

ICT Application in Governance of Rural parts of Rajasthan: A Road Ahead

Yashpal Soni¹, Dr. Geeta Chhabra Gandhi², Dr. Dinesh Goyal³,

¹PhD Scholar, Department of Computer Science, Poornima University, Jaipur, Rajasthan, India, soniyashpal@hotmail.com

²Associate Professor, Poornima University, Jaipur, Rajasthan, India, Geeta.gandhi@poornima.edu.in

³Principal, Poornima Institute of Engineering and Technology, Jaipur, Rajasthan, India, dinesh8dg@gmail.com

Article History: Received: 11 January 2021; Revised: 12 February 2021; Accepted: 27 March 2021; Published online: 10 May 2021

Abstract: The subject e-Governance was well thought of as in view of the prevailing impact of Information Communication Technology (ICT) in administration, there is a requirement to use the mouse for governance in a big way. Government too must be will set up that the important information is disseminated to the citizen, business, government / sub government departments and the NGOs.

Government is a mechanism or institutional arrangement for exercising sovereignty, while governance is the process and result of making authoritative decisions for the benefit of society. If governance cannot bring the greatest benefits to the largest number of people, it will lead to poor governance. In the welfare state, the goal is good governance. There are many ways to achieve this goal. E-government is the most suitable one, which can bring about a paradigm change in the face of governance. E-government is the deployment of information and communication technology (ICT) in the delivery of public services. In this highly competitive economy, e-government is everywhere. But in terms of the success of e-government projects, developed countries lag far behind developing countries, leading to a digital divide. Developing countries have not taken full advantage of the full benefits of ICT. There are many reasons for this situation, such as lack of appropriate technology, poor financing tools, lack of political will/commitment, resistance to change, etc. This article attempts to illustrate such problems by drawing lessons from developing experience/inference. Countries, experienced companies, participants in e-government, government and non-government departments, blogs, etc.

Keywords: ICT, e-governance, e-Mitra

I. INTRODUCTION

E-government is one of the latest concepts that emerged in the early twentieth century. In the field of e-governance, a lot of research has been conducted at the local, national and international levels.

In short, the concept of e-government refers to the use of electronic means to provide government services and information to people. Moreover, this means that the majority of people can obtain government services through electronic means, so that they can access government information and transactions anytime, anywhere.

E-government emphasizes the use of information and communication technology as a tool to help improve the efficiency and effectiveness of the relationship between government and citizens. In addition, it can be seen as a strategy to modernize public administration, improve municipal competitiveness, and improve the relationship between government and society.

According to the World Bank, "e-government refers to the use of information technology by government agencies (for example, wide area networks, the Internet, and mobile computing). These information technologies can change relationships with citizens, businesses, and other government departments. These technologies can serve A variety of different purposes: better provide government services to citizens, improve interaction with the corporate world, and enhance citizens' power or more effective government management through access to information. The benefits may be reduced corruption, increased transparency, and increased convenience. Increase Revenue and/or cost reduction." (World Bank)

UNESCO defines e-government as: "Government refers to the exercise of political, economic and administrative powers in the management of national affairs, including citizens expressing their own interests and making their legal rights and obligations. E-government can be understood as conducted through electronic media The purpose of implementing this governance is to promote an efficient, fast and transparent process of disseminating information to the public and other institutions, and to carry out government administrative activities." (UNESCO)

E-government can be defined as "an efficient and effective government structure controlled by citizens." Perry pointed out that e-government tools can be "used to maintain the important elements of accountability and tension required by a liberal democratic order." In the same context, e-government aims to promote policy making, but e-

government needs to use e-democracy.

On the other hand, e-government means "using the power of information and communication technology to help change the accessibility, quality, and cost-effectiveness of public services." E-government is also related to the relationship between citizens and those in power. In order to enhance accountability and authorization, the use of e-government is essential to achieve citizen participation.

In the past few years, the subject of e-governance and e-government has gained more and more awareness, and many governments hope to use online services. However, developing countries are at a disadvantage due to lack of funds and knowledge of the Internet and information technology. Developing countries are more likely to have corrupt governments, which limits the level of ICT within the country. However, in organizations in developed countries, the implementation of the program has produced effective results; the level of corruption has decreased and the level of democracy has increased. It is worth mentioning that even developed countries face problems such as how to build their e-government affairs.

II. MAJOR CHARACTERISTICS OF GOVERNANCE

The key cornerstone of good governance is the participation of all genders in society. Can participate directly or indirectly through any authorized institution or representative. Participation must be informed and organized. Representative democracy by no means that the concerns of the most vulnerable groups in society should be taken into consideration when making decisions.

Land rules: A partially enforced fair legal framework is one of the important features of good governance. This requires the full cooperation of human rights, especially ethnic minorities, women, and vulnerable groups.

Rule of law: Good governance requires the fair implementation of a fair legal framework. It requires full protection of human rights, especially the human rights of socially disadvantaged groups and minorities. Enforcement of the country's laws requires that the judiciary make decisions quickly and a clean police force.

Transparency: This is one of the important characteristics of governance. It means making decisions based on the rules and regulations of the land and implementing/enforcement there. This also means that information related to decision-making can be freely and easily provided to the affected party. This also means that information should be provided in easy-to-understand formats and media.

Responsiveness: Organizations, processes, and institutions should strive to provide services to all participating stakeholders within a reasonable time, preferably within a predetermined time.

Consensus-oriented: Good governance aims to enable all participants and affected institutions to express their opinions in order to draw conclusions on a broad consensus for the benefit of the society/community, thereby deciding how to achieve this consensus. The broad and long-term prospects required for sustainable social development are also part of this consensus orientation.

Equality: The participation of all stakeholders makes them feel that their contributions are important and do not exclude the mainstream. This is inclusive development.

Effectiveness and efficiency: Good governance means that processes and institutions can produce results that can meet the requirements/needs of society through the best use of resources and are available to all stakeholders.

Accountability: This is one of the important requirements of good governance. It is very important that the private sector, different organizations, society and government agencies are accountable to public and institutional stakeholders. Who is responsible for whom depends on the type of decisions or actions taken inside or outside the organization, which is a key requirement for good governance. Not only government agencies, but the private sector and civil society organizations must also be accountable to the public and their institutional stakeholders. The person in charge depends on whether the organization or agency makes decisions or takes actions internally or externally. Generally, organizations or institutions are accountable to those who will be affected by their decisions or actions. Without transparency and the rule of law, accountability cannot be implemented.

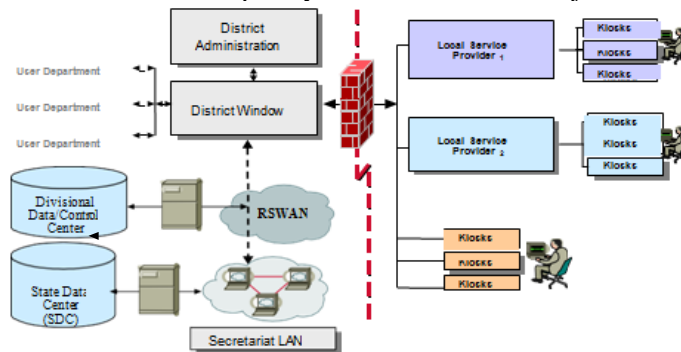
III. RAJASTHAN STATE'S E-GOVERNANCE: FRAMEWORK OF GOVERNMENT'S ENDEAVOUR

The Rajasthan government is taking all possible measures to promote e-government in all departments throughout the state, with the aim of providing worry-free, transparent and efficient services to ordinary people (whether in urban or rural areas). To achieve this goal, the key areas identified are:

- Citizen-centric service delivery,
- Back-end computerization,
- Creation of IT infrastructure and
- Human resource development (capacity building)

An e-governance framework has been developed, which shows an action plan for the creation of information technology. Infrastructure Enables/automates processes related to various government departments (departments) and integration to provide citizens with a single effective point of contact.

The **State's e-Governance Framework** developed by the Government of Rajasthan is represented as below



Source: http://www.rajasthan.gov.in/rajgovresources/newitems/Vol-1_Annexure-2%20_Details%20about%20E-Mitra%20Project.pdf.

On the left side of this figure, the comprehensive ICT infrastructure created and owned by the state government is depicted. This includes state-level and district-level data centers interconnected with the secretariat network and corporate networks of various departments (regional collectors, agricultural departments, registration and stamp departments, transportation departments, etc.) throughout the WAN. This will be the integrated logistics office of the state government to support IT.

The right side of the picture shows the e-Mitra model's electronic service-enabled delivery channel. Citizens establish contact with the state government through these access points. These e-Mitra front desks are owned and operated by private partners with sustainable revenue models.

The Stakeholders

The following are the stakeholders in the aforementioned e-governance framework.

- 1. Citizen:** Citizens are the main stakeholders in the e-government framework. The entire infrastructure and resources are designed to provide citizens with fair and effective services.
- 2. State government:** The state government is the main driver of this model. The state government has authorized regional administration and has developed legal mechanisms to authorize various roles. The state government will provide all back-end support to ensure efficient service delivery.
- 3. Regional Administration:** The district administrative department will provide the private sector (centers and kiosks) with basic infrastructure to interact with user departments and ensure effective service delivery.
- 4. Department/PSU:** The department's back-end systems should enable them to electronically process and process requests received through any electronic-enabled front desk or self-service terminal through the state wide area network.
- 5. IT&C / RajCOMP Department:** DoIT&C represents the state government and is the main trustee of all e-government projects. DoIT&C is responsible for providing the technical support required by the model through RajCOMP, the executive department of the model. RajCOMP is the State Designated Agency (SDA) for implementing e-government projects.
- 6. Local Service Provider (LSP):** Local service providers are private partners who establish and manage a system of centers and kiosks through which the system provides citizens with services in different sectors. Some other public interest services outside the government field will be added to the delivery channel developed by LSP.
- 7. Newsstand:** Self-service kiosks are an extension of service centers owned by private entrepreneurs. These service centers are small businesses from which citizens can obtain services from different sectors.

IV. GOR: E-GOVERNANCE E-MITRA (CITIZEN CENTRIC SERVICE DELIVERY)

- Through the service and information delivery point called "e-Mitra" center/information kiosk, various government-centered services are provided in an integrated form.
- The e-Mitra project integrates the (urban) and Jan Mitra (rural) plans, concentrating all departments under a single framework, and providing national citizens with a "multi-service"- "single window" experience.

main target:

- Provide citizens with a worry-free one-stop solution.
- Unified electronic service platform-reduce multiple points of interaction with citizens, thereby reducing wasted valuable time.
- Combines the best features of Urban and JanMitra models.
- Enhanced service coverage-more sectors including private sector services.
- Unified information exchange system structure.
- Public-private partnership model in the front office.
- The back office is owned by the government but operated by a technology partner.
- Provide employment opportunities for young people.
- Use real-time, Internet and batch processing modes. (Female online)
- **The state of automation**
- The project is implemented in 33 regions under a public-private partnership (PPP) model, and is supervised by the Regional E-Government Association (DeGS) led by regional collectors in the corresponding regions.
- The SDC and state-level necessary IT and other logistics infrastructure in all regions have been created and are running.
- **The following are the services provided by the e-Mitra Center for urban residents:**
- Electricity payment,
- RSRTC's online bus ticket sales,
- Issuing birth and death certificates,
- Payments/expenses due to land and building tax authorities,
- Payable/expenses paid by Rajasthan Housing Authority,
- Payable/fees of payments by the Jaipur Municipal Corporation,
- Payments/fees payable by the Jaipur Development Authority and
- Ground line and community bill No. 1 (BSNL) payment.
- **The e-Mitra self-service kiosk provides services for rural residents as follows: -**
- Remedies for public complaints,
- Submit the application form online,
- Access to land and tax records (ROR),
- Access to government information,
- Development Plan,
- BPL list,
- Real estate prices (DLC) and
- Agricultural information and Mandi rate.

Functional features

The e-Mitra project has two main components. One is background processing, and the other is service counter.

Backstage-

- Including the computerization of participating departments and the establishment of IT to enable hubs in the form of small data centers at the regional level.
- The regional data center (e-Mitra data center) is a platform that runs customized software to ensure the provision of services to citizens.
- The e-Mitra data center is managed by a total solution provider (T.S.P.) on behalf of the regional e-government association (hosted by the District Collector).
- All participating departments and service counters are connected to the e-Mitra data center to make the system work normally.
- The government provides financial resources for this purpose.

Service counter

- Counters set up in rural areas are called JanMitra kiosks, and in urban areas they are called LokMitra centers.
- Citizens register at the counter.
- Citizens can use services related to multiple departments/organizations at the same counter.
- From application deposits to financial transactions and final deliverable collections, all activities are carried out at these counters. In some cases, if there are statutory personal identity verification

requirements, citizens must go to the relevant government staff.

- During the entire cycle, as many activities as possible are in progress. Enabled, but where there are legal restrictions, these activities are performed manually. The main purpose is to protect ordinary people from harassment of government agencies traveling to multiple locations to complete their work.
- To make the point of contact efficient, the interface is carried out via the Web or a counter managed by a private partner (local service provider).

Now, e-Sevak-automatic touch screen machines have been installed in three places in Jaipur. The machine provides information about consumption receipts, their receipts and receipts generated for receipts. e-Sevak's service is available 24/7.

Recently, the e-Mitra project has been carried out online. This means that any transaction for any service can now be performed on the central server in Yojana Bhawan, Jaipur.

Centrally monitor the detailed information of all areas of all services through a web-based monitoring tool

VI. REVIEW OF LITERATURE

For countries with a population of more than 1 billion, the effective implementation of e-government is a huge challenge, and for rural autonomous regions (ie panchayats), it is even a bigger challenge. Although the government has taken many anarchic measures on a global scale, the focus and pace have been improved, but realizing the spiritual vision is still the biggest challenge the government faces. Research interest on e-government has greatly increased, but existing research has not yet fully addressed the key issues related to the sustainability of the implementation of e-government projects in rural areas and the actual achievement of goals. The video literature survey on the implementation of the entire e-government has notified various models, frameworks, problems, challenges and opportunities on a global scale. In [1], three widely used models and frameworks are compared, namely, diversity and best practice models, citizen thinking models, and strategic frameworks. There are differences in the information flow and availability of international best practices in e-government. In addition, four stages are proposed, namely, the existence of the network, the interaction between citizens and the government, and the complete transaction and service integration on the network. This is a successful method and overcomes the traps of any e-government project. Various studies have identified the challenges of successfully implementing e-government [2]. The main obstacles are inadequate planning, dysfunctional leadership, inadequate finances, lack of motivation and awareness, lack of citizen-centric applications, lack of cooperation between bureaucrats and local people, lack of trust, and poor technical design. Advocate the use of SoA, cloud to achieve the scalability and sustainability of e-governance applications [3]. For e-government initiatives in rural areas, a comprehensive citizen-centered approach is adopted. The method follows a variety of communication channels for disseminating e-services, focusing on establishing for various stakeholders (including bureaucrats, rural people, urban people, elected representatives, etc.) Effective capacity building mechanism Suggestion [4]. In [5], the author presented a case study on Punjab State, involving issues and challenges of e-government sustainability in rural areas of Punjab State. Questionnaire methods are used to evaluate performance expectations, technology adoption, and expected effort, that is, perceived ease of use, social influence, and convenience/support. The results show that 44% of people agree with the important role of e-government in improving the efficiency of government services and empowering citizens. This article also considers environmental challenges, namely low per capita income, maintenance costs, and social challenges, namely low literacy, different languages, awareness, accessibility, etc., as well as technical challenges, such as scalability, multi-mode operation capabilities, and interoperability, Scope freeze, privacy and security, and the local language for the successful implementation of e-government. In [6], the author exemplifies various management initiatives, as well as mainly obsolete infrastructure bottlenecks, lack of financial resources, technical skills Bottleneck. The impact of updates, digital divide, insufficient infrastructure, service usage, and efficiency and effectiveness. Saxena [7] has tried to implement security, trust, skills and financial barriers in the IT field. Emphasizes the need for process redesign to continue to use various rural e-governance programs, as well as challenges such as low literacy, awareness, privacy, security, and hesitation to change, to achieve rural e-governance India. The study attempts to test the acceptance and perception of e-government by the elected representatives of Kannur area, and lists the barriers to the acceptance of e-government by the elected representatives of Kannur area. improve. It is recommended to use ICT tools in governance to address the issues of low transparency and accountability. The paper also pointed to the development of the website, the online proceedings of the gabbha conference, online applications, and verification to reduce the possibility of corruption. In [8] research and analysis explores the pros and cons of using IT as a solution to the problems and ways to implement them for a best outcome in e-Governance occasionally comparing with the present scenario when relevant. In work [9], the author addresses the challenges of e-government systems and proposes a framework that utilizes AI technologies to automate and facilitate e-government services. 1. Framework for the management of e-government information resources. 2. Develop a set of deep learning models that aim to automate several e-government services. 3. propose a smart e-

government platform architecture that supports the development and implementation of AI applications of e-government. Paper [10] outlines and explains various e-governance projects of UP Government. It also discusses the challenges and issues faced by government and citizens. In Research work of [11] in his study entitled "Implementation of Integrated Electronic Governance in Bikaner Sector". Researchers provide a comprehensive overview of e-government, the process of which is based on practical experience and can better understand the various disciplines, tasks, and specialties that contribute to the development of the integrated environment. Researchers believe that integrated e-government will eliminate many problems, but its successful implementation depends on many factors, which is a matter of great concern. This research provides a technical overview of information technology and governance in emerging societies. Researchers mentioned e-government indicators, real-time governance, architecture design, service quality assurance, reliability, risk management, cost and schedule estimation, planning, testing and integration processes, and technology management. The researcher's contribution in his research work is to recognize and demonstrate that the most relevant tools for electronic governance can be developed. The researchers introduced the integrated solution architecture and named it the e-DISC architecture. e-DISC representatives effectively deliver information and services to citizens. The e-DISC system structure describes how to effectively provide services and information to citizens, and explains the practical ideas and theoretical framework for effective, correct and successful service delivery. The researchers drew some important findings and concluded that the electronic CD model can better maintain inter-departmental and intra-departmental work processes, and flexibly provide citizens with better quality and timely information by integrating new applications and services Temporary electronic services. This conceptual solution model was launched to describe the important functions that need to be handled in an e-governance project in a moderately comprehensive manner. By accepting this electronic optical disc model and considering some important considerations in the process, the implementation of e-government projects in Rajasthan and its departments can be very successful and effective.

VI. ISSUES IN THE EXISTING IMPLEMENTATIONS OF E-GOVERNANCE IN RAJASTHAN

There must be a single window system, and all citizen-related documents, affidavits, and certificates can be issued to ordinary people at the same time. The government should prepare an evaluation framework to evaluate e-government projects from time to time. The evaluation framework should be determined based on service cost, overall evaluation, service quality and governance quality. The feedback system also plays an important role in the impact assessment and maintenance of the state's e-government project. Feedback should be obtained from the end users of the project, such as citizens, stakeholders, managers, etc. Based on project evaluation and feedback, the government should take corrective measures.

In the PDS of Rajasthan, the entire process is semi-manual, there is no real-time actual distribution record, and there is no automatic system to track the total number of active ration cards in the food and civil affairs departments. Theft in the distribution network can occur at different levels. Intermediaries can usually try to take advantage of this advantage by purchasing on the basis of registered cards, which may not be directly related to the actual number of active cards. There is a lot of theft in existing PDS. In order to overcome these problems, the FCS department can use a technology to monitor real-time data and improve the efficiency of the supply chain, such as GPS, associate UID numbers with PDS, use smart cards for beneficiaries, and biometrics for beneficiaries for identity verification. There must be a public-private partnership (PPP) to develop the system. The government also needs to check the efficiency and effectiveness of the system from private institutions.

Several researchers suggested the need to increase citizenship and provide necessary training to project stakeholders. The government should act cautiously when choosing private institutions to implement e-government projects without any political influence. In addition, the government should use ICT and ICT tools to reform the process. Information and databases should be in digital form, not in manual form. The flow of information between all government departments and private institutions should be automated. The government must periodically conduct results-based evaluations of e-government plans. In addition, the government needs to assess the electronic readiness of states and union territories.

The establishment of e-government in Rajasthan has a long history, but it is limited to providing facilities to users. The platform lacks the ability to provide users with market space or medical support space, so they cannot show case art to the society or get medical services at the door

VII. ISSUES WHICH CAN BE ADDRESSED IN IMMEDIATE FUTURE

- Rajasthan needs Framework for Creating Market Place for Villagers using ICT
- Rajasthan needs Framework for extended Financial Services through secure ICT Mechanism for delivering support to youth and villagers
- Also Rajasthan needs Framework for ICT based Health Services to the far rural population using services of

Urban Medical Infrastructure

VIII. CONCLUSION

Citizens are not passive in building effective e-government services. For individual citizens and important intermediary organizations that represent and help citizens and citizen groups, important considerations should be considered and included in the consumption of e-government services

This research will be a milestone in the field of e-government, and the rural Rajasthan service benchmarking here will further stimulate PSU/SGU/Pvt competitors. Enterprises and various government agencies.

Citizen-centric governments are bound to deliver cost-effective, personalized and relevant e-services that simultaneously enhance democratic dialogue. E-Platforms for rural/ villagers provisioned by governments to cater the needs of trading, healthcare and financial services will lead to more retention of people to rural India and may develop more socio-economic balance to the society at large. This will also cater to the holistic participation of every individual in the economic growth of the Country. It will also facilitate the healthcare at the distant locations of state along with financial services.

References

1. Gandhi MK. India of My Dreams: Ideas of Gandhi for a Vibrant and Prosperous Modern India, Diamond Pocket Books (P) Ltd. ISBN: 9789352618378. <https://books.google.co.in/books?Id=5vYpDgAAQBAJ>, 2017.
2. Dawes SS. The Evolution and Continuing Challenges of E-Governance. *Public Administration Review*, 2008, 86- 100.
3. Kumar P, Kumar D, Kumar N. E-Governance in India: Definitions, Challenges and Solutions. *International Journal of Computer applications*, 2014, 0975-8887.
4. Bhatt N, Aggarwal A. E-Governance Policies & Practices Ahmedabad: Nirma University.
5. Kaur KP, Khurmi SS. Implementation of E-Governance in India: Opportunities and Challenges, *IJCST*, 2016; 7(1).
6. Bhatia A, Kiran C. Rural Development through E-governance Initiatives in India, *IOSR Journal of Business and Management* e-ISSN :2278-487X,p-ISSN 2319-7668, 2013.
7. Saxena S, Agarwal D. A review of barriers found in e-governance projects in Indian states, 2015; 5(11). ISSN: 2277 128X. www.ijarcsse.com
8. A. Sayed Javed, "Total e-Governance: Pros & Cons," *2018 International Conference on Computational Science and Computational Intelligence (CSCI)*, Las Vegas, NV, USA, 2018, pp. 245-249, doi: 10.1109/CSCI46756.2018.00053.
9. O. S. Al-Mushayt, "Automating E-Government Services With Artificial Intelligence," in *IEEE Access*, vol. 7, pp. 146821-146829, 2019, doi: 10.1109/ACCESS.2019.2946204.
10. S. Sahu, G. Chandra and S. K. Dwivedi, "E-Governance Initiatives and Challenges in the State of Uttar Pradesh," *2019 International Conference on Cutting-edge Technologies in Engineering (Icon-CuTE)*, Uttar Pradesh, India, 2019, pp. 108-112, doi: 10.1109/Icon-CuTE47290.2019.8991499
11. Tejasvee, Sanjay, Implementation of integrated e-governance in Bikaner division, *Shodhganga*, 2013