

E-governance in India

Devika Prakesh

BA Applied Economics

Marian College Kuttikkanam (Autonomous)

Peermade, Kuttikkanam, Kerala 685531

devikapkprakash@gmail.com

Naomi Sarah Mathew

BA Applied Economics

Marian College Kuttikkanam (Autonomous)

Peermade, Kuttikkanam, Kerala 685531

naomism555@gmail.com

Abstract

E-governance is an obvious evolution in our increasingly digital world. Not only does it simplify bureaucracy in India, it also allows for more transparency and citizen engagement. India, like most developing countries, is facing an influx of digital governance, to understand where its future prospects lie we must understand its evolution. This paper is a descriptive analysis of the strong evolution of e-governance of India across various sectors.

Literature Review

Saiful Deni, Thamrin Husain, Aji Deni (2020) conducted a study on Bureaucracy and Challenges in Digital Era: A New Concept of Information Technology Integration in the Archipelagic Country and it was found that as an archipelago province, the provision of digital governance infrastructure as an effective way to cope with communication patterns and costly interaction costs. Of course, the rule of supporting facilities such as logistics, technology base infrastructure and IT is more useful archipelago-based and addressing more targeted public services. The results of the watch care, some government structures do not have and empower E-Government applications in North Maluku. Many government websites are not appropriately managed, and data has expired, low management, and power of professional human resources in managing government sites. It requires serious attention from leaders, heads, regions, DPRD, public service practitioners, and IT practitioners to collaborate on changes and advances in digital governance.

Sarah N. Giest and Bram Klievink (2022), explores how the implementation of AI-driven technologies in public decision-making in different organisational contexts impacts innovation in the role definition of public bureaucrats. They analyse organisational, agency, and individual factors through the study of two cases- the Dutch Childcare Allowance and US Integrated Data Automated System. They conduct a thorough study on administrative innovation and the transformation of bureaucracy. Both cases show that digitization faces a complex organisational set up with agency and that individual-level dynamics are overlooked. The paper also highlights AI potentially replacing bureaucrats. The US case shows AI outperforming bureaucrats on addressing welfare fraud cases, whereas in the Dutch case AI remained a supportive role and it was politics and policy that pushed tasks forward.

Ahmed Mohammad Abdou (2021) conducted a study on Good governance and COVID-19: The digital bureaucracy to respond to the pandemic (Singapore as a model). It can be seen that digital bureaucracy has been achieved in Singapore to respond to the pandemic crisis. So, digital mechanism helps public administration to enhance transparency and accountability, while bureaucracy mechanism helps government to operate with efficiency and effectiveness. Therefore, we can say that digital bureaucracy helps to activate the mechanisms of good governance, especially in managing crises, such as the success of Singapore in the face of the pandemic. Indeed, it can be said that one of the most significant features of Singapore's experiences and achieving good governance and sustainable development and reaching what they are now is the gradual implementation of reform such as electronic management, that is, defining the relationship between reform, development and stability on the basis of "Development concepts" compatible with the requirements of the times, in a developing, transitional state typically, like Singapore, the major changes that reform brings will affect its old social structure and its social and political stability by digital bureaucracy. Here it must be emphasized that reform is based on stability and its aim is development.

Emir Mehmedovic, Faris Godinjak, Selma Horic (2022) conducted a study on Challenges of Digital Transformation of Government in Bosnia and Herzegovina- Necessity of Administrative Procedure Reform. Bosnia and Herzegovina, like other countries in the region, is facing certain challenges in the process of introducing information and communication technologies in the administration, and especially in administrative procedures. Some of them can be called common, since they were, to a greater or lesser extent, present in other countries in the region, while some can be considered as a "specific", because they are particularly characteristic of Bosnia and Herzegovina. In the following, we will present specific challenges, appreciating that a lot has already been written about "common challenges". What can be asked in the context of Bosnia and Herzegovina is whether the adoption of a set of e-Regulations is sufficient for the effective introduction of information and communication technology in the administrative procedure. In order for e-Regulations to come to life in the administrative procedure, it is necessary to make certain interventions in the administrative-procedural legislation. Given the above, the question arises whether this should be done through a comprehensive reform of administrative procedures or, through the amendment of, we can freely say, outdated regulations.

The study Digital transformation in society: key aspects for model development by N V Morze and O V Strutynska (2021) aimed to define Ukrainian educators awareness level about transformation processes, to analyze and develop model of digital transformation that can have a place in enterprises, business and educational institutions. It was found from the study that the results of the digital transformation are new products, services, policies, market, environment and development of the digital society as a whole. The process of the digital transformation is unavoidable of all spheres of human life. Firstly, for this, we should transform the education.

Juan-Gabriel Cegarra-Navarro, José Rodrigo Córdoba Pachónb, and José Luis Moreno Cegarraa (2012) examines the importance of information communication technologies (ICTs) in e-governance and civic engagement through an empirical study on 179 Spanish official town websites. The study finds a development in the country's service quality. The result of the study proves that good e-governance depends on how well the internet is used, e-government can bring transparency, accountability, and better communication between governments and citizens.

Suresh Malodia, Amandeep Dhir, Mahima Mishra, and Zeeshan Ahmed Bhatti (2021) examines the possible outcomes of e-governance. A quantitative study using case studies and interviews with experts, finds that e-governance has great potential to enhance efficiency of public administration. Tangible outcomes include cost efficiency, time advantage and efficiency. Outcomes that are intangible include citizen satisfaction and an increased trust in the government.

Subhajit Basu (2012) analyses e-governments in developing countries and finds e-governance to be a possible bridge for the digital divide in most developing nations. It can also make governments more transparent and held accountable which can make it impossible to sustain corruption, prevalent in third world countries.

Sudhir Chandra Das (2012) examines the scope of e-governance in India. Following a case study approach it finds that there are definite administrative and informational benefits such as better collection and management

of information, increase in public knowledge in government activities, interaction and coordination among state agencies, reduction in certain service costs and maintenance of demographic and economic records.

In the study E- Governance and Bureaucracy in Contemporary Indian Public Administration: A technological revolution by Qazi Fabihan Meraj, Suheel Azad and Dr. Vibha Doorwar (2019), it was mentioned that ICT has proved efficient, responsive, accountable, transparent and efficient monitoring and controlling mechanisms to complex situations in operational bureaucratic organizations, and increased the systematic administrative work regulations to govern the public bureaucracy. ICTs can swiftly perform multiple functions which are requirement for bureaucratic organizations to manage cumbersome tasks and enlarge flexibility of the public sector in challenging environmental conditions. The prerequisite of these organizations is to overcome the process of information challenges related with the increasing sphere of public involvement. The increasing difficulty and ambiguity of this sphere is the base for public sector bureaucracies to share and process more information for adequate activity to bring proper mechanism in the system. Organizations that take advantage to explore ICT in public bureaucracy dealings are perfect model of e-bureaucracies (Cordella,2007). Thus e-government policy are suggested by e-bureaucratic system which enhance the transparency, accountability, responsiveness, efficiency and effectiveness in the discourse of public administration which endorsing the bureaucratic state of impartiality in the citizens service system. Thus, ICT has brought an electronic transformation in the functioning of administration and functions in the following way: (Source: Jagdish Kapoor,

IT and Good Governance).

- Computer based files
- Networked power
- Sharing information
- Performance oriented
- Organizational
- Online processing
- Instant access
- Prompt response
- Data entry
- Creative work
- IT savvy
- Continuous improvement

In the study Digitalization in India by Dr. Bhavesh H. Bharad (2016), the author throws light on the grand challenges and the road ahead. Some of the challenges discussed are as follows:

- Digital Illiteracy: Digital illiteracy is prevalent in most of the towns and villages in India. Cities have adopted digitalization but limited to certain extent. This requires administration changes, Taxation changes and change in public mentality. So it's a team work which includes citizen's responsibility and support to the new system.

- Usage and Connectivity: It is a mammoth task to have connectivity with each and every village, town and city. Also it is challenging for the central authorities to make a database where such huge information can be stored. Internet usage in India is rising on the back of the mobile phone revolution. There are 105 crore wireless connections (TRAI; September 30, 2016) for a population of 133 crore (World Bank; October 6, 2016). But, the number of internet subscriptions is only a third of the total number of mobile phone users¹⁴.
- Cyber Threat: There is cyber threat all over the globe and digital India will not be any exception. Hence we need a strong anti cyber crime team which maintains the database and protects it round the clock.
- Co-ordination between various Departments: Within the government there are various departments which should be integrated. Integration has technical as well as corporate issue. Corporate in the sense self ego of the officers and staff of our government services are hurdle in the change. Also the middle man policy will be eliminated completely because of digital India; hence there will be imminent resistance from the working staff.
- Net Neutrality: When the internet started to take off in 1980s and 1990s, there were no specific rules that asked that internet service providers (ISPs) should follow the same principle. But, mostly because telecom operators were also ISPs, they adhered to the same principle. This principle is known as net neutrality. The issue is still on the table and we are blindly following the digital India. Net neutrality is must and we should make sure that digital India without net neutrality would be a great blow to entrepreneurs and citizens of India.
- Changing the Mindset: This point will come into picture when you have allocated the required resources and material but when it comes to implementing them, most of them will be hesitant to change. People are accustomed with years of same of practice that they are not ready to change.
- Exchange of Information: The information stored should also be used by other government offices. For example police, surveillance and other security issues can be easily resolved with digital India but its co ordination is a mammoth task. It is not only a technological question but also deals with the question of privacy and security.

The study E- governance: A key to good governance in India by Subramanian C (2012) talks about the fact that E-governance will truly allow citizens to participate in the government decision-making process, reflect their true needs and welfare by utilizing e-government as a tool. Introduction of e-governance is a key to make information technology (IT) relevant to ordinary citizens in India where a large numbers of population are poor and a digital divide is a significant problem. E-governance will allow ordinary people to constantly interface with the government in both local and central level on various matters. E-governance must be a high priority for India, as it is the only means of taking IT to the masses.

In this paper, E-Governance: Past, Present and Future in India by Nikita Yadav and V. B. Singh (2012), a framework was given and application of E-Governance along with a list E-Governance projects run by state and central governments. It also proposed future technology for E-Governance with pictorial representation of working of E-Governance with new technology. It also proposed benefits of clouds with a graph showing how clouds reduce labor cost. Implementing E-Governance without cloud computing and open source is an old technology. Cloud computing and open source is a hottest buzzword in IT sector and we should make best possible use of these emerging technology. There are number of reasons which make cloud and open source technology so famous in E-Governance. These technologies not only provide organization, technical benefits but also provide economical benefits. 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 (Information and Communication Technologies) services to government organizations throughout India. Several drafts have also been passed by IT department to implement E-Governance with these technologies so that working, efficiency, transparency and security can be increased in E-Governance.

The study E-Governance Status in India by Ajay Dutta and M. Syamala Devi (2015) reviews the e-Governance services, infrastructure and technologies on the implementation of electronic governance in India. E-services provides better delivery of government services to citizens, less corruption, increased transparency, greater convenience, citizen empowerment through access to information, decrease in time and effort, revenue growth and cost reductions. There has been a lot of improvements in new technologies, but cybercrime overcome the benefit of digital governance.

In the study Impact Assessment of E- governance in India by Dr. Neelesh Jain, Bhagwati Prasad Agnihotri and, Dr Ashish Verma (2013), it is said that In spite of poor infrastructure, poverty, illiteracy, language dominance and all the other reasons India has number of award winning e-governance projects. Effective promotion schemes by the Indian government are a boosting factor to provide quality services to their citizens. According to Skoch consultancy New Delhi, 81% citizens report reduction in corruption, 95% find cost of e-governance affordable and 78% favor fast delivery of services. Therefore we can say that e-Governance is the key to the “Good Governance” for the developing countries like India to minimize corruption and provide efficient and effective or quality services to their citizens.

RESEARCH METHODOLOGY

The methodology used in this study is descriptive method. Several studies on digitization, E- governance were referred regarding the globe and in India.

DESCRIPTIVE STUDY

The United Development Program (UNDP) defines governance as governance is the exercise of economic, political, and administrative authority to manage a country's affairs at all levels and means by which states promote social cohesion, integration, and ensure the wellbeing of their population.

To deal with the general concept of bureaucracy, it is necessary to define the meaning of the term bureaucracy, because the term bureaucracy is twofold: the first part (Bureau), meaning office by which means the place from which public business is conducted, for example the post office or the communications office (Mona Ramadan Muhammad Batikh, 2014, p. 81) and this Latin word is close to the French word (la bure) Which means the fabrics used as table cover in the office, and then used later to refer to the office itself. As for the second part (cracy), meaning rule, and the word, in both parts, means office rule or administration through offices, and it may also mean power or rule, and the first to use the term bureaucracy was the French minister Vincent de Gournay in the eighteenth century, as well as the first to look at public offices on It is the working tool in the government. Then the term moved to Germany during the nineteenth century, after which it moved to the English language and other international and international languages (Darwish & Badran, 2008, p. 117). When discussing the issue of modern bureaucracy (positive bureaucracy), it is necessary to refer to (Max Weber) as an official framework for everyone who writes on this topic. The bureaucracy in the beginning was intended to organize state administrations through offices, and in this sense it means the organization according to which administrative work is carried out on the basis of specialization and the division of work into multiple jobs, with determining the substantive relationships between them regardless of who occupy this organization (Al-Helou, 2009, p. 16, as well as Ibrahim Abdel Aziz Shiha, previous source, p. 13). Work within it according to general rules and predetermined procedures, and this work is proven in written documents and documents, which is the meaning that Max Weber intended when he established his theory on bureaucracy, which is called the concept of pure bureaucracy and is a model of good management in major administrative organizations such as the government apparatus, the German social scientist Max Weber He treated the theory of the bureaucracy as a rational system commensurate with the industrial society in Western Europe, and he studied the bureaucratic system as an integral part of the comprehensive social system and reached the conclusion that any social system, if it started as a traditional system, will end up being a bureaucratic system. So, the components and elements of the ideal model of bureaucratic organization according to the study and analysis of Max Weber formajor governmental organizations include the formal division of work and duties on the members of the organization, as well as the distribution of jobs on the basis of specialization in work and the hierarchy of authority and employee joining the job only through appointment, as well as work performance According to official records

and documents according to specific rules and controls. It should be noted that the reason for Max Weber's interest in studying the bureaucratic model stems from his deep belief that this model is the most efficient means for managing major administrative organizations, and that the future of contemporary societies depends on the best use of it (Mona Ramadan Muhammad Batikh, 2014, p. 87–89). The World Bank defines digital bureaucracy as a modern term referring to the use of information and communication technology in order to increase, efficiency, effectiveness, transparency and accountability of the government in the services provided by the government to citizens to eliminate corruption and encourage citizens to participate in public policies in various sectors. It can be said here that the World Bank affirms that Bureaucracy reform by electronic management is one of the important means in applying service quality and good governance which might help in crisis management. (Abdou AM, 2021)

In the recent past, the revolutionary development of e-governance has resulted in efficiency, transparency, accountability, and improved citizen commitment in the governments' planned decision-making practices. Almost in every country there is at least some form of online service which are being provided for their citizens to run the administrative affairs electronically in the government system (Nations, 2014). The number of countries has increased from 10 in 2003 to 29 in 2016, scoring high on the E-Governance Development Index (EGDI) (Peña-López et al., 2016).

The major events, which facilitated the development of e-governance (Nir Kshetri) in India, are as follows:

- The government introduces new policies for electronics, software, telecommunication and other emerging industries (1984)
- Formulation of National Association of Software and Services Company (NASSCOM)
- Establishment of Software Technology Parks (STP) eg: Tidal Park in Chennai
- IP connection with UVnet Technologies in US (1989) and connected to the US National Science FoundationNet (NSFNET) 1990
- Economic reforms started (1991)
- National IT task force established (1998) and recommended 3% reservation of the budget for bringing IT to masses
- Central Vigilance Commission (CVC) launches a website to combat corruption
- IT act 2000 was passed by the Parliament 2001: a year of e-governance declared by Ministry of Information Technology
- Appointed 'Adjudicating Officers' (AO) under the Mumbai High Court brought pressure on the government (March, 2003)

In the year 2005, the Government of India has formulated the National E Governance Plan (NeGP), which consists of 25 Central, State and Integrated Projects to be implemented in Mission Mode along with 8 support components for rapid introduction of e-Governance in the country (Sarita Rani). The Plan envisions providing all government services in an integrated manner at the doorstep of the citizen at affordable cost and aims to radically change the way governments interact with citizens and businesses and deliver services. (Subramanian C, 2012)

There are four pillars of E-Governance:-

- **CONNECTIVITY**:-Connectivity is required to connect the people to the services of the government. There should be a strong connectivity for an effective e-governance.

- **KNOWLEDGE:** - Here knowledge refers to IT knowledge. Government should employ skill full engineers who can handle the e-governance in an efficient way. These engineers also handle all kind of fault that may occur during the working of e-governance.
- **DATA CONTENT:** - To share any kind of knowledge or information over the internet, there should be its database. This database should have the data content which is related to government services.
- **CAPITAL:**-Capital can be on public or private partnership. It refers to money used by government to provide their services or to that sector of the economy based on its operation. (Nikita Yadav et al., 2012)

In the report of Second Administrative Reforms Commission (SARC), the initiative has been taken to promote e-Governance in India with the use of ICT to function the administrative system of government with the purpose of creating SMART governance which is- ‘Simple, Moral, Accountable, Responsive and Transparent’. According to SARC, the challenges in e-Governance are four main keys to tackle- people, process, technology, resource; to bring SMART way in the system. E-Governance facilitates communication between different independent parties in governance. These are:

- **G to G (Government to Government):** The kind of communication only within the limits of government organizations with the use of ICT to increase efficiency, performance and production in the government functioning.
- **G to C (Government to Citizens):** An interface created between the government and citizens which will facilitate efficient service delivery in the public sector with the purpose to make government activities citizen friendly.
- **G to B (Government to Business):** The different e-Government tools are used to promote efficient delivery of goods and services in the government system to perform various business dealings with the aim to control red-tape, corruption, time management, costs.
- **G to E (Government to Employees):** The use of ICT tools between government and employees in communication makes fast and efficient mechanism in the system with the objective to expedite in the functioning of public sector processing.

Thus, E-Government is a reform in the governing system in the government with the use of ICT. It has become an integral part of reform in governance. (Qazi Fabihan Meraj et al.,2019)

Today area of e-governance is very wide. E-Governance is implemented by government in almost every field. From urban states to rural areas and from politics to teaching, Governance has spread its root everywhere. Either its public or private sector, common man or businessman all is largely dependent on e-governance. Here we have presented different areas where e-governance is widely used. In the following section, we are describing the projects used in urban and rural areas of India.

E-Governance projects in urban areas are:

- **Transportation:-** Services provided by e-governance in this area are:-
 - Issuance of Time Table of buses.
 - Provision of booking facility for Interstate transport.
 - Transportation Improvement Program.
 - Regional Transportation Plans.

- Congestion Management Process.
- Transportation Demand Management.

Various Projects are as follows:

CFST:-Citizen Friendly Services of Transport Department by Andhra Pradesh government to provide services such as Issue of learner licenses ,Issue of driving licenses ,Renewal of driving licenses etc

2. Vahan and Sarathi:-The backend applications Vahan&Sarathi help in speeding the overall work flow in the transport department but Tamil Nadu govt.

3. OSRTC:- The Orissa State Road Transport Corporation project was started to provide transport related facilities online

4. HRTC: - Himachal Road Transport Corporation project is for online bookings, cancellation of seats, for enquiry about departure of buses, availability of seats and buses etc.

- Online payment of bills and taxes:-Services provided by e-governance in this area's:-
 - Online Transaction
 - Payment of Bill
 - Payment of taxes
 - Payment of house EMIs

Various Projects:-

1. FRIENDS: - This project is started by Kerala Government for its citizens to make online payment of electricity and water bills, revenue taxes, license fees, motor vehicle taxes, university fees, etc.

2. E-SEVA:-Electronic seva by Andhra Pradesh government to pay utility bills, avail of tradelicenss and transact on government matters at these facilities.

3. BWSSB ganakeekruthaGrahakaraSeve, water billing, and collection system: - This e-governance project is started by the Bangalore government. In this every month bills of houses are generated through BGS software

4. DOMESTIC: - This project is started by Daman and Diu. It is an Electricity Billing System for domestic consumers.

5. E-Pourasabha Municipal Application:-E-Pourasabha is an e-governance application for urban local bodies. It is implemented for Tax Collection system, Property Tax, Water Tax etc.

6. E-Mitra by the Government of Rajasthan

7. SAMPARK by Chandigarh government

8. E-Suvidha by the government of Uttar Pradesh

- Information and public relation key services:-With these kinds of projects people can get any kind of information with just a single click.

Various projects:-

1. LokMitra: - By the government of Himachal Pradesh. The services offered include information about vacancies, tenders, market rates, matrimonial services, village e-mail.
2. Mahiti Shakti: - By Gujarat government to provide information related to its working to its citizens.
3. OLTP: - By Andhra Pradesh government. With this project 16 government departments in Andhra Pradesh are connected on a single network.

- Municipal services: - Services provided are as:-
 - House Tax Assessment, Billing and Collection.
 - Maintain records of Land & property.
 - Issue of Death Certificates.
 - Registration & Attorneys of properties.
 - Review and approval authority for site plans

Various projects:-

1. E-Panjeeyan:-It is started by Assam government to deals with the computerization of the Document registration work at Sub Registrar Office.
2. SDO Suite:-By Assam government. This system helps in issuing various certificates like Land sale Permission, Legal heir certificate, Issue of Passport Verification Certificate, Birth and Death Report,
3. Palike:-The Palike-property tax software capture the basic details of the owner and property, payment details for which receipt is generated and given to the citizen was hosted.
4. Rural Digital Services (Nemmadi):-Provide services such as issuance of certificates, issuance of orders in respect of Social Security Schemes such as old age pension, widow pension, freedom fighter pension etc.
5. TRIS:- Tripura Registration Information System is meant for capturing of online photograph and biometric impression, Service for visit commission, request for duplicate document, searching of document etc.

- Roads and traffic management:- Services provided by this type of e-governance is:-
 - Network of Roads & Bridges
 - Road construction and their maintenance
 - Traffic Management
 - Safety ,Accident and pollution control

Various projects:-

1. BHOOSWADEENA-This project is computerized land acquisition system with tight integration with BHOOMI. The purpose of this project is to develop a system to automate the process Land acquisition
2. I-GeoApproach Internet Geometrics:-Purpose of this project is development of Geometrics based web enabled decision support system for Rural Road Network of Madhya Pradesh.

3. RSPCB (Rajasthan State Pollution Control Board);-The project relates to establishment of computer based system by fulfilling the Hardware, Software and Networking Requirements The project will be beneficial to the Government, Central Pollution Control Board, RSPCB itself.

4. CFST:- Citizen Friendly Services of Transport Department This project is started by the government of Andhra Pradesh to keep check on pollution control, road safety, road signs and safety

of its citizens.

Areas of e-governance in rural areas:-In rural areas e-governance has its very powerful impact. Here, from agriculture to local information everything is done through e-governance.

- Agriculture:- Following are the projects used in Agriculture.

1. Gyandoot: In the State of Madhya Pradesh it is an Intranet-based Government to citizen (G2c) service delivery initiative.

2. BELE:- It is a web-based application with 3-tier architecture for capturing and monitoring the major activities and services.

3. AGMARKNET: - It is a project approved by Department of Marketing & Inspection (DMI), Ministry of Agriculture, and Government of India.

4. SEEDNET:-It is a SEED informatics network under ministry of Agriculture, Government of India. The project was started in Chhattisgarh in the month of July' 2008 for Kharif season.

5. Mustard Procurement Management System:- It is started by the Haryana government. It conducted the Survey of mustard sown by the farmers and feed this data in to the database of the system. This data is then processed and generate coupons having information of dates on which a farmer may visit in the mandi to sale his mustard.

- Local information: - For local information such as prices of seeds, fertilizers, loan rates etc. government has started e-governance service in this area also.

Various projects:-

1. E-JanSampark:-Services & Information accessible to the common man in his locality to meet his basic need. This project is started by Chandigarh.

2. Prajavani: - it is started by the Government of Andhra Pradesh.it is a Web based Online Monitoring of Public Grievances.

3. WebPortal for Hyderabad and Cyberabad Police:-It is designed by hyderabad, developed and hosted with many exciting public utility features like Safety tips for all citizens, verification status of Passports, Stolen vehicles etc.

4. Intranet Portal of Chandigarh Administration:-It provides an environment where administration could interact.

5. E-DISHA EkalSewa Kendra:-This project is started by Haryana government.E-Disha to deliver any service from any counter/location, so at the peak requirements of services, counters can be extended as per crowd.

6. E-Samadhan: - the Government of Himachal Pradesh stressed upon to develop grievances redressed mechanism so that the genuine public grievances may be redressed in a time bound manner.

- Disaster management: - To manage disaster, is a very big challenge for the government as these are natural phenomena and are unpredictable. To deal with these disasters, much state government has started e-governance service for this.

Project in this area is:-

1. Chetana: - It is a Disaster management system which has been started in the state of Bihar to deal with natural disasters such as flood and earthquake.

- Land record management:-By facilitating e- governance service in this area, millions of land records can be maintain in a very short time span.

Major projects in this area are:-

1. Bhoomi:-It is the first e-Governance land records management system project which is successfully implemented for the benefits of the common man by the Government of Karnataka.

2. Comprehensive Modernization of Land Records(CMLR):- This project is started by the government of Andhra Pradesh. It allows integrating functions of property registration, mutations and updating of field survey maps.

3. Land Record Computerisation: - The objective of the project is to computerize fresh allotment, land transfer, regularisation of occupied land etc. related actives of the Dept. of Land Management at district

level.

4. Gyandoot: - it is an intranet in Dhar district of Madhya Pradesh, connecting rural cybercafés catering to the everyday needs of the masses.

5. Land Records Management System State Government of Punjab.

6. Devbhoomi State Government of Uttarakhand.

7. Bhu-Lekh – UP State Government of Uttar Pradesh.

8. E-Dhara State Government of Gujarat.

- Panchayat:-Services provided by e-governance in this area are:-
 - Issue of Birth/Death certificate.
 - Application for inclusion of name in Voter list.
 - Conducting various welfare schemes for the poor and needy sections of the society.
 - Preparing district wise planning, implementing those plan, and review for success.
 - To provide wage employment to the needy from amongst the poorest section of the rural society.
 - Rural water supply and sanitation.

Various projects:-

1. E-GramViswa Gram Project:- This Project Initiates e-Gram Project connecting 13716 Gram Panchayats and 6000 Citizen Common Service Centres as a part of the e-Gram connectivity Project by Gujarat.
2. RajNidhi: - "RajNidhi" is a web enabled information kiosk system developed jointly by Rajasthan state's Department of Information Technology and Rajasthan State Agency for Computer Services (Raj Comp) [4].
3. Raj-SWIFT:-The Rajasthan State's Department of Information Technology (DoIT) has developed Government's own Intranet called as "raj-SWIFT"
4. Support for P & RD sector in Assam:-NIC, Assam State Centre has been identified as the technical consultant for e-Governance solution and Computerization of the Department of Panchayat and Rural Development.
5. SamanyaMahiti by the State Government of Karnataka

E-GOVERNANCE IN HEALTH

Service provided by these projects are as:-

- Availability of medicines
- Special health camps
- Facilities at Anganwadi canters

Various projects:-

1. Online Vaccination Appointment for International Traveller:-Citizen centric application for the purpose of vaccination of the persons proceeding abroad and issuance of International Health Certificate
2. SMS based Integrated Disease Surveillance System: It is an SMS based Integrated Disease Surveillance System facilitates to report the occurrences of disease, number of persons affected from the area of occurrences immediately to the concerned authority.
3. Hospital OPD Appointment:-Hospital OPD Appointment System is another welfare measure undertaken by Chandigarh Administration to make life of citizens simpler.
4. NLEP (National Leprosy Eradication Program):-NLEP is web based application developed for monitoring of leprosy cases in Chhattisgarh State.
5. HEALING:-it is a Health Information system for Kerala Government which is developed and implemented for Medical Health & Family Welfare department

E-GOVERNANCE IN EDUCATION:-

- Providing basic education (elementary, primary, secondary) to children
- Providing computer education to children
- Results for 10th& 12thclasses

- Information on eligibility for “Distribution of books” scheme

Various projects:-

1. CASCET:-This project is started by the Karnataka government for Education Department.
2. Online Scholarship Management System:-It is meant for the purpose of distribution of scholarships and fees reimbursement.
3. AISES (All India School Education Survey):- this project is started by Assam government. This project is used for surveying the number of schools in district.
4. CAPnic:-This is for the Centralized seat allotment process for professional courses and come under Kerala.
5. VHSE Examination Management System:-it has been developed to handle pre-examination related activities of the vocational higher secondary education. (Nikita Yadav et al., 2012)

Here are some of the projects and products that have been launched, or are ready for deployment, as part of the Digital India initiative:

- Digi Locker facility will help citizens to digitally store their important documents like PAN card, passport, mark sheets, degree certificates and many personal documents. Digi Locker will provide secure access to Government issued documents. It uses authenticity services provided by Aadhaar. It is aimed at eliminating the use of physical documents and enables sharing of verified electronic documents across government agencies. Digi Locker will reduce the administrative overhead of government departments and agencies created due to paper work. It will also make it easy for the residents to receive services by saving time and effort as their documents will now be available anytime, anywhere and can be shared electronically.
- BHIM App was one of the biggest announcements of 2016. BHIM (Bharat Interface for Money) App gives an easy method of payment and fund transfer. It has the following basic features of an UPI app. BHIM app is developed by National Payment Cooperation of India and is currently available on Android Platform, though App store listing should follow soon. In less than a week time, BHIM is number one app on the Google Play Store and has already witnessed more than 3 million downloads and over 500,000 transactions since its debut. People never need to enter any details again and again into BHIM app. It automatically picks up your details corresponding to bank and phone number. No Transaction charges, transfer to anyone with or without BHIM app. Transfers are bank to bank, you don't need to add to wallet first. Transfers happen within seconds. The BHIM app don't save any information except the account name and phone number, hence it is much more secure.
- MyGov.in as an online platform to engage citizens in governance through a "Discuss, Do and Disseminate" approach. There are multiple theme-based discussions on My Gov.in where a wide range of people can share their thoughts and ideas through online on portal. This is the dream project initiated by central government to collect constructive feedbacks from the society, this is highly appreciated by the society and till date 4164.32K members registered, 187.30K submitted tasks and 3733.68K comments in various discussions. These tasks been reviewed by other members and experts. Once approved, these tasks can be shared by those who complete the task and by other members on My Gov.in platform. Every approved task would earn credit points for completing the task.
- e-Sign framework to allow citizens to digitally sign documents online using Aadhaar. Adigital signature takes the concept of traditional paper-based signing and turns it into an electronic "fingerprint." This "fingerprint," or coded message, is unique to both the document and the signer and binds them together. Government of India (vide its Gazette Notification, REGD. NO. D. L.-33004/99 dated 28th January 2015) has announced a method that facilitates Certifying Authority to offer e-Sign service to citizens who have AADHAR ID.⁸
- e-Hospital system for important healthcare services such as online registration, fee payment, fixing doctors' appointments, online diagnostics and checking blood availability online.

- Banking Sector Digitalization is mainly concerned with what all banks are required to do in order to provide better services to the customers. There are various technologies which are to be adopted for digitalization of back office. It also ensures self-sufficiency to the customers in whichever way possible.
- National Scholarship Portal for beneficiaries from submission of application to verification, sanction and disbursement.
- Digital India Platform for large-scale digitization of records in the country to facilitate efficient delivery of services to the citizens.
- Bharat Net programme as a high-speed digital highway to connect all 250000 gram panchayats of country. The world's largest rural broadband project using optical fibre cable.
- BSNL's Next Generation Network to replace 30-year old telephone exchanges to manage all types of services like voice, data, multimedia and other types of communication services. BSNL's large scale deployment of Wi-Fi hotspots throughout the country.
- Broadband Highways as one of the pillars of Digital India to address the connectivity issue while enabling and providing technologies to facilitate delivery of services to citizens.

Government make many Apps to make Digital India like Digital India Portal, MyGov Mobile App, Swachh Bharat Mission App and AADHAR Mobile Update, BHIM UPI App. (Bharad, 2016)

There are basically three types of challenges. These are

- Technical Challenges:-Technical issue involve the following challenges such as

- i. Interoperability
- ii. Privacy
- iii. Security
- iv. Multiservice Interaction

- Organisational Challenges:-Organisational challenges include-

- i. Lack of Integrated Services
- ii. Lack of Key Persons
- iii. Population
- iv. Different Languages

- Economical Challenges:-Economical challenges are as:-

- i. Cost
- ii. Maintainability
- iii. Reusability
- iv. Portability

(Nikita Yadav et al., 2012)

Let us look at some success stories in India and their impact on governance. Some of the successful e-governance projects include VAT Information Computerization to Optimize Revenue Yields (VICTORY) under the G2B delivery model in the state of Bihar, Stamps and Registration Automation with Technology and Information (SARTHI) under the G2C model in the state of Rajasthan, Service and Payroll Administrative Repository for Kerala (SPARK) under the G2E model and Integrated Information System for Food grains Management (IISFM) under the G2G model. The VICTORY system has facilitated unearthing crores of tax evasion by micro and macro analysis of tax data. It has also helped in scrutinizing of returns and validation of Input Tax Credit (ITC) from seller and purchaser data in a centralized way thus speeding up the refund process. The satisfaction index for VICTORY effectiveness is extremely high at around 90% despite of all the odd circumstances in Bihar. This creativity in reforms in tax administration fetched it the Oracle Excellence Award in the category of 'IT against odds' in the World Summit, 2006. The successful implementation of Project SARTHI in the year 2003 was instrumental in reinforcing citizen's confidence in the Government to serve citizens. The simple, effective time bound and innovative project has proved to be the role model for similar e-governance projects in the state of Rajasthan. SPARK is a web based Personnel Administration and Accounts Software for Government of Kerala covering more than 3.25 lakhs employees. The centralized integrated computerized personnel and payroll information system has helped the government to get details of any employee immediately, achieve highest level of transparency in dealing with the employees, more consistent application of rules, etc. On the payroll side, accurate and automatic payroll processing is facilitated. It also ensures that the rules and regulations are uniformly applied to all employees thereby avoiding complaints and achieve better employee relations. IISFM is an MIS solution developed and implemented by National Informatics Centre (NIC) for the Food Corporation of India (FCI). This system aimed at improving the ITC and better online stock inventory management system. The system is being used to bring in more transparency and curb mismanagement of food stocks. The project was a joint winner under the G2G/G2E category of the Computer Society of India e-Governance awards 2006 – 07. (Jain et al., 2014)

FINDINGS

It can be found from all the articles that are referred, e-governance is more efficient than the patriarchal system. It increases efficiency as well as reduces corruption. E-government is very much developed in most of the countries around the world and India is taking its baby steps. E-governance is the new future and if we could increase the digital literacy of the population, train more people as well as have proper infrastructure, e-governance is very much possible.

References

- [1] Saiful Deni, Thamrin Husain, Aji Deni. Bureaucracy and Challenges in Digital Era: A New Concept of Information Technology Integration in the Archipelagic Country. *Journal of Public Policy and Administration*. Vol. 4, No. 4, 2020, pp. 71-77. doi: 10.11648/j.jpaa.20200404.12
- [2] Sarah N. Giest & Bram Klievink (2022) More than a digital system: how AI is changing the role of bureaucrats in different organizational contexts, *Public Management Review*, DOI: [10.1080/14719037.2022.2095001](https://doi.org/10.1080/14719037.2022.2095001)
- [3] Abdou AM. Good governance and COVID-19: The digital bureaucracy to response the pandemic(Singapore as a model). *J Public Affairs*. 2021;21:e2656. <https://doi.org/10.1002/pa.265610> of 10ABDOU
- [4] Aydın, Ömer & Ozen, Ahmet & Gürel, Fatma & Mhlanga, David & Savić, Dobrica & Tosheva, Elizabeta & Mehmedović, Emir & Godinjak, Faris & Horić, Selma & Hadjitchoneva, Juliana & Lobejko, Stanislaw & Jordan, Frank. (2020). THE IMPACTS OF DIGITAL TRANSFORMATION.
- [5] N V Morze and O V Strutynska 2021 *J. Phys.: Conf. Ser.* 1946 012021
- [6] Juan-Gabriel Cegarra-Navarro, José Rodrigo Córdoba Pachón, José Luis Moreno Cegarra, E-government and citizen's engagement with local affairs through e-websites: The case of Spanish municipalities, *International Journal of Information Management*, Volume 32, Issue 5, 2012, Pages 469-478, ISSN 0268-4012, <https://doi.org/10.1016/j.ijinfomgt.2012.02.008>

- [7] Suresh Malodia, Amandeep Dhir, Mahima Mishra, Zeeshan Ahmed Bhatti, Future of e-Government: An integrated conceptual framework, *Technological Forecasting and Social Change*, Volume 173, 2021, 121102, ISSN 0040-1625, <https://doi.org/10.1016/j.techfore.2021.121102>
- [8] Subhajit Basu (2004): E-government and developing countries: an overview, *International Review of Law, Computers & Technology*, 18:1, 109-132
- [9] Das, Sudhir Chandra. (2012). E-Governance Mechanism in India: Experiences from Selected E-Governance Projects. *Mirror: Peer Referred Bi-annual Research Journal of Commerce, Management and Social Science, Kerala INDIA*. II. 166-177.
- [10] Fabihanmeraj, Qazi & Azad, Suheel & Doorwar, Vibha. (2019). E-Governance And Bureaucracy In Contemporary Indian Public Administration: A Technological Revolution. 09. 358-362
- [11] Bharad, Bhavesh. (2016). DIGITALIZATION IN INDIA: PROSPECTS AND CHALLENGES. 8. 114-120.
- [12] Subramanian, C.. (2012). E-GOVERNANCE: A KEY TO GOOD GOVERNANCE IN INDIA. *International Journal of Scientific Research*. 3. 305-308.
- [13] Yadav, Nikita & Singh, V.. (2013). E-Governance: Past, Present and Future in India. *International Journal of Computer Applications*. 53. 10.5120/8437-2220.
- [14] Dutta, Ajay & Devi, Mandalika. (2015). e-Governance Status in India. *International Journal of Computer Sciences and Engineering*. 3. 6.
- [15] Jain, Neelesh & Agnihotri, Bhagwati & Verma, Ashish. (2014). Impact Assessment of E-Governance in India.