

AN ANALYSIS OF E-GOVERNANCE PROJECTS IN INDIA AT CENTRAL & STATE LEVELS

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Abstract: India is a developing country, where e-governance projects are running using Information and Communication Technologies (ICT) services to support people and government. Recently, the government has taken a number of initiatives towards digitalization to improve various services for citizens, entrepreneurs, politicians and MNC's etc. Accessibility of these services 24*7 to any one at any place is the key feature of these services. For providing digital services of related products, a number of Information Technology (IT) enable infrastructure is required. The security, However, is still matter of concern while availing these services as there have been various cases reported of data leaks & financial nature. This paper presents a review of various e-government initiatives across various states in India, there adaptability and success and the impact of various intelligent technologies on their services.

Keywords: *e-governance, AI Techniques, Security, transformation etc.*

1.Introduction

Today, Information science and technology changing our society in all aspects i.e. services for public and government. The use of technological transformation has provided new services, best and fastest delivery of existing as well as new services at cheapest and more efficient ways for communication between Government to the government, citizen, business and employees respectively. It affects all fields like the private sector, government sector,

business modules etc, therefore, it is most important that facilities provided under e-Government by the use of Information & Communication Technologies (ICT) are under protection for data uses and cyber threat and vulnerabilities [9]. ICT is used to maintain the transparency between the government processes [1,2]. It provides services to the citizens, business enterprises and other bodies of the government. ICT makes the services smooth and transparent at all the level (National, State and Local level) of government [3, 4].

The successful implementation of any government initiative can be performed by e-Governance for better services. The better infrastructure of e-Governance requires computing facility and e-authentication for security system to deliver services in efficient manner [5]. The e-Governance changes the scenario of accessing information from the Internet.

The efficiency of any Government Initiatives is good if it satisfied the user requirements [6]. The quality of e-Governance project depends on the requirement and timely delivery of services to user. The measurement of any e-Governance projects can be performed by three quality aspects: process, information and service quality. The process quality (or system quality) is related to the functionality, flexibility, response time, recoverability, convenience etc. [7]. Information quality of any project is related to the relevancy, accuracy and timeliness of information [8]. Service quality focuses on communication between government and citizens.

The rest of the paper is organized as follows Section 2 describes the types of instructions and Issues in e-governance and Section 3 contains e-Governance projects in India. Finally, section 4 represents the conclusion of the paper.

2.Types of Interactions & Issues in e-Governance

Now days, e-Governance is the backbone of any government to provide good governance in a country. It creates the path for a government to deliver their services to the citizens. It also helps to develop a strong relationship between business, industries, citizens and other government bodies. The economic growth of a country also taking helps from e-governance projects [20, 21]. The e-Governance mainly depends on four groups such as Citizens, Business government & Employees [22, 23, 24, 25, 26, 27, 28]. The inter relationship of these groups divides the e-Governance into four blocks such as:

- i. Government to Citizens (G2C):- The purpose of this interface is to develop the healthy relationship between Government and citizens. Its aim is to offer the better services to the citizens.
- ii. Government to Business (G2B):- This defines the relationship between business community and Government. It creates transparent environment for business on dealing with Government.
- iii. Government to Government (G2G):- This interaction increases the flow of information & services within and between various entities of Government. This interaction is of two types: (a) Horizontal (interaction between different government agencies/ functional areas within an organisation. (b) Vertical (interaction between national, state and local

government agencies).

iv. Government to Employees (G2E):- This relationship is a two way communication process between organisation and employee. It helps in efficient services on one hand and satisfaction of employees on other hand.

In India e-Governance is very helpful in solving the social and economical problems of people belonging to cities and villages. The e-Governance has various characteristics such as :- (i) Fast, Convenient (ii) Cost Effective Service Delivery (iii) Transparency (iv) Accountability (v) Reduced Corruption (vi) Increased Participation by People. The success of e-Governance projects depends on various factors such as (i) Clear vision and strategies (ii) Technological change (iii) Globalization (iv) Modernizations (v) Consumer expectations (vi) government support.

There are various issues in implementing e-governance projects such as infrastructure, illiteracy of people etc. [16, 17, 18, 19]. The various issues of e-governance are as follows:

- Low Literacy: Though literacy is increasing, it is still an issue in India, so it also has been an impact on the knowledge of ICT infrastructure in India. So poor awareness and knowledge about ICT in India, especially in rural areas makes it difficult to success.
- Different Language: India is a developing where people belongs to different religions, cultures and uses different languages for communications. Most of the people uses or understands Hindi as well as their local languages, but unfortunately large number of e-governance projects are running in English language, so it creates a problem for people who understand and gets the benefits of e-governance projects.
- Unawareness: A very few amount of people are knows about the benefits of e-governance. So, they are not getting benefits from the success full project of government.
- Infrastructure: The e-governance project has not necessary infrastructure such as electricity, internet facility. Due to unavailability of infrastructure the communications are affected.
- User friendliness of websites: Users of e-governance projects or websites are not highly educated so they are unable to utilize the services in a efficient manner. So there is a need to guide or trained user to find the right way of performing the operations.
- Privacy and Security: privacy and security are also the major issues in implementing e-governance projects in India.
- Minimum Participations of various sectors (Society, Public and Private sectors): Any e-governance project requires the strong relationship between the government department and the agencies of another sector (Public/Private). Currently, the communication between the government and other bodies is less as a result of poor communication the e-governance project suffers.

3.e-Governance Projects in India

Over the years many efforts have been taken by government for delivering timely services to the people. In this regard various initiatives have been taken by State and Central

government under e-Governance. The e-Governance evolves after computerization (1980s) of government departments [45]. In 2006 Indian government approved NeGP (National e-Governance Plan) for long term development of e-Governance initiatives. It is also helpful in developing good environment for e-Governance (citizen-centric and business-centric).

The Mission Mode Projects (MMPs) are an individual project running under the NeGP with an aim to provide services to common man in their locality. In the year 2011, the government of India included four more initiatives in the list of MMPs. According to the Government of India, the MMPs under e-Kranti(2015) programme are 44 [30, 43, 44], and are listed in table 1, 2 & 3. In order to implement the successful MMPs, two factors are highly required such as managerial and operational factor. Managerial factor are related to management aspects of MMPs such as strategic planning, funding, focus of projects, network resource and infrastructure, inter operability with other project etc. Operational factor are related to the operations of MMPs such as awareness and uses, setting of accountability etc.

MMPs are of three types: Central, State and Integrated. The division of these is based on the constitutional status of the domain. For Example- Income Tax is considered as a subject of Central Government so it is included in Central MMPs. Some subjects like Police, Land record are the state subjects so they are included in state MMPs. Similarly integrated MMPs contains the subject which are in concurrent list.

Table1. Central Government MMPs (Total-15)

S.No. Name Beneficiaries

	Ministry/Department Responsible	Status	MMPs Year
1.	Banking All States & UTs Delivering Services 2006	Department	of Financial Services
2.	Insurance All States & UTs Delivering Services 2006	Department	of Financial Services
3.	Income Tax All States & UTs, All IT offices Ministry of Finance/Central Board of Direct Taxes 2006	Delivering	Services
4.	Central Excise All States & UTs (129 offices) Department of Revenue/Central Board of Excise and Customs Services 2006	Delivering	
5.	MCA21 All States & UTs Services 2006	Ministry of Company Affairs	Delivering
6.	Pensions All States & UTs Welfare and Department of Expenditure	Department of Pensions & Pensioners Delivering Services	2006
7.	Passport All States & UTs, All PSKs and PSLKs External Affairs/Ministry of	Ministry	of

Home Affairs Delivering Services 2006

8. National ID/UID All States & UTs Ministry of Electronics and Information Technology Delivering Services 2006

9. Immigration/ VISA All States & UTs,

All missions,

FRROs, FROs and

State Home

Depts. Ministry of External Affairs/Ministry of

Home Affairs Delivering Services 2006

10. e-Office All States & UTs

(210 Govt.

organizations) Department of Administrative Reforms &

Public Grievances Delivering Services Partially 2006

11. Posts All States & UTs, 1.55 lakh POs Department of Posts Under Implementation 2011

12. Central Armed

Paramilitary Forces Central Govt. Ministry of Home Affairs Design & Development 2015

13. e-Bhasha All States & UTs Department of Official Language,

Ministry of Home Affairs Design & Development 2015

14. National Mission on Education through ICT (NMEICT) All States & UTs Department of Higher Education Design Stage 2015

15. e-Sansad All States & UTs Ministry of Parliamentary Affairs Design Stage 2015

In table 1 the list of Central MMPs are described. Currently 15 MMPs are running under Central Government out of which 10 MMPs were started in 2006 under NeGP, One MMP i.e. Post were added in MMPs in 2011 and 4 i.e. Central armed Paramilitary Forces, e-Bhasha, NMEICT, e-Sansad were added in 2015 as MMPs under e-Kranti.

Table 2. State Government MMPs (Total -17)

S. No. Name Beneficiaries

	Ministry	Status	MMPs Year
1.	Transport	All States & UTs	Ministry of Road Transport & Highways
	Delivering Services	2006	

2. Land Rec./NLRMP All States & UTs,
Ministry of Rural Development Delivering Services Partially 2006
3. e-District All States & UTs,
All DM offices Ministry of Electronics and Information Technology Delivering
Services Partially 2006
4. Commercial Taxes All States & UTs Ministry of Finance Delivering
Services Partially 2006
5. Treasuries All States & UTs Ministry of Finance Delivering
Services Partially 2006
6. Municipalities All States & UTs Ministry of Urban Development and
Poverty Alleviation Delivering Services Partially 2006
7. Agriculture All States & UTs Ministry of Agriculture and Farmers
welfare Delivering Services Partially 2006
8. Public Distribution
System (PDS) All States & UTs Department of Food and Public Distribution
Delivering Services Partially 2011
9. Employment Exchange All States & UTs Ministry of Labour and
Employment Delivering Services Partially 2006
10. Education All States & UTs Ministry of Education Delivering
Services Partially 2011
11. Health All States & UTs,
All PHCs Ministry of Health and Family Welfare Delivering Services Partially
2011
12. e-Panchayat All States & UTs Ministry of Panchayati Raj Under
Implementation 2006
13. Crime and
Criminal
Tracking
Networks and
Systems (CCTNS)
All States & UTs,
All Police Stations Department of states/ Ministry of Home Affairs
Under Implementation 2006

14. Agriculture 2.0 All States & UTs Department of Agriculture and Cooperation Design Stage 2015
15. e-Vidhaan All States & UTs Ministry of Parliamentary Affairs Design Stage 2015
16. Rural Development All States & UTs Department of Rural Development Design Stage 2015
17. Women & Child Development All States & UTs Ministry of Women and Child Development Design Stage 2015

The list of State MMPs is described in table 2 where currently 17 MMPs are mentioned. From column 6 of table 2, we can identify that 10 MMPs were started in 2006 under NeGP, 3 MMPs were added in 2011 and 4 MMPs were added in 2015 under e-Kranti.

Table 3. Integrated MMPs (Total -12)

S. No. Name Beneficiaries

	Ministry	Status	Year Wise Journey
1.	India Portal	All States & UTs	Department of Electronics & Information Technology, Department of Administrative reforms & Public grievances Delivering Services 2006
2.	e-Sangam		(formerly National Services Delivery Gateway) All States & UTs Ministry of Electronics and Information Technology Delivering Services 2006
3.	Common Services Centers (CSC)	All States & UTs,	All CSCs Department of Electronics & Information Technology Delivering Services 2006
4.	Financial Inclusion	All States & UTs	Department of Financial Services Delivering Services 2015
5.	e-Trade	All States & UTs	Ministry of Commerce and Industry Delivering Services 2006
6.	e-Courts	All States & UTs,	14000+ courts Ministry of Law and Justice Delivering Services Partially 2006

7. e-Procurement All States & UTs,
Ministry of Commerce and Industry Delivering Services Partially 2006
8. e-Biz All States & UTs,
Ministry of Commerce and Industry Delivering Services Partially 2006
9. National
Geospatial
Information
System (NGIS) All States & UTs Ministry of Earth Sciences Design &
Development 2015
10. Road and Highway Information System (RAHI) All States & UTs
Ministry of Road Transport and Highways Design Stage 2015
11. Social Benefits All States & UTs Ministry of Social Justice and
Empowerment Design Stage 2015
12. Urban Governance All States & UTs
Ministry of Housing and Urban Affairs Design Stage 2015

The MMPs running under the coordination of State and Central Government are described in table 3. Initially 7 MMPs were started in 2006 as integrated MMPs under NeGP. In 2011 the Indian Government had not included any MMPs under this category. However, later in 2015, 5 MMPs i.e Financial inclusion, NGIS, Road and Highway information system, Social benefits, Urban Governance were added in list of MMPs under e-Kranti.

On comparing data from 5th column of each table (i.e. table 1, 2 & 3), it is concluded that 9 MMPs of Central Government, 1 MMPs of State Government and 5 MMPs of State and Central Government both delivering services to the public in all manners. It is also concluded that 2 MMPs of Central Government, 4 MMPs of State Government and 3 MMPs of State and Central Government are at design stage.

Based on our discussion and categorization of various e-Governance projects above, it is worth mentioning some of the most successful projects under Central MMPs.

i. Income Tax

The word Income-tax was introduced by James Wilson (British-India's first Finance Minister) in Feb 1860. The purpose of income taxation is raising revenue for the Government. It is a Central MMPs, used to provide a single window access to the citizen and government for income tax related services [30].

Fig.2: Screenshot of Income Tax Portal [30]

ii. Passport

The objective of this portal is to deliver Passport services to the people. This government initiatives comes under the Ministry of External Affairs and currently have more than 77 Passport Seva Kendras in the country. All the processes of this portal minimize the utilization of papers with an aim of providing passport to the citizens within 3 working days (Passport Seva) [31].

Fig.3: Screenshot of Passport Portal [31]

iii. IRCTC

It is a Central MMPs which works under the Ministry of Railways having tagline “Lifeline of the Nation”. This portal provides the ticketing facilities to the citizens with a user-friendly and efficient web interface (Indian Railway) [32].

Fig.4: Screenshot of Indian Railway Portal [32]

iv. Banking

The Internet banking (or online banking) is an electronic payment system that allows customers to perform financial transaction. The purpose of core banking is “anytime, anywhere banking” to Indian customers [33].

Fig.5: Screenshot of RBI Portal [33]

v. Central Excise & Customs

This portal comes under the Ministry of Finance and Department of Revenue, which provides the service tax, excise duty, GST etc. related services information to the citizens[34]. Some of the important services provided by this portal are revenue reconciliation, export procedures etc. This portal maintain the transparency in delivering services in the administrative procedure.

Fig.6: Screenshot of Central Excise & Customs [34]

vi. Insurance

This portal provides the facilities like handling of claims and other insurance policies. The objective of this portal is to develop the integrated mechanism for insurance companies using IT [35].

Fig.7: Screenshot of Insurance [35]

vii. Ministry of Corporate Affairs 21st century

It is the first successful MMP that received prime minister award for excellence in public administration. It was initially launched to transform ministry’s mode of working from paper to paperless format. It was also the first portal of government that uses the digital identity of user [36].

Fig.8: Screenshot of Ministry of Corporate Affairs [36]

viii. Pensioner's Portal

It works under the Department of Pension & Pensioners' Welfare of Indian government. It is the central government projects which is used for the formulation of policies relating to pension and other retirement benefits. It also plays a role of redress of Pensioners' Grievances (Pensioners portal) [37].

Fig.10: Screenshot of Pensioner's Portal [37]

ix. GEM Portal

Government e Marketplace was launched on 9th August 2016 by the Ministry of Commerce and Industry, Government of India. GeM was came into existence due to the recommendation of the Group of Secretaries to the Hon'ble Prime Minister. GeM provides the facilities for using Goods & Services online by various department of the Government. The main objective of GeM is to maintain transparency, efficiency between various departments (GeM) [38].

Fig.11: Screenshot of GEM Portal [38]

x. Public Financial Management System (PFMS)

The PFMS is a web-based integrated system for processing payments. It also helps in tracking, monitoring, accounting and reporting all expenditure information of Government of India. Initially developed to replace separate accounting management information/decision support systems (MIS/DSS) of various departments of government. This system evolved in December 2013 from the erstwhile Central Plan Scheme Management System (CPSMS) which was being implemented on pilot basis in four states (Madhya Pradesh, Bihar, Punjab, and Mizoram) to monitor fund flow of four planned schemes² by the Controller General of Accounts (CGA) since 2008 [39].

Fig.12: Screenshot of GEM Portal [39]

Table 4: Comparative study of MMPs

S. No.	Stage	Central (15)	State (17)	Integrated (12)
1	Delivering Services		Nine (60%)	One (5.8%) Five (41.6%)
2	Delivering Services Partially	One (6.6%)		Ten (58.8%) Three (25%)
3	Under Implementation		One (6.6%)	Two (11.7%) NIL
4	Design & Development		Two (13.3%)	NIL One (8.3%)
5	Design Stage	Two (13.3%)	Four (23.5%)	Three (25%)

On comparing the results of three types of MMPs, the 60% Central MMPs are delivering services to customer and government as compare to State and Integrated. The 10 out 17 MMPs of State are delivering services partially. The comparative study of various MMPs(table 4) clearly indicates that Central MMPs are far better in delivering services as

compared to State MMPs. Most of the State MMPs are though delivering partial services. Although there is no specific reason for this pattern or our study and understanding has revealed certain possible reasons for this such as the coordination between Central and States, constitutional provision (certain polices are the State subject while some other are in concurrent list), financial issues, political will power and may be social issues. It is worth noting that many successful e-Governance operations of the Central Government have started much earlier than the State once.

4.CONCLUSION

The e-Governance initiatives have played an important role in modern country. The government of India has taken many initiatives in identifying key areas at the Central and State level which are required to be automated to provide time efficient and transparent services to its citizens. Serious steps have been taken in 2006 towards systematically indentifying and implementing e-Governance projects.

Through our study and analysis of various e-Governance initiatives taken by both Central and State governments, it was found that many of the Central MMPs have been very successful in delivering services where as the State MMPs have not been so successful due to a variety of reasons. It is therefore required to take efforts to increase the success rate of various State projects in order to have the overall improved experience by all stakeholders. The deeper penetration and fruit effect will only be experienced when other MMPs as identified by the government would also be successful.

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