CHAPTER: I – INTRODUCTION

1.1- Governance, Government and Management

People often get confused about the difference between governance and government and use the term inter-changeably. Actually, the concept of "governance" is as old as human civilization. It means the process of decision-making and the process by which decisions are implemented (or not implemented). Government is one of the actors in governance. Government is a group of people who rule or run the administration of a country. It may be said that government is the body of representatives that governs and controls the state at a given time. Government may be of different types. It may be a democracy or autocracy. The government may be labeled as good or bad according to their way of working for the good of the people.

Governance can be used in various suffix like, corporate governance, international governance, national governance and local governance. Since governance is the process of decision-making and the process by which decisions are implemented, an analysis of governance focuses on the formal and informal actors involved in decision-making and implementing the decisions made and the formal and informal structures that have been set in place to arrive at and implement the decision. Government is one of the actors in governance. Other actors involved in governance vary depending on the level of government. In rural areas, for example, other actors may include influential landlords, associations of peasant farmers, cooperatives, NGOs, research institutes, religious leaders, finance institutions, political parties etc. At the urban and the national level, in addition to the above actors, media, lobbyists, international donors, multinational corporations, etc. may play a role in decision-making or in influencing the decision-making process. All actors other than government and the military are grouped together as part of the civil society. In some countries in addition to the civil society, organized crime syndicates also influence decision-making, particularly in urban areas and at the national level. Similarly, formal government structures are one means by which decisions are arrived at and implemented. At the national level, informal decision-making structures, such as kitchen cabinets or informal advisors may exist. In urban areas, organized crime syndicates such as the land Mafia may influence decision-making. In some rural areas residentially, powerful families may make or influence decision-making. Such, informal decision-making is often the result of corrupt practices or leads to corrupt practices. [1]

Governance is also the act of governing or ruling as per the set of rules and procedures framed by the government which need to be implement by its representatives. Governance has been defined to refer to structures and processes that are designed to ensure accountability, transparency, responsiveness, rule of law, stability, equity and inclusiveness, empowerment, and broad-based participation. Governance also represents the norms, values and rules of the game through which public affairs are managed in a manner that is transparent, participatory, inclusive and responsive. Governance therefore can be subtle and may not be easily observable. In a broad sense, governance is about the culture and institutional environment in which citizens and stakeholders interact among themselves and participate in public affairs. International agencies such as UNDP, the World Bank, the OECD Development Assistance Committee (DAC) and others define governance as the exercise of authority or power in order to manage a country’s economic, political and administrative affairs. The 2009 Global Monitoring Report sees governance as power relationships, formal and informal processes of formulating policies and allocating resources, processes of decision-making and mechanisms for holding governments accountable.

**Governance and Management**

Often there is a tendency to equate governance with management, the latter primarily referring to the planning, implementation and monitoring functions in order to achieve pre-defined results. Management encompasses processes, structures and arrangements that are designed to mobilize and transform the available physical, human and financial resources to achieve concrete outcomes.

Governance systems set the parameters under which management and administrative systems will operate. Governance is about how power is distributed and shared, how policies are formulated, priorities set and stakeholders made accountable. Table 1.1 summarizes the difference between governance and management:

**Table 1.1 – Difference between Governance and Management**

<table>
<thead>
<tr>
<th>Governance</th>
<th>Management</th>
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<tbody>
<tr>
<td>-Set and norms, strategic vision and direction and formulate high-level goals and policies</td>
<td>-Run the organization in line with the broad goals and direction set by the governing body</td>
</tr>
<tr>
<td>-Oversee management and organizational performance to ensure that the organization</td>
<td>-Implement the decisions within the context of the mission and strategic vision</td>
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is working in the best interests of the public, and more specifically the stakeholders who are served by the organization’s mission.

- Direct and oversee the management to ensure that the organization is achieving the desired outcomes and to ensure that the organization is acting prudently, ethically and legally.

- Make operational decisions and policies, keep the governance bodies informed and educated.

- Be responsive to requests for additional information.

[2]

1.2 - GOOD GOVERNANCE

The terms "governance" and "good governance" are being increasingly used in development literature. Like government, governance can be good or bad. Bad government and bad governance have similar characteristics: Corruption, Whimsical and Expedient Decision-Making, Shortsightedness, disregard for the concern of the many and decisions. In the same vein, the criteria for good governance include accountability and ethics in decision-making and implementation, transparency and predictability, rule-bound decision-making and action, responsiveness, a long-term view of the public interest. The public should therefore have a right to expect laws, a fair judicial system, politically accountable lawmaking and an effective and reform-minded bureaucracy.

Major Donors and international financial institutions are increasingly basing their aid and loans on the condition that reforms that ensure good governance are undertaken. In particular, the donors promote the notion of good governance as a necessary pre-condition for creating an enabling environment for poverty reduction and sustainable human development. Good governance has also been accepted as one of the targets of the Millennium Development Goals (MDGs). [3]

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In the 1992 report entitled “Governance and Development”, the World Bank set out its definition of good governance. This term is defined as “the manner in which power is exercised in the management of a country’s economic and social resources for development”. [4]

The World Bank identified three distinct aspects of governance:
(a) the form of the political regime;
(b) the process by which authority is exercised in the management of a country’s economic and social resources for development; and
(c) the capacity of governments to design, formulate and implement policies and discharge functions.

The first aspect is deemed to be outside the World Bank’s mandate, thus its focus has been on the second and third aspects.

In the 1994 report entitled “Governance: The World Bank’s Experience”, the recent progress made by the Bank in this area is set out under four different aspects, which provide a template against which its governance work can be assessed:

1) Public-sector management: The language of public-sector management is predominantly technical, changing the organizational structure of a sector agency to reflect new objectives, making budgets work better, sharpening civil-service objectives and placing public-enterprise managers under performance contracts.

2) Accountability: Governments and their employees should be held responsible for their actions

3) Legal framework for development: Appropriate legal systems should be created that provides stability and predictability, which are the essential elements in creating an economic environment in which business risks may be rationally assessed

4) Transparency and information: The themes of transparency and information pervade good governance and reinforce accountability. Access to information for the various players in the market is essential to a competitive market economy. [5]

International Development Association (IDA) highlighted that sustainable poverty reduction highly depends on sound policies, effective engagement and involvement of the poor, affected section of people and women in the development process. Good governance was inevitable component to the

development process and to the effectiveness of development assistance, and thus considered as a specific addition in the performance assessment methodology. The four major pillars against which governance can be judged are stated to be:

(1) **Accountability**: At the macro level this includes financial accountability, in terms of an effective, transparent and publicly accountable system for expenditure control and cash management, and an external audit system. It encompasses sound fiscal choices, made in a transparent manner, that give priority to productive social programmes such as, basic health services and primary education vital to improving the living standards of the poor and promoting economic development over non-productive expenditures, such as military spending. At the micro level it requires that managers of implementing and parastatal agencies be accountable for operational efficiency. Auditing systems should meet international standards and be open to public scrutiny.

(2) **Transparency**: Transparency of decision-making, particularly in budget, regulatory and procurement processes, is also critical to the effectiveness of resource use and the reduction of corruption and waste.

(3) **The rule of law**: A fair, predictable and stable legal framework is essential so that businesses and individuals may assess economic opportunities and act on them without fear of arbitrary interference or expropriation. This requires that the rules be known in advance, that they be actually in force and applied consistently and fairly, that conflicts be resolvable by an independent judicial system, and that procedures for amending and repealing the rules exist and are publicly known.

(4) **Participation**: Good governance requires that civil society has the opportunity to participate during the formulation of development strategies and that directly affected communities and groups should be able to participate in the design and implementation of programmes and projects. Even where projects have a secondary impact on particular localities or population groups, there should be a consultation process that takes their views into account. This aspect of governance is an essential element in securing commitment and support for projects and enhancing the quality of their implementation.

In October 1995, the **Asian Development Bank (AsDB)** policy paper called “Governance: Sound Development Management”, defined Good governance as “the manner in which power is exercised in the management of a country’s economic and social resources for development”. Later, the AsDB General Counsel explained that governance has two dimensions: (a) political (e.g., democracy, human rights); and (b) economic (e.g., efficient management of public resources). The AsDB has recognized four basic components of good governance:
(1) **Accountability:** Public officials should be accountable for government behavior and responsive to the entity from which they derive authorization. The accountability of public sector institutions is facilitated by evaluation of their economic performance. The proposed areas of action would be in the government capacity building through, for instance, public-sector management, public-enterprise management and reform, public financial management and civil-service reform.

(2) **Participation:** Government processes should be flexible enough to offer beneficiaries and others affected the chance to improve the strategy and implementation of public projects. The specific areas of action would be in the development of participatory development processes through, for example, participation of beneficiaries, a public/private-sector interface, empowerment of local government and cooperation with non-governmental organizations (NGOs).

(3) **Predictability:** Laws and policies should exist that regulate society and that are applied fairly and consistently. Predictability requires the state and its subsidiary agencies to be bound by and answerable to the legal system in the same way as private enterprises and individuals. The area of action could be the development of predictable legal frameworks for private-sector development.

(4) **Transparency:** Information should be available and accessible to the general public and there should be clarity as to rules and regulations. Access to timely and precise information on the policy can be important to decision-making by the private sector and can also serve to prevent corruption.[6]

The draft policy paper of The African Development Bank (AfDB) dated April 1999, defines governance as a process referring to the way in which power is exercised in the management affairs of a nation. The AfDB’s interventions in support of good governance focus on the following components, that will be converted into specific activities.

(1) **Accountability:** Elected individuals and organizations charged with a public mandate should be held accountable for specific actions to the public from which they derive their authority. In a narrow sense, accountability focuses on the ability to account for the allocation, use and control of public assets in accordance with legally accepted standards. In a broader sense, it is also concerned with the establishment and enforcement of rules of corporate governance.

(2) **Transparency:** The policies of the government should be publicly available and accessible.

(3) **Combating corruption:** Assistance should be provided to combat the misuse of public office for personal gain.

(4) **Participation:** Stakeholders should exercise influence over public policy decisions and share control of resources and institutions that affect their lives, thereby providing a check on the power of government. This process occurs at various levels: local government, regional and national levels through adaptable and decentralized forms of government.

(5) **Legal and judicial reforms:** A pro-governance and pro-development legal and judicial system should be created in which the laws are clear and are uniformly applied through an objective and independent judiciary.\(^7\)

**The United Nations Development Programme’s (UNDP)** definition of good governance is set out in a 1997 UNDP policy document entitled “Governance for Sustainable Human Development”. It states that governance can be seen as the exercise of economic, political and administrative authority to manage a country’s affairs at all levels. Economic governance consists of the decision-making processes that affect a country’s economic activities and its relationships with other economies. Political governance is the process of decision-making to create policies and programs. Administrative governance is the system of policy execution. Covering all three, good governance defines the processes and structures that guide political and socio-economic relationships. Its essential characteristics identified are,

1) **Participation.** All men and women should have a involvement in decision-making process, either directly or through legitimate intermediate institutions that represent their interests. Such broad participation is built on freedom of association and speech, including on the capacity to participate fruitfully.

2) **Rule of law.** Legal frameworks should be fair and enforced objectively, specifically the laws on human rights.

3) **Transparency.** This concept is built on the free flow of information. Processes, institutions and information should be directly accessible to those concerned, and enough information should be provided to deliver them understandable and monitorable

4) **Responsiveness.** Institutions and processes should serve all participants.

5) **Consensus orientation.** Good governance should reconcile differing interests in order to reach broad consensus on the best interests of the group and, where possible, on policies and procedures.

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6) Equity. All men and women should have equal opportunity to maintain or improve their well-being.

7) Effectiveness and efficiency. Processes and institutions should produce results that meet needs while making the best use of resources.

8) Accountability. Decision-makers in government, the private sector and civil-society organizations should be accountable to the public as well as to institutional stakeholders.

9) Strategic vision. Leaders and the public should have a broad and long-term perspective on good governance and human development, together with a sense of what is needed for such development. [8]

1.3 - GOOD GOVERNANCE IN INDIA

In India during ancient times, in the context of good governance, the concept of Ram Rajya; the advice given by Lord Krishna to Arjuna in Gita, one should behave as ordained by scriptures, one ought to know what ought to be done and what ought not to be done, what is to be feared and what not, what is obligatory and what is permitted, leads to the righteous path; the righteous path is called Dharma; the example given in Yajurveda, ruler would administer justice with the help of an elected assembly; he should control his passions, conduct himself in a righteous manner, he should have virtues of humility, discipline and voluntary conduct. Manusmriti; king is the protector of public order; king would order all his officials to work for the good of his subjects. Kautilya, in his treatise Arthasastra, propounded the traits of good governance by the ruler-king as follows:" In the happiness of his subjects lies his happiness, in their welfare his welfare; whatever pleases himself he shall not consider as good, but whatever pleases his subjects, he shall consider as good." In the modern times, Gandhian ideal of Gram Swarajya;

To the British goes the credit of giving this country a structure of governance, although it was done to meet their own imperial interests. The governance during the British Raj had, as its objective political consolidation economic exploitation and administrative elitisation. Development, people's welfare, native citizen’s problems concerning food, clothing, shelter etc., did not form part of the agenda of governance. To achieve this, the British created the steel frame of bureaucracy which was to serve India even after independence. During the entire tortuous course of freedom struggle self-government and good government became synonymous. With independence, governance, as enshrined in the constitution in its

preamble, "to secure to all its citizens justice-social, economic and political" and various other provisions like Fundamental Rights and Directive Principles like,

**Article-38** - A Social order for promotion of the welfare of the people, minimization of inequalities in income and elimination of inequalities in status

**Article-39** - Preventing concentration of wealth in few hands, equal pays for equal work for men and women

**Article-40** - Organization of village panchayats

**Article-41** - Right to work, to education, and to public assistance in cases of unemployment, old-age, sickness and disabilities

**Article-42** - Just and humane conditions of work

**Article-43** - Living wages for workers to ensure decent standard of life and adequate leisure

**Article-45** - Free and compulsory education for all children below 14 years of age

**Article-47** - Higher level of nutrition and public health

Coupled with it, attempts have been made from time to time to get structural changes in the administrative set-up to fulfill the aspirations of the people. Thus, as back as in 1949, N. Gopalaswami Ayyenger suggested improvement in methods of transactions of government business and suggested the creation of an O&M Division in the central government. In 1951, A. D. Gorwala suggested reorganization of administrative machinery to ensure speedy, effective and responsive administration. Paul Appleby, in his two reports submitted in 1953 and 1956, recommended for the setting up of an O&M in the union government and an Institute of Public Administration. Ashok Chanda, in 1954, suggested ways to remove delay in the execution of projects. T.T. Krishnamachari’s report dealt with training of IAS officers and improvement in district administration. K Santhanam’s report in 1964 dealt with corruption. And then came the Administrative Reforms Commissions in 1966 for ensuring highest standards of efficiency and integrity in public services. Finally, the Economic Reform Commission under L. K. Jha in 1983 advocated the need for accountability so that greater importance was given to performance rather than mere adherence to rules and procedures. With time, after independence, bureaucracy developed ills like red-tapism, corruption, bungling, arbitrariness, wastefulness and regimentation. in addition to it the governance scenario during the last more than fifty years has been rather gloomy; government losing initiative, drive and direction; genuine leadership vacuum with many leaders but each trying to pursue his
own selfish end; hypocrisy and dishonesty; the increasing canker of corruption; nexus between politicians, bureaucrats and criminals; muscle and mafia power; population explosion and consequent problems for governance like illiteracy, poverty, poor health, shortages, slums, unemployment, moral, ethical and social-behavioral downfall; and the mal-functioning of all the three wings of the government, the executive, the legislature and the judiciary. It was, however, in November 1996 that the Conference of Chief Secretaries realized that there is crisis in the Indian administration and therefore the governance at every level needed to reinvent itself to serve the interests of the people at large. This was followed by the Chief Ministers' Conference on May 24, 1997, convened by the Prime Minister, to discuss the Action Plan for Effective and Responsive Administration. The Action Plan, as adopted at this conference, suggested the formulation of Citizens' Charter, Transparency and Accountability, Reasonable standard of service and time limits, public interface and code of ethics and civil servants. [9]

Steps Taken for Good Governance in India
Several steps have been taken for improving the quality of governance in India:

1) The introduction of democracy in free India made it mandatory for the country to provide for a system of democracy at the grass-root level and an attempt was made by the 73rd and 74th Constitutional amendments to give a wider representative base and more powers to Local Rural and Urban institutions that ensure the involvement of people in the process of governance. [10]

2) With reference to the Right to Information Act 2005 any citizen can seek information from government or public authorities within a stipulated time frame.[11]

3) The National Rural Employment Guarantee Act (NREGA), 2005 renamed as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is guaranteeing 100 days unskilled work to every rural household

4) The Right to Education (RTE) Act, 2009 ensures free and compulsory education to all children of the age of six to fourteen years.[12]

5) The National Rural Health Mission (NRHM) launched in 2005 provides effective rural health care and National Urban Health Mission (NUHM) was launched in 2013 to meet the healthcare challenges of the urban poor

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6) The National Food Security Bill 2013, also known as Right to Food Act, provides a legal right to demand food from the state to satisfy their basic needs of food.

7) E-governance is a powerful tool of good governance. The National e-Governance Plan has the vision to make all Government services accessible to the common man at their door step, anytime, anywhere. The greater usage of internet has helped to integrate all areas of our country into the mainstream.

Besides above, the reforms in the electoral system, tax system, judicial set up, All India Service Rules, administrative structure and working have guided with a view to promote efficiency and transparency in the administration which would certainly help to establish good governance in India. [13]

1.4 - GOOD GOVERNANCE THROUGH E-GOVERNANCE

With the increasing awareness among citizens about their rights, the resultant increase in expectations from the government to perform and deliver, the whole paradigm of governance has changed. Government, today, is anticipated to be transparent in its dealings, accountable for its activities and prompt in its responses. This has made the use of ICT necessity in any agenda drawn towards achieving good governance. In its Fourth Report entitled ‘Ethics in Governance’, the second Administrative Reforms Commission had clearly stated that the tools of modern technology such as Information and Communications Technology (ICT) should be used to transform the relationship of the government with its constituents, citizens and businesses, and also between its own agencies. While recognizing the potential of ICT in transforming and redefining processes and systems of governance, the Commission had suggested that e-Governance is the logical next step in the use of ICT in systems of governance in order to ensure extensive participation and greater involvement of citizens, institutions, civil society groups and the private sector in the decision making process of governance. [14]

E-Governance

E-Governance or ‘electronic governance’ is basically the application of Information and Communications Technology to the processes of Government functioning in order to bring about ‘Simple, Moral, Accountable, Responsive and Transparent’ (SMART) governance. This would include the use

of ICTs by government agencies for any or all of the following reasons: (a) Exchange of information with citizens, businesses or other government departments (b) Faster and more efficient delivery of public services (c) Improving internal efficiency (d) Reducing costs / increasing revenue (e) Re-structuring of administrative processes and (f) Improving quality of services. [15]

Different governments and organizations define the term ‘e-Governance’ to suit their own aims and objectives. Sometimes, the term ‘e-Government’ is also used instead of ‘e-Governance’.

According to the World Bank,

“E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.”

Thus, the stress here is on use of information technologies in improving citizen-government interactions, cost-cutting and generation of revenue and transparency.

UNESCO defines e-Governance as:

“Governance refers to the exercise of political, economic and administrative authority in the management of a country’s affairs, including citizens’ articulation of their interests and exercise of their legal rights and obligations. E-Governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities.”

This definition envisages the use of the electronic medium in the exercise of authority in the management of a country’s affairs along with expression of citizens’ interests leading to greater transparency and efficiency.

The Council of Europe has taken e-Governance to mean:

“the use of electronic technologies in three areas of public action:

- relations between the public authorities and civil society
- functioning of the public authorities at all stages of the democratic process (electronic democracy)
- the provision of public services (electronic public services)”

In this case, the focus is on making use of electronic technologies with a view to encourage better interaction between government and citizens, promote democracy and provide public services.

The US E-Government Act of 2002 defines “electronic Government” to mean (Section 3601):

“the use by the Government of web-based Internet applications and other information technologies, combined with processes that implement these technologies, to-

(A) enhance the access to and delivery of Government information and services to the public, other agencies, and other Government entities; or

(B) bring about improvements in Government operations that may include effectiveness, efficiency, service quality, or transformation”.

This definition reflects the strategy of the US Government regarding the use of ICT in improving Government operations on the one hand and enhancing the access and delivery of information and services to citizens and government entities on the other.

Dr. APJ Abdul Kalam, former President of India, has visualized e-Governance in the Indian context to mean:

“A transparent smart e-Governance with seamless access, secure and authentic flow of information crossing the interdepartmental barrier and providing a fair and unbiased service to the citizen.” [16]

Basically, e-Governance is generally recognized as the use of Information and Communications Technology (ICT) at all levels of the Government in order to provide services to the citizens, interaction

with business enterprises and communication and exchange of information between different agencies of the Government in a speedy, convenient, efficient and transparent manner.

It helps in increasing the reach of government – both geographically and demographically

1.5 - STAGES OF E-GOVERNANCE

It is apparent that e-Governance is fundamentally linked with the development of computer technology, networking of computers and communication systems. In developing countries, such technologies and systems became available with a definite time lag as compared to developed nations. However, in the case of India, with the liberalization of the economy from the early 1990s onwards, there has been a merging in the availability of cutting-edge technologies and opportunities in the field of e-Governance. Gartner, an international consultancy firm, has formulated four-phase of e-governance model. 1) Presence; 2) Interaction; 3) Transaction; 4) Transformation; this can serve as a reference for governments to position where a project fits in the overall evolution of an e-governance strategy. The Indian experience demonstrates that the commencement of e-Governance proceeded through the following phases:

Phase-1: Presence

This first phase calls for making the goals and objectives of the government known to the people. Development of an inclusive government website, or a network of sites dedicated to different ministries and departments would set the stage for further advancements.

(a) Computerization: In the first phase, with the availability of personal computers, a large number of Government offices got equipped with computers. The use of computers began with word processing, quickly followed by data processing.

(b) Networking: Some units of a few government organizations got connected through a hub leading to sharing of information and flow of data between different government entities.

(c) On-line presence: Increasing internet connectivity resulted in maintenance of websites by government departments and other entities. These webpages/websites covered information about the organizational structure, contact details, reports and publications, objectives and vision statements of the respective government entities.

With this first phase, the very critical task of building the infrastructure, such as telecommunications would be undertaken.
Phase-2: Interaction

This phase would allow for basic interaction with the government.

(a) **On-line interactivity:** A natural consequence of on-line presence was opening up of communication channels between government entities and the citizens, civil society organizations etc. The main aim at this stage was to minimize the scope of personal interface with government entities by providing downloadable Forms, Instructions, Acts, and Rules etc. In some cases, this has already led to on-line submission of Forms.

The task of building the underlying infrastructure would have to be sustained through these two stages, allowing for rapid implementation of advanced applications as endorsed by the consequent phases.

Phase III – Transaction

This phase indicates direct interaction of the government and relevant entities. With the infrastructure in place, complete online service suites can be present for the public, businesses and governmental agencies. Services for the public such as bill and fine payments, license renewal, collecting opinion etc. online procurement tax returns etc. for businesses, cooperative budget preparation, tax records, etc. for governmental agencies can be predicted here.

Phase IV – Transformation

This final phase would strive to achieve the true vision of e-Governance. A single point of contact to constituent entities would provide an integrated platform for government services and organization totally transparent to citizens and businesses. Focus on ‘virtual agencies’ where government information is readily available to all allowing a seamless interface to respective agencies involved in the transactions. State-of-the-art Intranets linking government employees in different agencies extranets allowing seamless flow of information thereby facilitating collaborative decisions among government agencies, NGO’s and the public.\(^{[17]}\)

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\(^{[17]}\) History and Development of Good Governance, From: http://shodhganga.inflibnet.ac.in/bitstream/10603/2019/10/10_chapter-3.pdf
1.6 - E-GOVERNANCE IN INDIA

Establishment of the National Informatics Centre (NIC) in 1977 was the first major step towards e-Governance in India since it brought ‘information’ and its communication in focus.

Launching of NICNET in 1987 – the national satellite-based computer network; followed by the launch of the District Information System of the National Informatics Centre (DISNIC) programme to computerize all district offices in the country for which free hardware and software was offered to the State Governments. NICNET was extended via the State capitals to all district headquarters by 1990.

A National Task Force on Information Technology and Software Development was constituted in May 1998

In 1999, the Union Ministry of Information Technology was created.

By 2000, a 12-point minimum agenda for e-Governance was identified by Government of India for implementation in all the Union Government Ministries/Departments. Tax administration departments both at the Union and State levels were among the first to use ICT to improve their internal working. [14]

Prior to 2006 when the Government of India formally launched its National e-Governance Plan (NeGP), some Departments of Government of India as well as State Governments had initiated steps to adopt e-Governance. These initiatives are described under the following interactions:

Types of Interactions In E-Governance

1) G2C: Government to Citizen;

2) G2B: Government to Business;

3) G2G: Government to Government;

4) G2E: Government to Employee; [18]

Some Initiatives in the same field in India

1. Government to Citizen (G2C) Initiatives:
In this type of interaction, an interface is created between the government and citizens which enables the citizens to benefit from efficient delivery of a large range of public services. It ensures the availability and accessibility of public services on the one hand and improves the quality of services on the other. It gives people the choice of when to interact with the government (e.g. 24 hours a day, 7 days a week), from where to interact with the government (e.g. service centre, unattended kiosk or from one’s home/workplace) and how to interact with the government (e.g. through internet, fax, telephone, email, face-to-face, etc). The primary aim is to make citizen friendly government. [19]

Computerisation of Land Records (Department of Land Resources, Government of India)

Computerization of Land Records (In collaboration with NIC) ensuring that landowners get computerized copies of ownership, crop and tenancy and updated copies of Records of Rights (RoRs) on demand.

A Conference of the Revenue Ministers of States/UTs had advocated such computerization as early as in 1985. Based on the recommendation, the Union Ministry of Rural Development selected 8 districts in 8 States for a pilot project on Computerization of Land Records, which was 100% centrally sponsored. In 1997-98, it was decided that the scheme be extended to the taluka or tehsil or block level to facilitate distribution on demand, of computerized copies of RoRs from the tehsil or taluka computer centre. However, the process continued as earlier and so far, 582 districts, 4423 talukas / tehsils /circles and 1021 sub-divisions have been covered under the scheme. In 3356 tehsils, computer centres have been set up and in 2902 tehsils / talukas / circles computerized copies of RoRs are being issued to landowners on demand.

Bhoomi Project in Karnataka: Online Delivery of Land Records: Bhoomi is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka. It was felt that rural land records are central conduits to delivering better IT-enabled services to citizens because they contain multiple data elements: ownership, tenancy, loans, nature of title, irrigation details, crops grown etc. In addition to providing the proof of title to the land, this land record is used by the farmer for a variety of purposes: from documenting crop loans and legal actions, to securing scholarships for school-children. These

records were hitherto maintained manually by 9,000 village officials. Through this project, computerised kiosks are currently offering farmers two critical services 1) Procurement of land records 2) Requests for changes to land title. About 20 million records are now being legally maintained in the digital format. To ensure accuracy of data management, a biometric finger authentication system has been used for the first time in an e-Governance project in India. To make the project self-sustaining and resilient, Bhoomi levies user charges. The need for a project such as Bhoomi was felt for the following reasons:

1) In the traditional system, land records were not open for public inspection as a result there is record manipulation and nepotism.
2) The process for applying for transfer of title was awkward, time consuming and prone to harassment.
3) There were instances of Government land being illegally transferred in the name of prominent and powerful persons.
4) It was not possible for the administrators to procure, collate and analyse data from the manually maintained records.
5) Land records offered a unique opportunity to make people in the rural areas aware of the benefits of e-Governance.
6) Several benefits were attached with successful implementation of such projects: for example, the sanction of crop loans, since banks would insist on production of land records; reducing delay in the disposal of court litigation due to non-availability of records etc.

To achieve its objectives, certain IT innovations required to be carried out. These included:
1. Due to limited exposure of the officials in the use of IT and the critical nature of the data, the project depends on fingerprint biometrics for not only authentication of identity but also at each stage of any transaction relating to updation of data. This multi layered security access looks beyond the obvious danger of hacking of passwords and ensures accountability at all levels with no scope for repudiation.
2. To ensure that the officials are responsible for the decisions they take on Bhoomi, the original papers connected with the decisions are scanned. To contain frivolous litigation by people claiming that notices seeking possible objections to change of titles were not served on them, the notices are also scanned on to the system.
3. To convince a farmer of the genuineness of a computer interaction, a second computer screen facing him has been provided at the kiosk. Separate touch screen kiosks linked to the database are also available for farmers to independently verify the records in question.

4. In order to protect the data from physical threats like fire or calamities, backing up of data was done by way of online replication.

5. Bhoomi software runs on a First in First Out process.

During project implementation, all the officials involved were assigned well-defined roles and responsibilities, down to the grass roots level. However, in the beginning, despite elaborate and detailed guidelines, these were not filtering down. This was finally achieved through State level workshops and intensive trainings for bringing about changes in the attitude among departmental staff. The Bhoomi project is a remarkable effort and sets an example for other projects in its approach towards piloting a project, as well as it rolls out and sustenance. It may be mentioned here that manually written Records of Right, Tenancy and Cultivation (RTC) have been declared illegal. Based on the success story of this project and its innovations, the Union Ministry of Communications and Information Technology has announced that Bhoomi would be a national model for computerisation of land records and replicated throughout the country.[20]

_**Gyandoot**: It was initiated in the Dhar district of Madhya Pradesh in January 2000 with the twin objective of providing relevant information to the rural population and acting as an coordinator between the district administration and the people. The basic idea behind this project was to establish and promote a technologically innovative initiative which is owned and operated by the community itself. The services offered through the Gyandoot network include followings,

- Daily agricultural commodity rates
- Income and Domicile certificate
- Caste certificate
- Public grievance redressal
- BPL family list
- Rural Hindi newspaper

There is a prescribed service charge for each service which is displayed at each kiosk along with the information about the expected delivery time.

The implementation of this project assumes significance as it throws light on the issues involved in taking e-Governance to rural areas. For example, the ‘India: e-Readiness Assessment Report 2003’ mentions issues of connectivity and electricity supply as major bottlenecks. It also mentions that “Since the cost of Gyandoot E-commerce transactions for most villagers is high, it is important for basic services (e-mail, government databases) rather than high-end applications.”30 The Centre for Electronic Governance, Indian Institute of Management, Ahmedabad also made an evaluation of this project for the World Bank in 2002. It concluded that power supply, connectivity, and backend support are the essential pre-requisites for such projects and significant re-engineering of backend processes and introduction of services that directly contribute to poverty alleviation are needed to make such initiatives sustainable. [21]

**Lokvani Project in Uttar Pradesh:** Lokvani is a public-private partnership project at Sitapur District in Uttar Pradesh which was initiated in November, 2004 to provide a single window, self-sustainable e-Governance solution with regard to handling of grievances, land record maintenance and providing a mixture of essential services.

As 88 per cent of the District population resides in villages and the literacy rate is only 38 per cent, the programme had to be designed in a way which was user-friendly and within the reach of the people both geographically as well as socially. To achieve this, the programme format uses the local language, Hindi, and is spread throughout the district to a chain of 109 Lokvani Kiosk Centres. These Kiosks have been established by licensing the already existing cyber cafes.

As was the case in the Gyandoot project in Madhya Pradesh, no loan or government subsidies were involved in this project. Since existing cyber cafes are being used to run the project, capital outlays are not involved. The system is expected to generate its own funds from the citizens and also contribute to the earnings of the Kiosk operators. However, like Gyandoot in Madhya Pradesh, low literacy rate combined with minimal computer literacy, poor internet connectivity and only 5 to 6 hours availability of power in rural areas constitute major bottlenecks. Despite these bottlenecks, the response to this project has been overwhelming. The main attraction for the citizens is the online grievance redressal system. The Lokvani

Centre enters the complaint on behalf of the complainant. The user need not be literate or computer expert to lodge his / her grievance. A copy of the complaint is given to the complainant along with the complaint number (like the PNR No. of the railway ticket) and the database keeps track of all the complaints filed by a Lokvani Centre. All complaints lodged through this site are monitored and sorted at the District Magistrate’s Office. The complaints are then marked to the concerned officers. A time frame is determined for the redressal, depending on the nature of the complaint. It varies from 15 to 40 days. The name of the officer, to whom the complaint has been marked, along with the deadline, is uploaded on the server the next day. The complainant can access these details within 2 to 3 days of lodging the complaint. In case, the complainant is dissatisfied with the decision, he/she can lodge a new complaint enclosing the previous complaint number and other details. The new complaint lodged will carry a history sheet containing all the details about the previous complaint and its resolution.

Due to the unprecedented and positive response to the grievance redressal mechanism mentioned above, the project is considered a success.[23]

**Project FRIENDS in Kerala:** FRIENDS (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services) is a Single Window Facility providing citizens the means to pay taxes and other financial dues to the State Government. The services are provided through FRIENDS Janasevana Kendrams located in the district headquarters.

This project is a classic case of achieving front end computerized service delivery to citizens without waiting for completion of back end computerization in various government departments. This project thus tries to avoid the complex issues involved in business process re-engineering in the participating departments. In fact, the FRIENDS counters are not even networked with the participating departments/entities. Print-outs of payments made through the counters are physically distributed to participating entities for processing. To remove bottlenecks at the time of processing, a government order was issued to treat a receipt from a FRIENDS counter as equivalent to a receipt from the concerned government entity.

Owing to the success of the project, efforts have been initiated to develop FREES (FRIENDS Re-engineered and Enterprises Enabled Software) which would incorporate the ‘Any Centre Any Payment Mode’. [23]

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**e-Mitra Project in Rajasthan:** e-Mitra is an integrated project to facilitate the urban and the rural masses with maximum possible services related to different state government departments through Lokmitra-Janmitra Centers/Kiosks. e-Mitra is an integration of these two projects in all the 32 districts using PPP model. There are two major components – ‘back office processing’ and ‘service counters’. Back office processing includes computerization of participating departments and establishing an IT enabled hub in form of a mini data centre at the district level (e-Mitra data centre). All participating departments and the service centres hook up to this data centre. It is managed by the Facility Management Service Provider on behalf of the district e-Governance Society (under Chairmanship of the district collector). Private partners (Local Service Providers) run the kiosks/centres. In case of collection on account of payment of utility bills and government levies, the Local Service Provider does not charge the citizen, but gets reimbursement from the concerned organization through the e-Mitra Society. In case of other services, the transaction fees is prescribed by the Society. Thus, this project is an improvement on earlier schemes as it also involves back office computerization. Further, the citizen is not required to pay any fees for availing of the facility for making payment for government utilities.

The e-Mitra project has been chosen by the Government of Rajasthan to roll out the Community Service Centre project under NeGP. [24]

**e-Seva (Andhra Pradesh):** This project is designed to provide ‘Government to Citizen’ and ‘e- Business to Citizen’ services. All the services are delivered online to consumers/citizens by connecting them to the respective government departments and providing online information at the point of service delivery. The network architecture is designed as an Intranet on a Wide Area Network (WAN). The network is designed in three tiers, each tier being physically located in different places. The first tier for the client-end is located at the eSeva centres. The second tier consists of the data servers and the application servers. The third tier comprises Departmental servers as the backend in the concerned departments (Electricity, Municipality, Passport Office, Transport Department, Registration, Commercial Tax, etc). These servers keep consolidated databases. Presently, eSeva is providing ‘One-stop-shop’ for over 66 G2C and B2C services in 46 eSeva centres in the twin cities and Ranga Reddy district. Centres have also been

opened in 20 other districts. The services include online payment of utility bills, issuing certificates, issuing licenses & permits, e-forms etc. Payments can be made by cash/cheque/DD/credit card/Internet. The project has become very popular among the citizens especially for payment of utility bills. In fact, it has been asserted that the success of this project is largely based on payment of electricity bills. This project exemplifies the potential for integration of delivery of Union, State and Local Government services at one point. However, it also shows that the model based on payment of utility bills could not be rolled out in the rural hinterland. [25]

Revenue Administration through Computerized Energy (RACE) Billing Project, Bihar

The Patna Electric Supply Undertaking (PESU), which is one of the seven area boards of the Bihar State Electricity Board (BSEB), caters to the energy requirements of the Patna Urban Area. The entire billing and payment process was manual and anomalies in the system were resulting in harassment to the consumers and loss of revenue to the Board. The major problems which had cropped up in the system were irregular billing cycle, ineffective data management, lack of transparency and delayed accounting. To address these problems, it was decided by the BSEB to take the assistance of ICT in providing value added and consumer-friendly service to the clients. A separate department of IT was created in BSEB to implement the project and the software was designed by NIC.

To begin with, a pilot was executed in one of the divisions for implementing the RACE software in 2001. Different modules were implemented incrementally and by July 2007, payment of bills of any division at any one of the 31 collection counters as per convenience was facilitated. Bills are now being generated with a barcode and consumers can download the bills using the internet and also see the details of payments made by them. [26]

Admission to Professional Colleges – Common Entrance Test (CET): User of ICT to make the process of admission transparent and objective. One of the pioneering efforts was made by Karnataka. The State Government decided to conduct a common entrance test based on which admission to different colleges and disciplines was made.

[25] https://www.esevaonline.ap.gov.in/
2. Government to Business (G2B) Initiatives:

In this type, e-Governance tools are used to aid the business community – providers of goods and services – to seamlessly interact with the government. The objective is to cut red tape, save time, reduce operational costs and to create a more transparent business environment when dealing with the government. The G2B initiatives can be transactional, such as in licensing, permits, procurement and revenue collection. They can also be promotional and facilitative, such as in trade, tourism and investment. These measures help to provide a friendly environment to businesses to enable them to perform more efficiently.

G2B initiatives cover all activities of government which affect on business organizations. These include registrations under different statutes, licenses under different laws and exchange of information between government and business. The objective of bringing these activities under e-Governance is to provide a agreeable legal environment to business, expedite various processes and provide relevant information to business. [27]

E-Procurement: To reduce the time and cost of doing business for both vendors and government.

Project in Andhra Pradesh: Prior to the introduction of an e-Procurement system in Andhra Pradesh, procurement in Government departments was done through a manual tendering process.

The process consisted of a long chain of internal authorizations and scrutiny which necessitated several visits by the suppliers to government departments. The manual tender system suffered from various deficiencies, including discrimination, cartel formation, delays, lack of transparency etc.

The Government of Andhra Pradesh introduced the e-Procurement project in 2003 with the following objectives:

1) To reduce the time and cost of doing business for both vendors and government;

2) To realize better value for money spent through increased competition and the prevention of cartel formation;

3) To standardize procurement processes across government departments/agencies;

4) To increase buying power through demand aggregation;

[27] e-Governance: Conceptual Framework, Second Administrative Reforms Commission Report, Chap-2, 2.4.1 From: http://arc.gov.in
5) To provide a single-stop shop for all procurements; and

6) To allow equal opportunity to all vendors.

In order to achieve these objectives, the entire e-Procurement process was designed to avoid human interface i.e., supplier and buyer interaction during the pre-bidding and post-bidding stages. The system now ensures total anonymity of the participating suppliers, even to the buyers, until the bids are opened on the platform. The e-Procurement application provides automatic bid evaluation based on the evaluation parameters given to the system. These improved processes have eliminated subjectivity in receipt and evaluation of bids and has reduced corruption to a significant extent.

Further, to bring transparency in e-Procurement, tender documents containing all details are hosted on the website. The documents can be downloaded by the interested suppliers free of cost, from the day of publication of a tender. At any time in the procurement cycle, any person associated with the transaction can check and know the status of the transaction. This saves time and effort involved in finding out the status of a purchase order, besides enabling better planning of inventory.

At the outset, an effort was made to standardize the procurement processes and forms followed by various departments especially for public works tenders. Today, all the departments are following a common tendering process and forms for works tenders. These processes have been re-engineered to further improve the efficiency and curtail subjectivity in tender evaluation by the department users.[28]

**E-Procurement in Gujarat**

The system of e-procurement was introduced in the State of Gujarat from October 2004 onwards. Roll out of the system was carried out in a phased manner starting from few works/items for limited departments and was made compulsory for all government departments in 2007. The project was funded by the State Government with the objective of deriving the benefits of increased efficiency from e-enablement of business processes.

It aims to establish transparency in procurement process, shortening of procurement cycle, availing of competitive price, enhancing confidence of suppliers and establishing flexible and economical bidding

process for suppliers. It has been presented to cover the following transactions:

- purchases and procurement of goods, plants, equipment, machinery, medicines, medical and surgical supplies and stores items, food and civil supplies stores items and purchases, printing and stationery items and purchase, all types of vehicle purchases, furniture and fixtures etc.
- Civil construction and related work
- Outsourcing of needed services
- Auctioning of old plants, equipment, machinery, buildings, vehicles, furniture and fixtures, lands, properties, etc

As the project followed defined procurement guidelines of the State Government, no changes were required in the legal framework. However, the process of submission of bids have gone through a major change as physical submission of bids got changed into online data submission. Assessment of the bids and comparative data is presented by the system itself. Initially, the project was launched on a pilot basis and after successful handling of tenders, the roll out was extended to all departments. One to one training was given to all core team members. The project has resulted in reduction in cycle time to 6.6 days from the earlier 30 days.

The project emphasised the importance of training of the stakeholder’s involved – departmental employees and bidders/suppliers/vendors. This project became a benchmark because of sustained capacity building and awareness generation. [29]

**MCA 21:** By the Ministry of Corporate Affairs. The project aims at providing easy and secure online access to all registry related services provided by the Union Ministry of Corporate Affairs to corporate and other stakeholders at any time and in a manner that best suits them.

**Services provided by the project**

The e-government plan covers all major transactions, barring those concerning liquidation of companies. The services currently provided include:

- Registration and incorporation of new companies


- Filing of annual returns/balance sheets/forms denoting change of names/address/director's details
- Registration, modification and verification of charges
• Inspection of public documents
• Applications for various statutory services offered by the ministry
• Issue of certified copies, and redressal of investor grievances
• The portal enables electronic filing of documents.

A Data Centre established in Delhi serves as a secure electronic registry for storage and retrieval of records. A Disaster Recovery Centre in Chennai provides the back-up for the electronic registry.\[30\]

3. Government to Government (G2G) Initiatives:

In G2G type interaction, Information and Communications Technology is used not only to restructure the governmental processes involved in the functioning of government entities but also to increase the flow of information and services within and between different entities. This kind of interaction is only within the sphere of government and can be both horizontal i.e. between different government agencies as well as between different functional areas within an organization, or vertical i.e. between national, provincial and local government agencies as well as between different levels within an organization. The primary objective is to increase efficiency, performance and output. \[31\]

**Khajane Project in Karnataka:** It is a comprehensive online treasury computerization project of the Government of Karnataka. The project has resulted in the computerization of the entire treasury related activities of the State Government and the system has the ability to track every activity right from the approval of the State Budget to the point of rendering accounts to the government. \[32\]

**SmartGov (Andhra Pradesh):** The Andhra Pradesh Secretariat comprises a number of departments. The processing of information in the Government is predominantly workflow intensive. Information moves in the form of paper files from one officer to another for seeking opinions, comments, approvals etc. SmartGov has been developed to streamline operations, enhance efficiency through workflow automation and knowledge management for implementation in the Andhra Pradesh Secretariat. The solution automates the functioning of all levels of Government entities and provides a well defined mechanism for

[30] MCA 21 - The first Mission Mode Project to be launched under NeGP, From: http://nisg.org/project/41
transforming the “hard copy environment” to a “digital environment”. It enhances productivity through use of IT as a tool. SmartGov replaces the paper file with an e-file. SmartGov provides the features of creation, movement, tracking and closure of e-files, automation of repetitive tasks, decision support system through knowledge management, prioritisation of work, easy access to files through an efficient document management system and collaboration between departments. This project is being extended to more departments.

4. G2E (Government to Employees) – Government is being the biggest employer has to interact with its employees on a regular basis. This interaction is a two-way process between the organization and the employee. Use of ICT tools helps in making these interactions fast and efficient on the one hand and increase satisfaction levels of employees on the other.

**Government to Employees Initiatives**

G2E involves giving and taking of information regarding diverse work assignments as may come from time to time, evolution of performance, management policy for personnel, training and development of employees, and career advice. Exchange of information happens online among different organizations, discussion forums, and agencies to enable employees to get the maximum benefit.

The G2E model is a blend of providing information and services by the government organization to their employees to enable communication and learning. This model of e-governance is known for its efficacy in proving e-learning and favors sharing of knowledge among them. It also enables employees to get a chance to access information with regard to pay and benefits policies, training and learning new skills, and employees can manage their benefits online.

**SPARK- Service and Payroll Administrative Repository of Kerala**

SPARK (Service and Payroll Administrative Repository of Kerala) is G2E web-based Personnel Administration and accounts software for Government of Kerala covering 5.25 lakhs employees. Permanent Employee Number for all employees is allotted through the system. Every department in Government has an establishment section to manage the human resources. The entire service information of an employee working in the sub-ordinate service (N.G.O) is maintained in the service book of the employee and is retained with the respective office in which the employee works at any given time. The service information of State Service (Gazetted) employee is maintained in the Entitlement Register and retained with concerned section at A.G office. When a non-gazetted employee is transferred and gets posted to another office, the service book is transferred to the new office whereas the Entitlement register
is always kept at A.G office. The establishment section mainly deals with Payroll, updating service book of the employees, preparation of gradation list, drawing up promotion list based on respective eligibility and reservation criteria, transfers and postings of employees and sanctioning of leave benefits as per directions laid down in the Kerala Service Rules.[33]

*eHRAadm*

The project started with the objective of developing a generic framework for form-based workflow applications to facilitate online G2E services and streamline and speed up administrative approval. The project covers Leave, Service Book, Immovable Property Return, LTC, CGHS and Transport at present.

**Project Features**

- Role Based Access Control
- Software design facilitates Apply, Forward, Process, Approval for form-based applications
- Facilitates approving authorities with appropriate information
- Workflow driven by application specific processing (organization structure)
- Login authentication via centralized LDAP server
- Email notification
- Tracking and monitoring of Application status
- Unique Id for application submitted
- e-Records creation in XML and archival of e-Records
- Pre-population of forms
- Application administration with respective establishment officers/staff
- Centralized System Administration

• Audit logging of important transactions

• Deployment of application software on enterprise Application Server/ DB Server

e-Service Book: The project launched to provide e-Service Book facility for Central Government Employees under 100 days agenda of Govt. of India. So, form-based system has been implemented to create and update of e-Service Book and other related information for central government employees. The project, at present, covers more than 27,000 employees spread across seventy-four central ministries/departments based in Delhi.

Project Features

• Cloud based deployment architecture
• Role based Access control
• Jurisdiction based access of employee
• Analytical DSS Reports for top govt. officials

Summary of Report Min/Dept/Org Wise [34]

1.7 - NATIONAL E-GOVERNANCE PLAN (NEGP)

The National e-Governance Plan (NeGP) has been formulated by the Department of Information Technology (DIT) and Department of Administrative Reforms & Public Grievances (DAR&PG) comprising of 27 Mission Mode Projects (MMPs) and 10 components on May 18, 2006. The NeGP aims at improving delivery of Government services to citizens and businesses with the following vision:

“Make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realise the basic needs of the common man.”

Implementation Strategy, Approach & Methodology of NeGP

Implementation of e-Governance is a highly complex process requiring provisioning of hardware &

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[34] From- http://www.nic.in/projects/ehradme-service-book
software, networking, process re-engineering and change management. Based on past experiences methodology adopted for NeGP contains the following elements:

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

2) **Governance:** Appropriate arrangements for monitoring and coordinating the implementation of NeGP under the direction of the competent authorities have also been significantly put in place. The programme also involves evolving/ laying down standards and policy guidelines, providing technical support, undertaking capacity building, R&D, etc. DIT is required to adequately strengthen itself and various institutions like NIC, STQC, CDAC, NISG, etc., to play these roles effectively.

3) **Centralized Initiative, Decentralized Implementation:** e-Governance is being promoted through a centralised initiative to the extent necessary to ensure citizen-centric orientation, to realise the objective of inter-operability of various e-Governance applications and to ensure optimal utilisation of ICT infrastructure and resources while allowing for a decentralised implementation model. It also aims at identifying successful projects and replicating them with required customisation wherever needed.

4) **Public-Private Partnerships (PPP) model** is to be adopted wherever feasible to enlarge the resource pool without compromising on the security aspects.

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

6) **Programme Approach at the National and State levels:** For implementation of the NeGP, various Union Ministries/Departments and State Governments are involved. Considering the multiplicity of agencies involved and the need for overall aggregation and integration at the national level, NeGP is being implemented as a programme, with well defined roles and responsibilities of each agency involved. For facilitating this, appropriate programme management structures have also been put in place.

7) **Facilitatory role of DIT:** DIT is the facilitator and catalyst for the implementation of NeGP by various Ministries and State Governments and provides technical assistance. It serves as a secretariat to the Apex Committee and assists it in managing the programme. In addition, DIT is
also implementing pilot/infrastructure/technical/special projects. DAR&PG’s responsibility is towards Government Process Re-engineering and Change Management, which are desired to be realised across all government departments. Planning Commission and Ministry of Finance allocate funds for NeGP through Plan and Non-plan budgetary provisions and lay down appropriate procedures in this regard.

8) **Ownership of Ministries:** Under the NeGP, various MMPs are owned and spearheaded by the concerned line Ministries. In case there are any ongoing projects which fall in the MMP category, they would be properly enhanced to align them with the objectives of NeGP. For major projects like Bharat Nirman, Rural Employment Guarantee Schemes etc., the line ministries concerned are advised to make use of e-Governance as also automation techniques from the inception stage. States have been given the flexibility to identify a few additional state-specific projects, which are relevant for the economic development of the State.[35]

**Benefits of e-Governance**

Advantages of e-Governance for the government as a service provider and for the people as a user are as follows,

**Transparency:** Use of ICT makes governing profess transparent. ICT helps make the information available online eliminating all the possibilities of concealing of information. The citizens can see the information whenever they want to see.

**Accountability:** Once the governing process is made transparent the Government is automatically made accountable. Accountability is answerability of the Government to the people.

**Cost Reduction:** Paper-based communication needs lots of stationary, printers, computers, etc. which calls for continuous heavy expenditure. Internet and Phones makes communication cheaper saving valuable money for the Government.

**Speedy Execution:** Technology makes communication speedier. Internet, Phones, Cell Phones have reduced the time taken in normal communication.

**Convenience:** E-Government brings public services to citizen’s doorstep anytime anywhere

**Better access to information and quality services for citizens:** ICT would make available timely and reliable information on various aspects of governance. In the initial phase, information would be made

available with respect to simple aspects of governance such as forms, laws, rules, procedures etc later extending to detailed information including reports (including performance reports), public database, decision making processes etc. The ultimate objective of e-Governance is to reach out to citizens by adopting a life-cycle approach i.e. providing public services to citizens which would be required right from birth to death.\[36\]


- There has been a steep growth in the number of countries that are using e-government to provide public services online through one stop-platforms – an approach that makes it easier to access public services. In 2003, only 45 countries had a one-stop-platform, and only 33 countries provided online transactions. According to the 2016 Survey, 90 countries now offer one or more single entry portal on public information or online services, or both and 148 countries provide at least one form of online transactional services.

- Many governments across the globe are opening their data for public information and scrutiny. The 2016 Survey shows that 128 countries now provide datasets on government spending in machine readable formats.

There have been increased efforts to utilize advanced electronic and mobile services for the benefit of all. Fixed and wireless broadband subscriptions have increased unevenly across regions\[37\]

The increased usage of smart phones due to declining average selling price is resulting in an enormous flow in the number of mobile internet users in India. According to the latest report from IAMAI, titled “Mobile Internet In India 2016”, the country is estimated to have 371 million mobile internet users by June 2016. \[38\]

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\[36\] e-Governance: Conceptual Framework, Second Administrative Reforms Commission Report, Chap-2, 2.5.1 From: http://arc.gov.in


As per IAMAI report, mobile purchasing in rural areas has been increased from 9.09% in June 2012 to 41.60% in June 2016 as compared to urban area which almost five times more.

**Graph 1.2 – Mobile Internet Users in India – Urban vs Rural**


Increased use of mobile phones by people to avail various services on internet has started a new era of M-Governance as a subset of E governance in India. It has given the scope to the government to connect a greater number of people and to provide governance services and information “anytime, anywhere”. Mobile applications also rely on good back office ICT infrastructure and work processes. It has potential of using mobile phones as input devices in certain areas where last mile connectivity becomes issues for simple data inputs of critical importance for decision making in government departments.

The private sector has been leveraging the use of mobile phones for delivery of value added services to customers mostly through SMS based in sectors like, Banking, Media, Airlines, Telecom, Entertainment, News, Sports, Astrology, and Movie Tickets etc., M-governance has increased the productivity of public service personnel, improving the delivery of government information and services, increasing channels for public interactions and lower costs leading to higher participation of people.

A Mobile Applications Store (m-App Store) has developed by Deity as part of Mobile Seva project. The Mobile Governance Portal and the m-App Store can be accessed at http://mgov.gov.in/. The m-Appstore currently hosts over 240 live mobile applications. Applications can be downloaded and installed free of cost on a mobile phone by any person.

The project, “mobile seva” has won the second prize at the prestigious United Nations’ Public Services Awards in the category “Promoting Whole of Government Approaches in the Information Age” for Asia Pacific.

1.8 - ISSUES AND CHALLENGES OF E-GOVERNANCE

Dr. APJ Abdul Kalam, former President of India and a visionary in the field of e-Governance has aptly summarized the basic challenge lying before the country in this regard:

‘‘e-Governance has to be citizen-friendly. Delivery of services to citizens is considered a primary function of the government. In a democratic nation of over one billion people like India, e-Governance should enable seamless access to information and seamless flow of information across the state and central government in the federal set up. No country has so far implemented an e-Governance system for one billion people. It is a big challenge before us.’’

[42] Implementing e-Governance Reforms, Second Administrative Reforms Commission Report, Chap-6, 6.1.2
Although the government has come up with several initiatives to facilitate the access to public services, the anticipated outcomes are yet to be fully realized. This can be largely attributed to various front-end and back-end challenges that the government continues to face. Front-end challenges relate to user-specific issues such as,

- high level of IT illiteracy
- lack of user-friendly application interfaces, specific to government applications
- lack of resources in rural areas like, electricity, service centers etc.
- low broadband penetration
- lack of awareness of e-Governance initiatives.

Back-end challenges relate to technical, process or human resource issues within the government. These issues include

- lack of systems integration vertically within a department, and horizontally with other government departments
- limited knowledge of using computers at various levels of bureaucracy
- deployment of technology without proper process re-engineering
- lack of IT Governance mechanism
- vendor selection and poor execution due to the lack of competent human resource both on the government and the executing vendor’s side
- Lack of capacity in several government departments to conceptualize, design, execute and monitor projects has been a big constraint. The conceptualization of the project including technology choices, business model choices, SLAs need to be thought through differently for each category of project and articulated in the RFP.

The researcher has classified all such challenges in to Social, Economic, Technical and Human resources category and discussed as below,

**Social Challenges**

1) **Different Language:** The diversity of people in context of language is a huge challenge for implementing e-Governance projects as e-Governance applications are written in English language. Therefore, it becomes a challenge for the government to write e-Governance applications which are to be implemented for the whole nation in more than one language so that these may be acceptable to the users of a particular language.
2) **Low IT Literacy**: IT illiteracy is a major obstacle in implementation of e-Governance in India. So, first of all Indian people must be made aware about the usage of Information Technology.

3) **Recognition of applications**: It is a challenge to have all the citizens well aware of the facilities offered by the e-governance and have them to trust in it, so that citizens should be ready to accept these facilities.

4) **User friendliness of government websites**: Users of e-Governance applications are often non-expert users who may not be able to use the applications in a right manner. Such users need guidance to find the right way to perform their transactions.

5) **Services are not accessible easily**: Even if the users of Internet are growing but still there is a major part of Indian population which is not able to access e-Governance activities for variety of reasons, e.g. limited access to Information and Communication Technologies and devices.

6) **Confidence on technologies provided by government**: Users do not have trust on the technologies he/she is interacting with due to security of personal information and data theft. The government has to make a balance between ensuring that a system prevents fraudulent transactions by implementing security measures at hardware and software level.

7) **Lack of awareness in people**: Most of the Indian people are not aware of the benefits of e-Governance services. Even the government do not pay much attention to make the people aware about e-Governance activities. Unawareness is a major challenge in the implementation of e-Governance projects.

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**Economic Challenges**

1) **Cost**: In developing countries like India, cost is one of the most important obstacles in the path of implementation of e-Governance. A huge amount of money is involved in implementation, operational and evolutionary maintenance tasks.

2) **Maintenance of electronic devices**: As the Information Technology changes very fast and it is very difficult for us to update our existing systems very fast. Maintenance is a key factor for long living systems in a rapidly changing technical environment.

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**Technical challenges**

1) **Interoperability**: Interoperability is the ability of systems and organizations of different qualities to work together. The e-Governance applications must have this characteristic so that the newly developed and existing applications can be implemented together.
2) **Applications must be transferrable from one platform to another:** e-governance applications must be independent from hardware or software platforms. These applications may also help on possible reuse by other administrators.

3) **Multimodal Interaction:** Multimodal interaction provides the user with multiple modes of interfacing with a system. An e-Government application can be really effective if its users can access it using different end user devices.

4) **Privacy and Security:** Lack of security standards can limit the development of e-Government projects that contain personal information such as income, medical history etc.

5) **Scalability of technologies:** Technology tends to get out of date very fast. Our government may not be in position to buy new servers every year. So, it is better to use technologies and products which are tried and tested and have scope of scalability to cater future needs.

6) **Geographical barriers:** Corporate networks reside on reliable and controlled networks. Government networks have to go into all areas which are even unfriendly to live. It is, however, costly to wire up all the villages in the country. So, e-Governance systems must have to use the wireless networks like existing cellular networks to reach the applications into remote areas irrespective of the geographical issues.

7) **Lack of integrated services:** Most of the e-governance services which are offered by the state or central government are not integrated. Lack of communication between different departments of government may be its major cause.

8) **Disposal of E-Waste:** number of people has started using electronic gadgets now a days given rise to selling of brand new and re-furbished equipment. It has also created a new environmental question for disposal of waste electronics items

**HR Challenges**

1) **Limited Human Capital Pool in Government:** The availability of human resources with the required competencies falls considerably short of requirements. Presently, this human resource gap is met through hiring resources form the NISG or IT consulting firms directly on short-term contracts.

2) **Lack of Institutional Structures:** There is lack on well-defined organizational structures with clear roles and authority, responsibilities and accountability. The institutional structures with rigid rules, lack of recognition for e-governance domain experience, poor linkages to career path, promotions and opportunities and lack of incentive mechanism to attract, leverage and retain the scarce talent
to work on IT and e-governance projects do not enable seamless deployment and movement of personnel.

3) **Inadequate Capacity Building**: The key challenges with regard to capacity building include absence of institutionalized training and learning framework for e-governance, assessment of training needs, developing training strategies, and lack of trained personnel for training. There has to be the HR interventions for NIC to include identifying human capital gaps, enhancing number of permanent posts and recruitment capacity building.

Researcher has conducted this study around above mentioned challenges of e-Governance. Researcher has been working in IT Industry from last 10 years along with pursuing academic research. Researcher has worked on various IT technologies along with experience of establishing IT Governance practices for sustainable service availability coupled with meeting IT Security and audit compliances. Researcher has selected a State Owned Public Enterprise of Government of Gujarat for his area of study to identify challenges in IT Service delivery to people.

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