

Future Strategies and Challenges of Rural e-Governance in India

Saroj Kumar Singh

Deptt. Of Rural Economics, S. N. S. R. K. S. College, Saharsa(A Constituent Unit of B. N. Mandal University, Madhepura, Bihar
E-mail: drsaroj999@gmail.com

Abstract—The success of any e-Governance initiative lies in complete integration between the services. That is easier said than done. We are a country with 18 official languages and states having different parties in power than at the Center. This creates language issues and also political issues. e-Governance is not a “technical initiative”. It hinges on the re-engineering of process and administrative methods. If one has to enable technology to do things better and faster, then people and processes need to change the ways. That is most often not possible in a government set up. The personnel in government have little or no motivation to change the way they have been doing things. That can fail any well laid out processes and technologies! Even though NIC is the one body responsible for the whole framework, but there is no ready-made framework out there that can be used by NIC to easily dovetail different components together. Whatever it does in a way becomes the standard. Even though awareness has grown over the last decade. Still, the Urban-Rural divide is quite huge in terms of technical capabilities and accessibility. Internet access is not that readily available in villages and small towns. So the political motivation to spend time and resources on something that will provide benefits to the people of the state is sometimes absent. It takes a back seat. This is accentuated by the lack of education and awareness of the politicians themselves!

1. INTRODUCTION

India is a nation of villages. The rural mass in the nation comprises the core of Indian society and also represents the real India. According to the Census Data 2011, there are 638,387 villages in India that represent more than 72 per cent of the total population. In a geographically and culturally diverse country like India, a system of accountable, efficient and transparent local government is indispensable for development and public service delivery at the grassroots level of society. Majority of the population lives in rural areas and out of the rural inhabitants around a quarter are conspicuously below the poverty line (BPL) and under extreme deprivation. Even after more than six decades of independence, many rural areas still lack basic infrastructure such as roads, water, electricity, hospitals, and schools and so on. In a participatory democratic society, ICT can be used for good governance, enhances democratization and citizen empowerment. The digital governance creates better connections between citizens and government and encourages their participation in governance. The process gives chance to open up the

avenues for direct participation of women in government policymaking process. It is very significant in rural areas where people deprived of getting benefit of the different integrated development programs.

2. E-GOVERNANCE IN INDIA

The Government of India set up the Department of Electronics in 1970, which was later followed up with the setting up of National Informatics Center (NIC) in 1976 and has since emerged as a “prime builder” of e-Government / e-Governance applications up to the grassroots level as well as a promoter of digital opportunities for sustainable development. NIC, through its ICT Network, “NICNET”, has institutional linkages with all the Ministries / Departments of the Central Government, 35 State Governments/ Union Territories, and about 625 District administrations of India. NIC has been instrumental in steering e-Government/e-Governance applications in government ministries/departments at the Centre, States, Districts and Blocks, facilitating improvement in government services, wider transparency, promoting decentralized planning and management, resulting in better efficiency and accountability to the people of India.

This initiative is slated to be completed by 2019. It is a public – private initiative where even restructuring of NIC is one of the agenda!

3. E-GOVERNANCE MODELS

E-governance services can be shared between citizens, businessman, government and employees. These four models of e-governance are as

3.1 GOVERNMENT TO CITIZENS (G2C)

This model of e-governance refers to the government services which are shared by citizens. Here, citizens visit to the link of services that they want to use. This model strengthens the bond between government and its citizen. Type of services which are provided by this model includes:-

- a. Payment of online bills such as electricity, water, telephone bills etc.
- b. Online registration of applications.
- c. Copies of land-record.
- d. Online filling of complaints.
- e. Availability of any kind of online information.

3.2 Government to government (G2G)

This model refers to the services which are shared between the governments. There is lots of information that need to be shared between various government agencies, department and organizations. These types of services or information are as:-

- A. Sharing of information between police department of various state.
- B. Government document exchange which includes preparation, approval, distribution, and storage of all governmental documents is also done through e-governance.
- C. Most of the finance and budget work are also done through e-governance.

3.3 Government to businessmen (G2B)

This model increases the transparency between government and private sector and businessmen use to communicate. They share information through this model like:

- a. Collection of taxes.
- b. Rejection and approval of patent is also done by this model.
- c. Payment of all kind of bills and penalty.
- d. Sharing of all kind of information, rules and data.
- e. Complaints or any kind of dissatisfaction can be shown by this.

3.4 Government to employees (G2E)

This model increases the transparency between government and its employee. Here, employee can keeps a check on the functioning and working of government and government can keeps on its employees. Information that can be shared by this model:-

- a. All kind of data submission(attendance record, employee record etc) from various government offices is done by this model
- b. Employee can file all kinds of complaints and dissatisfaction by this model.
- c. All kind of rule- regulation and information for employees can be shared by this.
- d. Employees can check their payment and working record.
- e. Employees can register all kind of working forms online.

4. E-GOVERNANCE IN RURAL AGRICULTURAL DEVELOPMENT

There have been several initiatives by the State and Central Governments to meet the various challenges facing the agriculture sector in the country. The Agriculture MMP has been included in NeGP in an effort to consolidate the various learning from the past, integrate all the diverse and disparate efforts currently underway, and upscale them to cover the entire country. The online services include up to the Panchayat level. The major e-Governance initiatives in Agriculture sector are: Rashtriya Krishi Vikas Yojana (RKVY).

5. E-GOVERNANCE IN DEVELOPMENTAL SCHEMES

E-Governance in Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) The Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MGNREGA) (External website that opens in a new window) aims at enhancing the livelihood security of people in rural areas by guaranteeing hundred days of wage-employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work. The Central government in association with the state governments has been adding different e-governance initiatives in this scheme.

The major online modules in MGNREGA include: Queries, Suggestions, Complaints, Feedback in Panchayats level Grievance Redresses System, Workers Information & Description, District / Block Administrator, State specific information, Social Audit.

6. E-GOVERNANCE IN INDIRA AWAAS YOJNA

With a view to meeting the housing needs of the rural poor, Indira Awaas Yojana (IAY) was launched in May 1985 as a sub-scheme of the Jawahar Rozgar Yojana. It is being implemented as an independent scheme since 1 January 1996. The Indira Awaas Yojana aims at helping rural people below the poverty-line belonging to SCs/STs, freed bonded laborers and non-SC/ST categories in construction of dwelling units and up gradation of existing unserviceable Kutch houses by providing grant-in-aid. From 1995-96, the IAY benefits have been extended to widows or next-of-kin of defence personnel killed in action. Benefits have also been extended to ex-servicemen and retired members of the paramilitary forces as long as they fulfill the normal eligibility conditions of the Indira Awaas Yojana

7. E-GOVERNANCE IN NATIONAL SOCIAL ASSISTANCE PROGRAM (NSAP)

NSAP includes the following schemes: Indira Gandhi National Old Age Pension Scheme (IGNOAPS) (External website that opens in a new window), Indira Gandhi National Widow Pension Scheme (IGNWPS) (External website that

opens in a new window), Indira Gandhi National Disability Pension Scheme (IGNDPS) (External website that opens in a new window), Other online information like beneficiary abstract, monthly progress reports, data gap report, report on PDAs created, report on linking of beneficiary to PDA, annual progress reports, area-wise disbursement report, month-wise disbursement report, released pension amount report, a quittance abstract, pass book for pensioner, beneficiary search, category-wise disbursement report, funds receipts and expenditure, fund utilization and disbursement are also available.

8. PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

The Pradhan Mantri Gram Sadak Yojana (PMGSY) was launched by the Govt. of India to provide connectivity to unconnected rural habitations as part of a poverty reduction strategy. Government of India is endeavoring to set high and uniform technical and management standards and facilitating policy development and planning at State level in order to ensure sustainable management of the rural roads network. A citizen can track the day to day progress report in the scheme. The e-governance initiatives include:

Habitation Coverage, Sanctioned, Pending Proposals, Completion of Packages, Physical and Financial Projects Summary, Physical Progress of Works, Financial Progress of Works, Financial Progress As Per Accounts, State Profile, National Projects Summary, Per Kilometer Cost.

9. SWARNJAYANTI GRAM SWAROZGAR YOJANA (SGSY)

Swarnjayanti Gram Swarozgar Yojana (SGSY) is to bring the assisted poor families (Swarozgaries) above the Poverty Line by ensuring appreciable sustained level of income over a period of time. This objective is to be achieved by inter alia organizing the rural poor into Self Help Groups (SHGs) through the process of social mobilization, their training and capacity building and provision of income generating assets. The SHG approach helps the poor to build their self-confidence through community action. Interactions in group meetings and collective decision making enable them to identify and prioritize their needs and resources. This process ultimately leads to the strengthening and socioeconomic empowerment of the rural poor as well as improve their collective bargaining power..

10. RURAL BUSINESS HUBS (RBH)

Rural Business Hubs (RBH) is aimed to eradicate rural poverty and create employment opportunity in rural India. The Ministry of Panchayati Raj has adopted the goal of "Haat to Hypermarket" as the overarching objective of the Rural Business Hubs, initiative aimed at moving from more livelihood support to promoting rural prosperity, increasing

rural non-farm incomes and augmenting rural employment. RBH Guidelines and Monitoring (External website that opens in a new window)

11. BACKWARD REGIONS GRANT FUND (BRGF)

The Backward Regions Grant Fund (BRGF) is designed to redress regional imbalances in development. The fund will provide financial resources for supplementing and converging existing developmental inflows into 250 identified districts. Provide professional support to local bodies for planning, implementation and monitoring their plans. Guidelines and Monitoring Formats for BRGF, Other Rural Development schemes that include e-Governance Project Diksha,

12. COMMON SERVICE CENTRE (CSC) SCHEME

People's Action for Development in India (PADI). The National Social Assistance Programme (NSAP) e-Governance in Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Pilot Weather Based Crop Insurance Scheme (Modified National Agricultural Insurance Scheme (MNAIS), Weather Based Crop Insurance Scheme (WBCIS) Investment in Debentures of State Land Development Banks (SLDB), National Agricultural Insurance Scheme (NAIS)- Scheme and Operational Modalities, National Spatial Data Base (NSDB) MGNREGA Soft for Mahatma Gandhi National Rural Employment Guarantee Scheme, Total Sanitation Campaign (TSC). Ministry of Drinking Water and Sanitation (MoDWS), Member of Parliament Local Area Development Scheme (MPLADS) "Nirmal Gram Puraskar" (NGP) Government of India (GOI) National Spatial Database (NSDB), National Spatial Database (NSDB) National Agricultural Insurance Scheme (NAIS)- State Land Development Banks (SLDB), Weather Based Crop Insurance Scheme (WBCIS) National Agricultural Insurance Scheme (MNAIS) – Scheme, Rashtriya Krishi Vikas Yojana (RKVY).

13. STRATEGIES AND CHALLENGES BEFORE STAKEHOLDERS IN INDIA

Some of strategies and challenges that Digital India initiative will face will be:

- I. Lack of legal framework.
- II. Absence of privacy.
- III. Data protection laws.
- IV. Civil liberties abuse possibilities..
- V. Lack of parliamentary oversight for e-surveillance in India.
- VI. Lack of intelligence related reforms in India.
- VII. Insecure Indian cyberspace. It will be interesting to see how the Modi Government can tackle these strategies and challenges and make it a successful program. Despite the challenges, the program is very ambitious and something that will indeed take India to the next level in terms of governance

and attracting business. Of course, this also has a huge potential to create jobs!

The Digital India project that aims to offer a one-stop shop for government services would use the mobile phone as the backbone of its delivery mechanism. The government hopes the Rs 1.13-lakh crore initiative that seeks to transform India into a connected economy to also attract investment in electronics manufacturing, create millions of jobs and support trade. So development of these rural mass is one of the key areas of consideration in the government policy formulation. Rural Development which is concerned with economic growth and social justice, improvement in the living standard of the rural people by providing adequate and quality social services and minimum basic needs becomes essential. The present strategy of rural development mainly focuses on poverty alleviation, better livelihood opportunities, provision of basic amenities and infrastructure facilities through innovative programs of wage and self-employment etc.

The government of India has started many programs aimed at improving the standard of living in villages or rural areas. To build rural infrastructure, the government launched a time-bound business plan for action called Bharat Nirman (External website that opens in a new window) in 2005. Under Bharat Nirman, action is proposed in the areas of Water Supply, Housing, Telecommunication and Information Technology, Roads, Electrification and Irrigation.

In view of the sheer size and diversity of our country, delivery of governance to the remote corners in a meaningful and locally relevant manner is a huge challenge. The administrative setup has evolved by incorporating our age old institutions with the modern democratic organs to meet this challenge..

I can say, from my experience that although lots of efforts have been made in the creation of infrastructure and internal information handling by govt. bodies as well as public services, the diffusion of technologies in moving towards e-governance have been rather slow. This may primarily be attributed to the following reasons.

13.1 Lack of IT Literacy and awareness regarding benefits of e-governance

There is general lack of awareness regarding benefits of e-governance as well as the process involved in implementing successful G-C, G-G and G-B projects. The administrative structure is not geared for maintaining, storing and retrieving the governance information electronically.

13.2 Underutilization of existing ICT infrastructure

To a larger extent, the computers in the department are used for the purpose of word processing only, resulting in the underutilization of the computers in terms of their use in data mining for supporting management decisions. The time gap between the procurement of the hardware and development of

the custom applications is so large that by the time application is ready for use, the hardware becomes obsolete.

13.3 Attitude of Government Departments

The psychology of government servants is quite different from that of private sectors. Traditionally the government servants have derived their sustenance from the fact that they are important repositories of govt. data. Thus any effort to implement DMS and workflow technologies or bringing out the change in the system is met with resistance from the govt. servants.

13.4 Lack of coordination between Govt. Department and Solution developers

Designing of any application requires a very close interaction between the govt. department and the agency developing the solutions. At present the users in govt. departments do not contribute enough to design the solution architecture. Consequently the solution developed and implemented does not address the requirements of an e-governance project and hence does not get implemented.

13.5 Resistance to re-engineering of departmental processes

Successful implementation of e-governance projects requires lots of restructuring in administrative processes, redefining of administrative procedures and formats which finds the resistance in almost all the departments at all the levels. Additionally there is lack of expertise of Departmental MIS executives in exploiting data mining techniques, updating and collection of real time content onto website etc. Therefore the content as is collected or maintained by various e-governance portals is unreliable or full of gaps. In such a scenario, it's difficult for any e-governance solution to achieve its intended results.

13.6 Lack of Infrastructure for sustaining e-governance projects on national level

Infrastructure to support e-governance initiatives does not exist within government departments. The agony is that the government departments are not equipped to be in a position to project the clear requirements nor are there any guidelines for involving private sector. Whatever efforts have been made by various govt. organizations may be defined as islands of computerization. The infrastructure creation is not guided by a uniform national policy, but is dependent on the needs of individual officers championing a few projects. Therefore, the required networking and communication equipment is either nonexistent in govt. departments, or if it exists at all, it does not serve any tangible purpose as far as the requirement of e-governance project is concerned. The use of connectivity options provided by govt. agencies like NICNET etc. are used in a very limited manner for data transmission purpose between various locations viz. District., State , Center etc. and is mainly utilized for e-mail and Internet purpose only.

14. SOME OF THE REQUIREMENTS FOR IMPLEMENTING SUCCESSFUL E-GOVERNANCE ACROSS THE NATION ARE:

- I. E-Governance framework across the nation with enough bandwidth to service a population of one billion.
- II. Connectivity framework for making the services reaches rural areas of the country or development of alternative means of services such as e-governance kiosks in regional languages.
- III. National Citizen Database which is the primary unit of data for all governance vertical and horizontal applications across the state and central governments.
- IV. E-governance and interoperability standards for the exchange of secure information with non-repudiation, across the state and central government departments seamlessly.
- V. A secure delivery framework by means of virtual private network connecting across the state and central government departments.
- VI. Datacenters in Centre and states to handle the departmental workflow automation, collaboration, interaction, exchange of information with authentication.

For success of an e-governance project and superior service delivery, it is imperative that the government agency focuses on whole citizen experience. Focusing on the citizen is essential for long term success. The govt. agency needs to integrate information from all points of citizen interaction. The overall architecture for e-Governance needs to ensure that the architecture components are extensible and scalable to adapt to the changing environments. The e-Governance applications that are emerging as islands of successes have to be interoperable.

15. CONCLUSION

It is evident from above discussion that an objective of achieving rural e-governance and transforming India will require basic change in work culture and goal orientation, and simultaneous change in the existing processes. Foremost of them is to create a culture of maintaining, processing and retrieving the information through an electronic system and use that information for decision making. It will require skilled navigation to ensure a smooth transition from old processes and manual operations to new automated services without hampering the existing services. This can be achieved by initially moving ahead in smaller informed initiatives in a time bound manner and avoiding large and expensive steps without understanding the full social implications. The real challenges are how to develop and sustain successful e-governance projects and deliver state of the art e-services to citizens. Unfortunately it's not as easy as adding "e" in front

of your service delivery mechanism. Successful e-governance initiatives can never be taken in haste. Particularly for the democratic nation of the billion people like India, e-Governance should enable seamless access to information and seamless flow of information across the state and central government in the federal setup. No country has so far implemented an e-governance system for one billion people.

16. SUGGESTIONS FOR THE SUCCESSFUL TRANSFORMATION FROM "A" TO "E"

Suggestions for the Successful Transformation from "A" to "e" are as follows

16.1 Create Literacy and commitment to e-governance at high level

The most important requirement is a training program for policy makers in E-Governance (Senior Public Servants), politicians and IT task force members. Such programs can be need based and outsourced when required. In addition it should be made mandatory for all the stake holders in implementation and maintenance of e-governance services to have the general IT skills.

16.2 Conduct Usability Surveys for assessment of existing e-governance projects

There is a tremendous divergence in the extent of implementation of the concept of e-Governance. It is, therefore, not possible to come up with a framework for implementation of e-Governance which is straightaway applicable to all states and the Central Government. Therefore an e-readiness exercise should be carried out in all states, government departments to understand their level of acceptability of the e-governance.

16.3 Starting with implementation of pilot projects and replicating the successful ones

The pilot projects taken in various states should be assessed for their achievement levels. They should be classified as success or failure according to the desired output written down before implementation of the projects. The study should be carried out by an independent agency for the implementation agency. The study should be carried out at each stage of implementation. Bottlenecks and causes of delays should be documented, even though they are removed later. The successful projects should be replicated over the nation with members drawn from the implementing team. The projects, which could not achieve the desired outcome, should be documented for possible causes of failure. Various bottlenecks and causes of delay should be identified.

16.4 Follow the Best Practices in e-governance

The study of Best Practices will bring forward the best practices being followed nationally and internationally. The

national and international Best Practices study will give a great momentum to the process of E-Governance. The State Governments will not have to re-invent wheel every time and they can learn from the developments already made.

16.5 Have clearly defined Interoperability policy

The e-governance architecture needs to ensure that the components are scalable and adaptable to the future requirements. It has also to ensure that the Local architecture fits into the State level and the same into National and Global architecture. Interoperability is a major criterion while defining the architecture.

16.6 Manage and Update content on govt. websites efficiently and regularly

Content is the 'heart' of any IT project. The govt. agency has to keep in mind some of the important technical guidelines, while developing the software and computerization, to facilitate the future integration. The department also needs to address the security of transactions and messages.

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