

# Overcoming the Challenges in implementing e-Governance in Rural India

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**Abstract**—To ensure the availability of e-governance to the rural masses is the need of hour for a country like India, where a majority of population lives in rural area. Use of ICT facilities plays a key role in e-governance and is becoming indispensable. Here we try to highlight the Challenges related to implementation of e-Governance in India. E-governance aims at providing information and services to the citizens. It also helps them in decision making process, to make government more accountable, transparent and effective. Effective implementations can take ICT to the Indian citizens and can help government to align their services with the changing needs of stakeholders and Indian citizens to develop the economy. Here we also consider various e-governance projects started by the Government and initiatives that should be taken by the Government for successful implementation of e-governance in rural India.

**Keywords**- e-governance, ICT, SMART, Gyandoot, Bhoomi, e-panchayat, e-post

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## I. INTRODUCTION

All Information and Communication Technology (ICT) is being used for faster and better communication, utilization of information and retrieval of data to its users. The strategic objective of e-Governance is to support and simplify governance for government, citizens and businesses. With the support of the ICT facilities, the government processes defined by specializations can be made efficient, effective, and citizen friendly. There are many challenging issues lying ahead. Security is the main concern for the citizen, information transparency, legal issues, infrastructure, skill and awareness, access to right information, inter-departmental collaboration, tendency to resist the change in work culture etc. are the main concerns for the government to address [4].

e-governance simply means “Electronic Governance”; e-governance is a way of managing government electronically. With the introduction of ICT e-governance has grown manifolds. In developing countries like India, it is still in growing phase. In fact the ultimate motto behind e-governance is to provide SMART governance i.e. Simple, Moral, Accountable, Responsible and Transparent government [1]. The critical objective of any government is to provide services to citizen for enhanced and level conduct of administrative operations. In fact e-governance makes government more user-centered [2].

Other than all these factors, the government needs to make significant investments in areas such as government process re-engineering, capacity building, training, assessment and awareness. The positive impact of ICT and of e-governance on the rural economy is now extensively recognized. In the present era of globalization, the distances between the people have been abridged by turning the entire world into the global village. In the present globalized world, technology is one major force and most potent instrument of social change and progress.

## II. LITERATURE REVIEW

Nikitha Yadav, V.B.Singh, (2012) sheds light on what type of technology adopted by govt. for e-governance and also pointed out that, e-governance made govt. working more transparent, effective to citizens of India. Very importantly, it concludes that by introducing technologies such as, open source and cloud computing for e-governance [7]. Shrinivas, Meghashyam Athalye, (2013) stresses on some issues and challenges of e-governance and also suggests some remedies for e-governance failures in India [20]. Poonam, Priyanka and P. Verma, (2014) throws light on initiatives of e-governance in various states of India, and it includes challenges, failures of e-governance projects, solutions for good governance, etc. And also discussed the targets set out for e-governance under twelve five year plan [10]. V.S. Benival and Kapil Sikka, (2013) highlights about future prospects and challenges in India. Besides, what initiatives taken by govt. discussed as well. It concludes that, India still lagging behind in properly utilizing ICT for delivering govt. services [17].

## III. CHALLENGES IN E-GOVERNANCE

There are a large number of obstacles in implementation of e-Governance in India. These challenges are explained below [5, 6]:

**Illiteracy** - Literacy can be defined as the ability to read and write with understanding in any language. Literacy level of rural India is very low. It is a huge obstacle in implementation of e-Governance projects. Rural people are not able to access the e-Governance facilities due to illiteracy and so these projects turn out to be a failure.

**Low IT Literacy:** Majority of the Indian people are either illiterate and those who are literate, they do not have much acquaintance about Information Technology (IT). Most of

the rural population in India is not aware regarding the usage of Information Technology. With low level of IT literacy, the e- Governance projects cannot be implemented successfully. e.g. schemes launched by the government like gyandoot, Bhoomi, e-choupal etc. where rural people are its end users and they fail to use these type of facilities provided by the government.

**A. Different Language** - In India we have people speaking different languages. Rural population does not know any other language than their native language. The multiplicity of type of people in context of language is a huge challenge for implementing e-Governance projects. As most of e-Governance applications are written in English language. And also, English is not easily understandable by majority of rural population. Hence, it becomes a challenge for the government to write e-Governance applications which are to be implemented for the whole nation in more than one language so that these may be acceptable to the users of a particular language [3].

**B. Services are not accessible easily:** The concept of e-Governance is supposed to increase efficiency and effectiveness of the government, but these goals will be achieved only if the service will be available to the 100% of the citizens. So, every service should be accessible by anybody from anywhere and anytime. Users of Internet are growing but still there is a major part of Indian population which is not able to access e-Governance activities for variety of reasons, e.g. some people may have limited access to ICT facilities and devices. Therefore, government has to provide internet access through public terminals as a part of their universal access efforts.

**C. Cost:** In developing countries like India, cost is one of the most important obstacles in the path of implementation of e-Governance where major part of the population is living below poverty line. Even the politicians do not have interest in implementing e-Governance. A huge amount of money is involved in implementation, operational and evolutionary maintenance tasks. These costs must be low enough so that to guarantee a good cost/benefit ratio.

**D. Privacy and Security:** A critical obstacle in implementing e-Governance is the privacy and security of an individual personal data that he/she provides to obtain government services. With the implementation of e-government projects, some measures should be taken to protect the sensitive personal data of the people stored or used in these projects. Lack of effective security standards limits the growth of various of e-Government projects that contain personal information.

**E. Geographical problems:** Corporate networks reside on reliable and controlled networks. Government networks have to go into all areas which are even unfriendly to live. It is, however, costly to wire up all the villages in the country. So, e-Governance systems needs to use the wireless systems like satellite networks to ensure the availability of applications into rural and remote areas irrespective of the geographical issues.

**F. Recognition of applications:** Awareness of the e-Governance facilities offered by the government is another challenge. It is a challenge to have all the citizens well aware of the facilities offered by the e-government and building trust for these applications, so that citizens are willing to use these facilities.

**G. Hesitation to change** - Humans are always reluctant to change. Now e-governance also means change of the existing system of manual working to computerize systems, which are generally disapproved by the employees and the common man. People generally dislike it as they need to learn new things in it for which they need to give in more time and effort.

#### IV. E-GOVERNANCE PROJECTS BY INDIAN GOVERNMENT

Indian Government has started many projects to provide facilities of e-governance for rural India. Many of these projects proved to be a success but still some initiatives needs are to be taken and the ones that are currently being done can be improved further, considering the problems being faced by the rural people in accessing these projects. Some of the projects started by Indian government are discussed below along with their current status:

##### A. Gyandoot

Gyandoot also called as “Rural Cyber cafes on Intranet”. It is an Intranet based Government to Citizen (G2C) service delivery portal started in Dhar district of Madhya Pradesh in January 2000. Gyandoot was planned to generate a commercial, replicable, cost-effectively self-sufficient and financially feasible model so that rural people can take the benefits of Information and Communication Technology (ICT). It made use of IT for benefit of rural areas where people do not have the facilities similar to those in cities [8]. Gyandoot was awarded with the ‘Stockholm Challenge IT Award’ in 2000 in the 'Public service and democracy' category. Initially it proved to be very successful but with passage of time in long run, the usage of the system has remained far below acceptable levels. This clearly shows ICT alone cannot improve the service delivery to rural poor. Significant re-engineering of backend processes and introduction of services that directly contribute to poverty alleviation are needed to make such initiatives sustainable.

##### B. Bhoomi

Bhoomi (Complete Land administration & management tool) is a project jointly funded by the Government of

Karnataka and the Government of India to digitize the existing paper land records. The project eliminated the problem of inefficiency and corruption in land records by creating a software mechanism that controlled the changes to the land registry in Karnataka. It had cut down the long and delayed mutation steps, faster disposal of mutations to farmers. "BHOOMI" designed fully in-house by National Informatics Center Bangalore, without any considerable Business Process Re-engineering (BPR) at the beginning. The system required lots of modifications during implementation phase as well as in the last 15 years period of functioning. After seeing the success of Bhoomi other states like Andhra Pradesh, Haryana, Madhya Pradesh are also implementing a similar system [9,1].

#### C. E-panchayats

A local village based self government is called as Panchayats. In India majority of the population lives in villages, so these panchayats play a main role. e-Panchayat was conceived as a Mission Mode Project (MMP) under NeGP. Initially 2,50,000 panchayati raj institutions at the gram panchayat, block and zila-parishads were identified[19]. The e-Panchayat project shows prospective results for the rural people, as it tries to renovate the Panchayati Raj Institutions into symbols of modernity and transparency. NIC developed e-panchayat for Andhra Pradesh and Hyderabad. All the information of the panchayats was collected and based on that the e-panchayat was initiated. The e-panchayat comprised of about 30 modules with approximately 150 sub-modules. These modules were providing the information to the villagers on diverse products like agriculture, fisheries and irrigation etc. and also on other problems relating to loans from industries, housing, water etc. It also dealt with various other services like property tax, registration and issuance of death and birth certificates etc. An important module in this was the grievance redressal cell where any grievance could be registered and monitored for the solution. Thus the project serves all aspects of panchayat's functioning including planning, budgeting, monitoring, accounting, implementing, social audit and delivery of services to citizens [12, 1].

#### D. e-post

e-post service was launched by the secretary of the Department of Posts on 30th January 2004. But in rural areas these facilities are not available. It is a very service where people can send the messages either printed or handwritten anywhere in India. Through this service the handwritten or printed document are scanned and sent via email to the post office near to the addressed destination. There the printout of the document is taken out, sealed in an envelope and delivered at the addressed destination. The document can be in any language. e-POST service is not limited to the e-POST centers. It can be availed of from any Post Office. Any customer can send and receive e-POST messages whether he is a metropolis or from a remote village, A fee of Rs. 10/- per A4 page is charged. For encouragement to the corporate customers, post office provide them special e-post rates and other value additions. For Corporate customer, e-post charge fee of Rs. 6 per page

of A4 size & for bulk it charge fee of Rs. 5 per page. This service tries to bridge the digital divide [11].

### V. SUGGESTIONS FOR IMPROVING E-GOVERNANCE

**A. Improvement of Literacy rate** – Literacy is always considered as an important factor in economic development of a country. Government initiated many programs for improving the literacy rate. In fact, Government has set up many primary schools in various areas. But this has not been successful as most of the schools are not functioning properly. Reasons cited for non functioning of schools is lack of proper infrastructure, no drinking water, lack of proper toilet facility, absence of teachers from school etc. which discourage students from attending school [13,14]. So, more emphasis should be given on the improvement of these schools.

**B. ICT growth** – Twelfth five year plan has proposed "Removing barriers of cost, language and accessibility by providing equitable access to Internet and its benefits to all. We need to devise and implement a national digitization plan and a digital literacy campaign for enabling the common man of rural India to use ICT optimally." This move of Government will also help in plummeting the digital divide. According to RRN Prasad, a member of the Telecom Regulatory Authority of India (TRAI): "In the Indian context, bridging the digital divide essentially means bridging the teledensity divide between rural and urban areas." [15]

**C. Cloud Computing** - Cloud computing can play an important role in overcoming the challenges posed by e-governance. It is useful in all those fields where technological infrastructure is not appropriate. Cloud computing can also help in internet propagation. "Cloud computing can contribute in a variety of ways to deliver citizen services efficiently and enable IT resources to be provided on demand, at scale in a multi-tenant, yet secured environment." [16]

**D. Business Process Re-engineering** – Although e-governance emphasizes on ICT, it is not the only factor in its success. For good e-governance re-engineering is essential. To develop the performance of e-governance, the processes and procedures of e-governance need to be restructured. Also for betterment of e-governance five components of the business that need to be changed are Strategy, Processes, Technology, Organization and Culture [18].

### VI. CONCLUSION

E-governance is getting momentum in India, it is proving a key to success for good governance. E-governance has had great role in each sphere of the economy over number of years. India economy has been progressive one on account of good governance. It provides facility to the citizens to get benefit from the services provided by Government. There has been a considerable increase in the percentage of individuals using the Internet in India. Although Indian government is spending a lot of money on e-Governance projects but still these projects are not successful in all parts of India. Unawareness in people, local language of the people of a particular area, privacy for the personal data of

the people etc. are main challenges which are responsible for the unsuccessful implementation of e-Governance in India. The participation of people can play a vital role in proper implementation of e-Governance in India [3]. Although Government has faced a lot of challenges but still the move towards e-governance in India has been successful. Further, the paper lists down the solutions for a more effective and efficient e-governance program

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