Opportunities and Challenges of e-Governance in Rural India

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ABSTRACT

The governance is the use of institutions, structures of authority and even collaboration to allocate resources and coordinate or control activity in society or the economy. E-Governance or electronic governance can be defined as the application of information and communication technology (ICT) for providing government services, exchange of information, transactions, integration of previously existing services and information portals. Countries around the world are increasingly opting for „e-Governance‟ as governance has become more complex and varied in the last few decades and more importantly, citizens‟ expectations from government have increased manifold. The objective of E-Governance is to provide the services to citizens through developing simple, steady and reliable registration process, by built-in consistency and transparency in process, by automating all the back office function. To achieve efficiency, transparency and accountability in governance by providing ICT enabled access and opportunities for all, anywhere, anytime – is the motto of the E-governance. It is not an easy job to implement the E-governance in the state. There are lots of challenges in the E-governance project, government process reengineering and change management are the biggest structural hindrance. This paper studies various issues, challenges and then presented a roadmap to the success of the E-governance in municipalities and urban areas in India. The rapid growth of the Internet and the advantages of the medium over conventional communication systems in terms of flexibility, speed, availability and ease make it an obvious route for knowledge dissemination. Several E-governance projects have attempted to improve the reach, enhance the base, minimize the processing costs, increase transparency and reduce the cycle time. Several states have initiated the creation of State Wide Area Networks (SWAN) to facilitate electronic access of the state and district administration services to the citizen in villages. The paper presents a brief review of the role and the obstacles associated with the use and implementation of rural E-education and E-governance applications.

Keyword: E-governance, Information Technologies, poverty, rural.

INTRODUCTION

In developing countries where literacy level is very low most of the people are living below poverty line. Along with many other developing countries India also suffers the same problem. People are unaware about the benefits of e-Governance activities and people do not use Information technologies. It is because of this reason a number of problems occur to implement e-Governance activities [1]. The main purpose of governance is the welfare of citizens. The term e-Government came into existence with the advent of government websites in late 1990s. Internet is used by the government to provide its services at the door step of customers, business and other stakeholder. In E-Governance, government makes best possible use of internet technology to communicate and provide information to common peoples and businessman. Today, electricity, water, phone and all kinds of bills can be paid over the internet. All this is what government and citizens is using and doing. All are dependent on internet and when citizens depends on government internet services all that come is E-Governance. A definition suggests that the governance is the use of institutions, structures of authority and even collaboration to allocate resources and coordinate or control activity in society or the economy. Simply defined, governance is the use of structures of authority to a decision making process for the management of society‟s affairs. E-governance goes beyond E-government. It means employing modern ICTs to address the issues of governance i.e. the participation in the decision making process of citizens and other actors. This inter-alia implies deploying efforts in the participation of all citizens, the access-divide and promotes opportunities for social empowerment. The World Bank defines governance as the exercise of political authority and the use of institutional resources to manage society‟s problems and affairs. "Just as the whole universe is contained in the self, so is India contained in the villages"…. The villages epitomize the soul of India. With more than 70% of the Indian population living in rural areas, rural India reflects the very essence of Indian culture and tradition. No wonder then that a holistic development of India as a nation rests on a sustained and holistic development of rural India. E-Governance originated in India during the 1970s with a focus on in-house government applications in the areas of defense, economic monitoring, planning and deployment of ICT to manage data intensive functions related to elections, census, tax administration etc. Initial steps taken by government are as follows:

- The establishment of the **Department of Electronics in 1970** was the first major step towards e-governance in India as it brought „information‟ and its communication to focus.
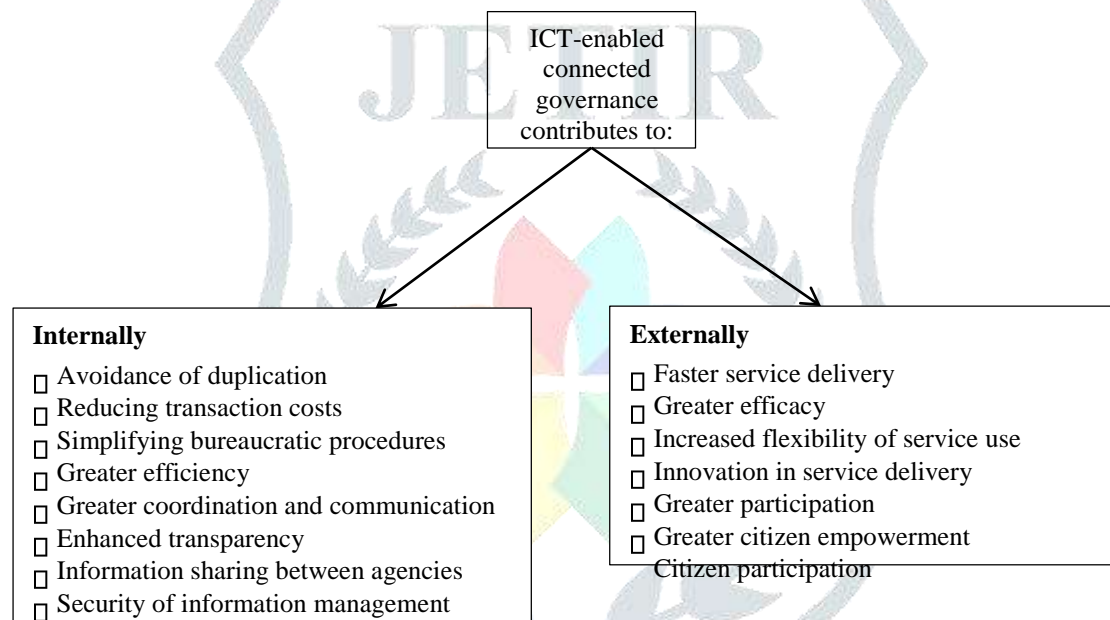
- **National Informatics Centre (NIC) established in 1977,** launched the **District Information System** program to computerize all district offices in the country

- The main thrust for e-governance was provided by the launching of **NICNET in 1987** – the national satellitebased computer network.

Objectives

- Better service delivery to citizens.
- Ushering in transparency and accountability.
- Empowering people through information.
- Improve efficiency within Government i.e. between center-state or inter-states.
- Improve interface with business and industry.

Pillars of e-Governance

- People
- Process
- Technology
- Resources

ICT-enabled connected governance contributes to:

Internally
- Avoidance of duplication
- Reducing transaction costs
- Simplifying bureaucratic procedures
- Greater efficiency
- Greater coordination and communication
- Enhanced transparency
- Information sharing between agencies
- Security of information management

Externally
- Faster service delivery
- Greater efficacy
- Increased flexibility of service use
- Innovation in service delivery
- Greater participation
- Greater citizen empowerment
- Citizen participation

This paper covers the role of e-governance in two of the Government of India programmes focusing on rural society. One is Integrated Rural Development Programme (IRDP) initiated in 1978 [10] and National Rural Employment Guarantee (NREGA) [11] and discusses on their critical success related issues and how planning support systems based egovernance [12] can help addressing these issues.

The **National e-Governance Plan** (NeGP) is an initiative of the Government of India to make all government services available to the citizens of India via electronic media. NeGP was formulated by the Department of Electronics and Information Technology (DeitY) and Department of Administrative Reforms and Public Grievances (DARPG). The Government approved the National e-Governance Plan, consisting of 27 "Mission Mode Projects" (MMPs) and Ten components, on 18 May 2006. This is an enabler of Digital India initiative, and UMANG (Unified Mobile Application for New-age Governance) in turn is an enabler of NeGP [2, 3].

The government of India has approved the **National e-Governance Plan (NeGP)** in May 2006 with the vision: "Make all government services accessible to the common man in his locality, throughout common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man". The NeGP currently consists of 27 Mission Mode Projects (MMPs) and 8 Support Components to be implemented at the Central, State and Local Government levels. The Central Govt. is very eager to bring each Gram Panchayat under E-governance policy and also make Internet access powered by VSAT satellite technology to bring the village schools in contact with outside worlds.

NEGP APPROACH:

- Focus on Public Service Delivery & Outcomes o Process Re-engineering & Change Management are critical
  - o Radically change the way government delivers services
- Centralized Initiative, Decentralized Implementation o Implementation framework accordingly o Project Implementation in Mission Mode o Empowered Mission Teams- professional & domain people

The focus of NeGP is on the following:

- Adequate weightage must be given for quality and speed of implementation in procurement procedures for IT services.
- Incorporation of a suitable system of incitement of States to encourage adoption.
- The trend of delivery of services through common service centers should be encouraged and promoted.
- Wherever possible, services should be outsourced.
- The full potential for private sector investment should be exploited.
- Connectivity should be extended up to block level through NICNET/SWANS.
- NeGP also envisages significant investments in arrears such as government process re-engineering, capacity building, training, assessment and awareness. The plan is to be executed over a four-year period. An apex committee under the Cabinet Secretary is already in place for providing the strategic direction and management oversight.

Based on the experiences from the past successful e-Governance applications, the approach and methodology adopted for NeGP contains the following elements:

i. Common Support Infrastructure: NeGP implementation requires setting up of common and support IT infrastructure such as: State Wide Area Networks (SWANs), State Data Centres (SDCs), Common Services Centres (CSCs) and Electronic Service Delivery Gateways.

ii. Governance: appropriate adaption for monitoring and systematizing the implementation of NeGP under the direction of the competent authorities has also been considerably emplace. The programme also fascinate evolving and settling down standards and policy guidelines, providing practical and technical support, guaranteeing capacity building, research and development etc.

iii. Centralized Initiative, Decentralized Implementation: e-Governance is being promoted through a centralized initiative to the extent necessary to ensure citizen-centric orientation, to realize the objective of inter-operability of various e-Governance applications and to ensure optimal utilization of ICT infrastructure and resources while allowing for a decentralized implementation model. It also aims at identifying successful projects and replicating them with required customization wherever needed.

iv. Public-Private Partnerships (PPP) model is to be adopted wherever feasible to enlarge the resource pool without compromising on the security aspects. A **public–private partnership** (**PPP**, **3P**, or **P3**) is a cooperative arrangement between two or more public and private sectors, typically of a long-term nature. In other words, it involves government(s) and business(es) that work together to complete a project and/or to provide services to the population. They are an example of multi-stakeholder governance which is a key target of United Nations Sustainable Development Goal 17.

v. Integrative Elements: Adoption of unique identification codes for citizens, businesses and property is to be promoted to facilitate integration and avoid ambiguity.

vi. Programme Approach at the National and State levels: For implementation of the NeGP, various Union Ministries/Departments and State Governments are involved. Considering the multiplicity of agencies involved and the need for overall aggregation and integration at the national level, NeGP is being implemented as a programme, with well defined roles and responsibilities.

E-GOVERNMENT PROJECTS

GYANDOOT: Gyandoot is an internet in Dhar district of Madhya Pradesh, connecting rural cybercafés catering to the everyday needs of the masses. The web site is an extension of Gyandoot internet for giving global access. The site has these services to offer: Commodity/mandi Marketing Information System, Copies of Khsara, BI/khatauni and Maps, Online registration of applications, Income certificate, Domicile certificate (Mool Niwasi), Caste certificate, Landholder"s passbook of land rights and Loans (Bhoo adhikar evam rin pustika).[4,5]

WARANA: The primary objective of the recently launched Wired Village project is to demonstrate the effective use of IT infrastructure in the accelerated socio-economic development of 70 villages around Warna Nagar in the Kolhapur and Sangli districts of the state of Maharashtra. The existing cooperative structure has been used in concert with high speed

VSATs to allow Internet access to existing cooperative societies. The project aims to provide agricultural, medical and educational information to villagers by establishing networked „facilitation booths" in the villages.

AKSHAYA: Information and communication technologies (ICT) have wide field of good governance for development through faster, cost effective, and more systematic approach. Citizen empowerment is one of the key components of good Governance. Akshaya e-Centers are being set up throughout Kerala. These centers will initially provide e-literacy to one member from every household and act as ICT dissemination nodes and ITeS deliver points in every village.

BHOOMI: It is major initiative to computerize land records to ensure more secure title deeds and roll-back the rampant cases of corruption.

CARD: The Computer-aided Administration of Registration Department (CARD) is designed to eliminate the maladies affecting the conventional registration system by introducing electronic delivery of all registration services. CARD was initiated to meet objectives to demystify the registration process, bring speed, efficiency, consistency and reliability and substantially improve the citizen interface.

DAIRY INFORMATION SYSTEM KIOSK: Running the DISC application targeted at the booming dairy sector has been tested for two milk collection societies by the Indian Institute of Management, Ahmedabad"s e-governance center. The project consists of two basic components- an application at the rural milk collection society that could be provided Internet connectivity and a portal at the district level serving transactional and information needs of all members. [1, 2]

FRIENDS: Fast, Reliable, Instant, Effective Network for the Disbursement of Services is part of Kerala State IT Mission. FRIENDS counters handle 1,000 types of payment bills originating out of various PSUs. The payments that citizens can make include utility payments, electricity and water, revenue taxes, license fees, motor vehicle taxes, university fees etc. Firewalls safeguard data from manipulation. [2]

GRAMSAMPARK: „Gramsampark" is a flagship ICT product of the state of Madhya Pradesh. A complete data base of available resources, basic amenities, beneficiaries of government programmes and public grievances in all the 51,000 villages of Madhya Pradesh can be obtained by accessing the website www.mp.nic.in/gramsampark. Gramsampark has three sections- Gram Paridrashya (village scenario), Samasya Nivaran (grievance redress) and Gram Prahari (village sentinel). An eleven point monitoring system has been put in place whereby programmes are monitored village-wise every month. Four more programmes are under the monitoring system, which includes untouchability eradication, women"s empowerment, water conservation and campaigns for sanitation.

LOKMITRA: The services offered include information about vacancies, tenders, market rates, matrimonial services, village e-mail. An interesting feature is that citizens can use IT enables system as a grievance redress system. LOKMITRA" vision is people centered development. It envisions a social change process where weaker sections of society get full opportunity to set the agenda and course of action for their overall development. Such a process will be characterized with socio-economic as well as gender equality and justice. There will be respect for ecological balance & sustainable development.[6,7]

MAHITISHAKTI: Operates like a single window through which the citizens can access information related to all aspects of government"s functioning, various benefit scheme and services ranging from obtaining ration cards to getting sanction for old age pension.

E-CHAUPAL: This project started by ITC"s International Business Division as a cost effective alternative supply chain system to deal directly with the farmers to buy products for exports is getting transformed into a mega market for rural. The tobacco giant has already set up over 700 chaupals covering 3,800 villages in four states, which include Madhya Pradesh, Utter Pradesh, Karnataka and Andhra Pradesh dealing with products ranging from soya bean, coffee, aqua culture and wheat. The e-Choupal project model is designed to tackle the challenges posed by the unique features of Indian agriculture that is shattered farms, weak infrastructure and the involvement of middlemen or mediators. Real-time information and customized knowledge provided by 'e-Choupal' enhance the ability of farmers to take decisions and set their farm output according to market demand and maintain quality and improve productivity.[8,9]

E-SUVIDHA: This facility was started in 2002, for the north-eastern states of India and CICs were dedicated to the people of this region. These centers are located in the areas of the country, which are socially and economically backward. These centers are equipped with computer and other communication infrastructure and connect the local population with the digital world. This begins new possibilities of providing improved government services to the people by using the installed ICT infrastructure of CICs. This project was accomplished to provide services like birth registration, death registration, marriage certificates, category certificates etc. They also provide information about agricultural prices and related matters and educational and employment opportunities [2, 3]. E-Suvidha make use of information technology to simplify the processes of government functioning and to bring efficiency and transparency in governance.

AGMARKNET: Agricultural Marketing Information Network (AGMARKNET) was launched in the year 2000 by the Union Ministry of Agriculture. The Directorate of Marketing and Inspection (DMI) link about 7,000 agricultural wholesale markets in India with the State Agricultural Marketing Boards and Directorates. This was done to exchange the information with effective manner. This e-governance portal AGMARKNET, implemented by National Informatics Centre (NIC), facilitates generation and transmission of prices, information about the commodities availability from agricultural markets, and spreading information through web to producers, consumers, traders, and policy makers transparently and fast.[10, 11]

E-GOVERNANCE CHALLENGES SPECIFIC TO INDIA:

E-governance was implemented for the healthier communication between people and government. Government faced many challenges and issues in starting it. Following are some of the hindrances or challenges overlook by government.

1.   Lack of Integrated Services: Most of the e-governance services being offered by state or central governments are not integrated. This can mainly be attributed to Lack of communication between different Departments. So the information that resides with one department has no or very little meaning to some other department of Government.

2.   Lack of Key Persons: e-governance projects lack key persons, not only from technological aspect, but from other aspects as well.

3.   Population: This is probably the biggest challenge. Apart from being an asset to the country it offers some unique issues, an important one being non availability of matching resources.

4.   Establishing Person Identities: There is no unique identity of a person in India. Apart from this, measuring the population, keeping the data base of all Indian nationals and keeping it updated are some other related challenges. [5]

5.   Different Languages: A challenge due to the diversity of the country. In India the most of the languages spoken by people are their native languages. The Rural society faces difficulty to understand any other language. Most of the e-governance projects use English or Hindi as the primary language. So the project led by the government cannot be used by majority of the rural population. It enforces need to do governance (up to certain level) in local languages. Ensuring e-governance in local language is a big task to achieve.

Challenges: Key challenges for E-governance application are:

a) **The improvement of overall literacy rate:** The government is continuously trying in increasing the literacy rate in rural society. But the govt. should endeavor to improve the literacy issue in India. Literacy rate in rural areas is approximately 67% with rural male literacy rate 77% and rural female literacy rate 60%. IT illiteracy is another flaw where the people are not skilled and therefore technology cannot be used in proper manner. In India, many of the schemes launched by the government like AGMARKNET, Bhoomi etc. include rural people as end users due to lack of technical awareness and related knowledge most of them are are incapable of using the facilities provided by the government.

b) **The development of Telecommunication infrastructure:** It is difficult to connect all rural areas through internet and maintaining the continuous supply of electricity is a great challenge. Moreover, it is difficult to lay the cables at these places. Especially remote areas are lacking basic infrastructure.

Cost is one of the major obstacles in implementing e-Governance as most of the population is living below poverty line. The government provides limited financial resources. A large amount of capital cost is required to provide the primary infrastructure for implementation, operational maintenance tasks. These costs must be low to provide benefit to as many people.

c) The commitment of governments to genuine transformation towards a more transparent and citizen centered governance.

All implementers and drivers of e-governance initiatives agree that the biggest challenge of deploying e-governance is not technology but change management. Change management is important not only in terms of cultural change but also in terms of changing operations and processes workflow that the automated environment will introduce. "It"s important to educate the people at all levels about the benefits and advantages of e-enabling the system should be communicated clearly right at the beginning to ensure popular support which will lead to greater chances of success". It is not an easy job to implement the e-governance in the state. "Rome cannot be built in a day" so there are challenges in achieving each and every milestones. There are lots of challenges in the e-government strategy such as lack of readily available support to line secretaries for initiating and sustaining e-governance project, government process re-engineering and change management are the biggest structural hindrance in achieving goal enunciated, which could be reduced by involvement of user during software development phase, regular training programmes & skill up gradation of project team members by organizing IT seminars and product demonstration and availing infrastructure for hands on training for new project. Lack of project

oriented approach could occur due to deployment of nonprofessional employees. Personal dependent initiated project could worsen all the efforts and initiative which were earlier taken. There is a need to strengthen the core infrastructure for all departments. Focus is needed on the funding and financial sustainability of project. The above are some of the fundamental challenges that we are facing in the implementation of the e-governance [4].

Components of success: According to an officer from NIC, success factors of e-governance projects are:

o 20% Technology o 35%

Process o 40% Change

Management o 5% Luck

CONCLUSION

In this paper, a framework and application of E-Governance and E-Governance projects run by state and central governments are presented. E-Governance with open source is very popular in west countries but in India it is still an emerging technology. NIC is providing the network backbone and a wide range of ICT services to government organizations throughout India. The emanate of e-government is one of the most required developments of the web. Global shifts towards increased categorization of IT by governments were emerged in the nineties, with the arrival of the World Wide Web. E-Governance is not only popular in India but also in other parts of the world. To make working of government more efficient, responsive and transparent many developed and developing countries have taken some useful steps for the expansion of e-governance in their respective countries.

One of the expected benefits of e-governance investment solutions often cited by proponents is cost saving achieved by increasing the speed of transactions, reducing the number of personnel to complete a task and improving the consistency of outcomes to streamline procedures and trim the costs. There is need of well laid out strategy to target rural market at the corporate levels. For instance, in time of economic slowdown many marketers are looking at rural areas as a sort of respite. In e-governance projects, efficiency can take many forms. Some projects seek to reduce errors and improve consistency of outcomes by automating standardized tasks. A related efficiency goal of many e-government initiatives is to reduce costs and layers of organizational processes by re-engineering and streamlining operating procedures. Similarly, some e-government advocates suggest that reducing the amount of time spent on respective tasks will give those government employees an opportunity to develop new skills and advance their careers. IT will be the corner stone for bringing in efficiency in the Indian health care system. It will be instrumental in standardizing the way patient information is stored and exchanged between various healthcare programmes across the organizations. There is a huge opportunity for rural market in India with more than 6,00,000 villages and 700 million people the country side offer a huge consumer base. Indian companies can use e-governance technologies to tap up rural market efficiently. This is a win-win opportunities for the companies. In rural India issues such as security, accessibility, poor power supply and weather variations in villages presents a tough challenges. Ultimately it will be the e-governance services which will make inroads in rural economies to improve the life and convenience of the masses. E-governance requires a bit of patience as any investment needs a certain time period to pay back.

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