know that everyone does not own

a mobile phone, especially, senior citizens and unprivileged people in society.

3. Basically, mobile devices and cell phones are used as tools for personal communication, fun and entertainment rather than serious activities.
4. When m-payment systems or any financial transactions are involved there is least trust or security. This will drive the citizens away from using the services if it is not emphasizing on security features.
5. Sometimes, unwanted data is called for and hence there is an overload of data.

Conclusion

Banking, Media, Airlines, Telecom industry, Entertainment, News, sports, Astrology, Education, Agriculture, are few to mention that are implemented using m-governance. We can see that m-governance and its applications are emerging as a development tool for all the developing countries. A saying goes 'Easy to build the trust but hard to regain the trust', m-governance has to be carefully implemented without losing the trust of citizens. Once the trust is lost it is very hard to regain it and make the citizens to work with m-governance. It is imperative to choose m-government applications wisely. We have to make sure that they are non-trivial and also not very difficult to use the applications. The application should be user-friendly. Balancing the need for information with the comfort level of user with the technology is having a prime importance. In deploying m-government applications, one has to ensure that citizens get exactly what the application claims and should be able to deliver in a very short span. The growth of the m-governance depends on the periodic updates. They have to be sure to regularly get back to complainants about the status of their complaint until it is resolved. The applications should be able to ensure that there are suitable back-office systems in place to deliver on m-government promises. Privacy and security issues are of a great concern as wireless networks involves broadcast of signals over public airwaves, which will lead to attacks by



hackers. Hence, privacy and security issues must be addressed.

M-Governance, was initiated by the Government with the aim to develop the strengths of Mobile penetration in the country by trying to be connected for the delivery of government services to common people. Government has focused on m-governance so as to offer various government department services through mobile phones accessible to the citizens in the field, in the street, at home or other convenient locations on a 24 X 7 basis, rather than the users having to visit government offices or log on to the Internet portals to access services. Hence it is evident that M-Governance is now emerging as a tool towards development in India. The vision of m-governance project is to build or showcase solutions and applications which will be benchmarks in M-governance services across the world.

References

Subhash Bhatnagar, *e-Governance Using Mobile Platform*.

Rameesh Kailasam, *m-Governance Leveraging Mobile Technology to extend the reach of e-Governance*.

Diatha Krishna Sundar & Shashank Garg , *M-Governance:A Framework for Indian Urban Local Bodies*.

Manish Kumar and Omesh Prasad Sinha, *M-Government – Mobile Technology for e-Government*.

Telecom Regulatory Authority of India, Consultation Paper On *GROWTH OF TELECOM SERVICES IN RURAL INDIA - The Way Forward*.

Boston Analytics (October 2007), *A Study of the Mobile Value Added Services (MVAS) Market in India*

Websites:

www.mgovworld.org

www.web2py.iiit.ac.in/outreach

<http://vikaspedia.in/>

<http://geospatialworld.net/>

www.tradingeconomics.com/india/rural-population-percent-of-total-population

<https://www.itu.int/ITU-D/cyb/app/docs/m-gov>