CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Democracy gains its value from the nature of the government it forms after the elections and the governance it offers to its people. Government and governance focus on getting the appreciation and cooperation of the people who are governed. Governments around the world are taking efforts to reform their public administration organizations and deliver more efficient and cost effective services, as well as better information and knowledge to their citizens. Every one of us aspires for a good and effective government in our country to ensure the safety and happiness of the people. It is true that the quality of a government naturally depends upon the ways and means of promoting and preserving the standard of life.

A government has to use its power and authority to provide goods and services to the people to maintain the general welfare and basic needs of the common man. So governance is the knack of application of power, strategies, policies and projects with the aim of improving the quality and standard of life. The fundamental expectation of a citizen is minimum cost of living and maximum satisfaction in his everyday life. The assurance for high quality in governance proposed by the rulers during the elections is in turn checked by
the voters. When the rulers are ready to impress the people with new methods and strategies like Information and Communication Technology (ICT) applications in every walk of life, it leads to satisfied citizens and an accountable government.

1.2 ICT AND GOOD GOVERNANCE

Good governance has been stressed often in political science, public administration and more particularly, development management (E-governance Capacity Building 2005). It is closely associated with democracy, civil society, participation, human rights and continuous development of a society. It plays an important role in reformations in public sector growth as it deals with the present and future needs of the people. The essence of good governance is its ability to be people friendly in executing the schemes and the transparency in the activities of the authorities in establishing an administration that is responsive and accessible. The use of computers and information technology is generally conceived as a very effective tool of good governance. It is expected that it will improve the following

a) Delivery of services to the people at low cost,

b) Empowerment of people through open and free information,

c) Transparency in the working of government,

d) Useful linkage between citizen and administration,
e) Analyzing the reach of the schemes and services to the people.

Participation of citizens, transparency in administration, effective and efficient delivery of government services are some elements of good governance in a country. They can be executed satisfactorily when e-Governance is implemented in the activities of government departments.

In our pluralist and complex society, the information explosion has happened due to the growth of communication technologies and the internet helps to move towards a state of continued growth and stability. The prime and urgent issues of the society force the citizens to use the new technologies to organize themselves so that their voices are heard to help the administrative forums. With the advent of World Wide Web (WWW) in the 1990s, many initiatives of ICT measures in governments emerged (Mittal & Kaur 2013). The expectations of people from a government became huge and the adoption of IT enabled governance turned into a new definition of public governance. Thus computers can increase the reach of the people to the information related to rules, regulations, procedures, acts and also about various services offered by the government.

One interesting thing about computer is that it reduces direct contact with individuals that help to reduce the chances of corruption in work places. For example, a farmer can get details of his land record copy on the computer; a citizen can pay any bill or tax without going to the particular office. The
administrative delay due to insufficient staff in an office can be avoided by the use of computers and internet. Many states in the country like Tamil Nadu and Karnataka are using computers for transparency in the departments of education, agriculture, healthcare and rural development.

It is a current trend to attach ‘e’ to various fields (like e-commerce, e-learning, e-health and e-Governance) and is one simple way to create a name for the use of ICT to support the tasks within the topic. This is to see the contribution of it in a particular field or discipline in a new light and it further extends the boundaries of them beyond the usual parameters of evaluation. It is sure that the digital environment will add significance to every field of administration in connection with social and democratic importance.

In 1970s, e-Governance originated in our country with a focus on in-house government applications in specific areas like defense, economic monitoring, planning and the introduction of ICT in census and tax administration. In 1980s itself, the National Informatics Centre attempted to connect all the district headquarters. From the early 1990s, e-Governance has seen the use of IT for wider developments in both public and private sector. In the following years, e-Governance is considered as a high priority agenda in India, as it is considered to be the only means of taking IT to the common citizen.
In current scenario, to govern a country means to steer, to control and to influence from a position of authority. According to the former secretary general of the United Nations Kofi A Annan, "Good governance is perhaps the single most important factor in eradicating poverty and promoting development" (Dwivedi & Bharti 2010). Therefore, governance is an exercise of power for steering social systems, as well as a process by which organizations are directed, controlled and held to account to their society. It is a set of the systems and processes concerned with ensuring the overall direction, effectiveness, supervision and accountability of an organization.

e-Governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services. In this chapter the demands of modernity to move towards online administration, the basic issues related to it and the acceptability of e-Governance in India so far in various fields and the need for e-Governance in election system are discussed.

1.3 E-GOVERNANCE

It involves the application of electronics in government organizations to speed up the processes that are aimed at the welfare of the people.
1.3.1 Definition of e-Governance

Application of information and communication technologies to transform the efficiency, effectiveness, transparency and accountability of informational and transactional exchanges within government and between government and government agencies is defined as e-Governance.

1.3.2 Concept of e-Governance

The concept of e-Governance explains doing more work with fewer people, in less time and with less and smaller offices. To say in simple terms, it is not just about government website, apps and e-mail. It is not just about service delivery over the internet and mobile phones. It is more than a digital access to government information or electronic payments. It will change the attitude of citizens in relating themselves to governments, other organizations and also among themselves. It will evolve a new concept of citizenship, both regarding needs and responsibilities.

e-Governance can be explained as giving citizens the choice of when and where they access government information and services. The idea of putting the citizen at the focus of government means verifying citizen as the end user after applying more and more of electronics and information technology in many of the government procedures. There are three aspects to e-Governance:
1) IT enables the government functioning something similar to back-office automation.

2) Web enabling the government functioning so that the citizens will have direct access.

3) Improving government processes so that openness, accountability, accuracy, the speed of operations, effectiveness and efficiency may be achieved.

Though this would mean web enabled applications, e-Governance would also cater to automated applications for the government sector, which helps in achieving SMART (Libya Colaco 2012) governance which is defined as

- Speed
- Moral
- Accountable/Accurate
- Responsive
- Transparent Governance

1.3.3 The Need of e-Governance

A government cannot exist or function on its own. For a government to operate effectively, a government community citizen
infrastructure should be in place. This would result in a study and meaningful information flow between the government and citizens of a nation. The term e-Governance has different connotations.

- **e-Administration**: State is modernized by using ICT by the formation of data repositories for management information system and computerization of records.

- **e-Services**: The importance of e-services is to bring the government closer to the citizens. They provide online services for various needs of an individual. e-Administration and e-Services together constitute e-Government.

- **e-Governance**: Ability of government is improved by using IT to address the society needs. Publication of policy and program related information to transact with citizens is included.

- **e-Democracy**: Capability of all the sections of society are assisted by motivating with IT to participate in the governance of the state. The emphasis is on transparency, accountability and participation of individuals.
1.3.4 Objectives of e-Governance

As far as the e-Government is concerned, a strict distinction is made between the objectives for internally focused processes (operations) and externally focused services. They can be explained as follows:

- **External strategic objectives:** The external objective of e-Government is to satisfactorily fulfill the public needs and expectations on the front office. Use of e-commerce in government operations helps for a speedy and effective interaction with the public, businesses and other agencies.

- **Internal strategic objectives:** In its back office, the objective of e-Government is to facilitate speedy and effective processes for performing administrative activities.

1.4 DELIVERY MODELS AND METHODS OF E-GOVERNMENT

The primary delivery models of e-Government can be divided into

- Government to Government (G2G)
- Consumer to Government (C2G)
- Government to Citizen (G2C)
- Government to Employees (G2E)
Within each of these interaction domains, four kinds of activities take place.

- Pushing information over the internet like regulatory services, general holidays, public hearing schedules, issue brief notifications.

- Two-way communications between the agency and the citizen, a business, or another government agency. In this model, users can engage in dialogue with agencies and post problems, comments, or requests to the agency.

- Conducting transactions, for example, lodging tax returns, applying for services and grants.

- Governance to enable the citizen a transition from passive information access to active participation in everyday affairs of administration.
These models and the services included in them can be explained in the following sub-sections.

1.4.1 Government to Citizen (G2C)

G2C will aim at connecting citizens to government for democracy and various public services in government domains. It will involve better services to the citizens through single point delivery mechanism.

- **e-Citizen**: Under e-citizen, an integrated service centre will be created. The purpose of this centre will be to take over the various customer services in due course.

- **e-Transport**: Registration of motor vehicles, permits issue, driving license issue, pollution control due to the emission of smoke from the vehicles, tax and fee collection through cash and bank challan are included in the transport aspects that can be easily e-governed.

- **e-Medicine**: Connecting various hospitals in distinct parts of the country and better medical services to the citizen are provided through e-Medicine.

- **e-Education**: It constitutes different initiatives of educating the citizen and the government with numerous information technologies.
• **e-Registration**: e-Governing the registration, properties transfer and stamp duty to be paid as decided by the government will bring significant decrease of paper work and reduce the duplicating of entries in registering property.

• **Computerization of Land Records**: This service ensures that the landowners get computerized copies of ownership and updated copies of records of rights on demand.

• **Bhoomi Project**: Computerized delivery using self-sustainable e-governance project of nearly 20 million rural land records to 6.7 million farmers through 177 government-owned kiosks was conceded out in the state of Karnataka as shown in Figure 1.1.

![Figure 1.1 Bhoomi project](image-url)
• **Gyandoot:** It is a G2C based on intranet service delivery initiative. It was initiated in the Dhar district of Madhya Pradesh in January 2000. It acts as an interface between the district administration and the people and provides relevant information about various government services to the rural people.

• **Lokvani Project in Uttar Pradesh:** It is a public-private partnership project at Sitapur district in Uttar Pradesh and implemented in November, 2004. It provides a single window e-Governance solution to various essential services such as handling of grievances and land record maintenance.

• **Project FRIENDS in Kerala:** Fast Reliable Instant and Efficient Network for the Disbursement of Services is called FRIENDS which is a single window facility providing citizens to pay taxes and other financial dues to the state government.

• **e-Mitra project in Rajasthan:** It is an integrated project to assist the urban and the rural masses with maximum possible services associated to various state government departments such as utility payments through Lokmitra centers and service delivery center through Janmitra kiosks.
e-Seva (Andhra Pradesh): It provides Government to Citizen and e-Business to Citizen services. The highlight is that 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.

Admission to professional courses in professional colleges/ universities– common entrance test: With the rapid growth in the demand as well as supply of professional education, the admission process to these institutions became a most important challenge in the early 1990s. To make the process of admission transparent, a common entrance test is conducted for the admission to different colleges and universities in various disciplines.

1.4.2 Government to Business (G2B)

e-Taxation: It will represent different services that a business house wants to get from the government. Getting license is also included in this. In a similar scenario, it can also flow from a business house to the government. This will become a B2G service. The main requirements for e-Taxation are as follows:

1) Payment Mechanism: A secure payment mechanism needs to be built to enable payments over the electronic medium.
2) **PKI:** Public key Infrastructure or PKI is essential for secure and genuine transactions.

### 1.4.3 Government to Government (G2G)

This can also be referred as e-Administration. It involves improving government processes by reducing the cost, by making strategic connections within government and by creating empowerment. It will involve networking all government offices to produce synergy among them. The major areas are:

- **e-Secretariat:** The seat of power that has a lot of valuable information regarding the functioning of the state is called Secretariat.

- **e-Police:** Citizen’s confidence is built by e-Police on police department. There will be two databases. Police personnel are the first one and the other is of the criminals.

- **e-Court:** There are many cases pending before various courts of law in India. It has caused certain difficulties in the smooth run of normality in society. The application of IT can transform the legal system and bring the court cases to a level of zero dependencies with respect to manual dealing with database of the cases.
1.4.4 Consumer to Government (C2G)

This will mostly represent the areas where the citizen interacts with the government. It will include areas like census where the consumer provides information to the government and taxation where the consumer pays taxes to the government.

- **e-Democracy:** This is an attempt to modify the role of the citizen from passive information receiver to active citizen with a contribution in social activities. The government will be informing and encouraging the citizen to vote and engage the citizen in governance. Organizing an e-debate for taking the citizen’s opinion about the different government policies will strengthen democracy. The concept of e-debate is related to the political leaders participating in television talk shows.

1.4.5 Government to NGO (G2N)

e-Society is about establishing interactions beyond the boundaries of government by developing communities, by building government partnerships and by building civil society. It involves building various associations or interest groups that will ensure the betterment of the society. Such initiatives deal particularly with the relationship between government and citizens. The basics of the achievement of it are:
1) **Publishing**: It is the delivery of data to the citizens. This will involve an open access to government information. The citizen has a right to government information and its activities.

2) **Interaction**: It is the delivery of data to citizens and receiving feedback data from the citizens. This involves taking feedback from the citizens and interacting with the interest groups.

1.4.6 **Government to Government (G2G) Initiatives**

It is an information system sharing the data between government agencies which improves the data access and sharing.

- **Khajane Project in Karnataka**: It is a comprehensive online treasury computerization project of the government of Karnataka. It has made possible the computerization of the entire treasury related activities of the state government and has the ability to track every activity.

- **SmartGov (Andhra Pradesh)**: SmartGov has been developed to put in order the administrative operations, to enhance efficiency through workflow automation and knowledge management for implementation in the secretariat of Andhra Pradesh.
1.5 NATIONAL e-GOVERNANCE PLAN

The National e-Governance Plan (NeGP) is formulated by the department of administrative reforms and public grievances and department of electronics and information technology in the year 2006. The NeGP has the target of improving the speed in delivery of government services and schemes 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 and reliability of such services at affordable costs to realize the basic needs of the common man.”

On July 17, 2010, the former Cabinet secretary Mr. K. M. Chandrasekhar told newspersons that out of 27 mission mode projects under NeGP, 14 had commenced delivery of services in different parts of the country. He assured that by the end of 2014 all mission mode projects would go alive and this would enable the delivery of public service to the citizens of the country as outlined in the program. Projects such as MCA21, pensions, central excise, income tax, passport, banking and insurance, land records and common services centre have been already started and the efforts to modernize the employment exchange are on the way (Press Information Bureau 2010). People can obtain copies of their land records, job cards for employment under MGNREGS and certificates related to birth, death, income and caste online. There are currently 80,000 common service centers (ICT
kiosks through which e-Governance services are delivered) available in India. There is an expectancy of this number to increase up to one lakh in the next few years. India is expected to go for paperless governance after that.

The NeGP comprises of broadly three parallel components. One is the government departments are asked to digitalize their data and services to enable them to be delivered over the internet. Also the government is setting up State-Wide Fibre-Optic Networks (SWAN) to inter-connect various government departments, collectorates, municipalities, panchayat offices etc., along with a central database of all statewide data(Samir Sachdeva 2010). The process of completing SWAN in all the states in our country started in 2010 and it is expected that all the states will complete it soon. The projects under NeGP comprise Central and State Mission Mode Projects.

1.5.1 Central Government Initiatives as Mission Mode Projects (MMP)

The following mission mode projects are initiated by the central Government of India for its various services.

- **e-office:** The central government offices are modernized using the current information and communication technology. e-Office is aimed at increasing the usage of work flow and rule based file routing, quick search and retrieval of files and office orders, digital signatures for authentication, forms and reporting components.
• **Immigration, Visa and Foreigner’s Registration and Tracking:** Immigration Check post is the first point of contact that generates popular perception about the country, thus necessitating a state of the art system for prompt and user-friendly services.

• **UID:** The unique identification project is conceived as an initiative that would provide identification of each resident across the country and would be used primarily as the basis for efficient delivery of welfare services.

• **Pensions:** The pensions MMP are mainly aimed at making the retirement / pension associated information, services and grievances handling mechanism available online to the needy pensioners.

• **Banking:** Operational efficiency should be improved by another step of the Banking MMP and reducing the efforts and delays involved in handling and settling transactions.

• **Posts:** Department of Posts through computerization and networking is undertaken to the modernization of postal services of all post offices using a system based on central server and setting up of computerized registration centers.
1.5.2  State Mission Mode Projects

The following mission mode projects are initiated by the state government of India for its various services.

- **e-Governance in Municipalities:** It is an exclusive idea of the government of India conceptualized under the umbrella of the overall Jawaharlal Nehru national urban renewal mission and the NeGP.

- **Crime and Criminal Tracking Network and Systems:** Creating a broad and integrated system for enhancing the effectiveness and efficient policing at all levels and especially at the police station level is the aim of this system.

- **Public Distribution System:** Computerization is envisaged as a final-to-final project covering key functional areas such as supply chain management including utilization and allocation reporting, movement and storage of food grains, grievance redress.

- **Health:** Programmed management using ICT has been undertaken by the ministry of health and family welfare in the mother and child tracking system programmed and the ministry envisages a more inclusive use of ICT including for hospital information systems etc.
- **e-Panchayat:** The panchayat raj institutions are saddled with the problems of insufficient financial and physical resources, technical capabilities and extremely limited computerization. The ministry of Panchayat Raj, government of India has therefore decided to take up the computerization of PRIs on a mission mode basis.

![Figure 1.2 e-Panchayat](image)

- **e-District:** Providing support to the fundamental administrative unit is the aim of this project i.e. supporting the district administration by undertaking backend computerization to permit electronic delivery of high volume citizen centric government services.
National Land Records Modernization Programme: To employ state of the art information technology is the focus of the complete operation to transform the existing land records system of the country.

1.5.3 Integrated Mission Mode Projects

- **e-Procurement**: The purpose of this project is to create a national idea to execute procurement reforms, through the use of electronic government procurement. It is implemented by the ministry of commerce and industry.

- **e-Courts**: The purpose of e-Court is to make the justice delivery system into cost effective, transparent and easy accessible. The clear objective of is to re-engineer the processes by the use of technology and thus enhances judicial productivity.

- **e-Biz**: The purpose of this project is to provide efficient, convenient, transparent and integrated electronic services to investors, industries and business throughout the business life cycle. The department of industrial policy and promotion and Ministry of Commerce and Industry execute this project.
• **Common Services Centers:** The purpose of this project is to provide cost-effective video, voice and data content and services in the areas of education, e-Governance, entertainment, health, telemedicine, as well as other private services. It will offer web-enabled e-Governance services in rural areas, including application forms, certificates and utility payments.

• **Direct Benefit transfer:** Recently, to assist disbursements of government entitlements like social security pension, NREGA, handicapped, old age pension etc, Aadhaar card is used for authentication. Figure 1.3 shows direct benefit transfer.

• **Aadhaar Enabled Payment System (AEPS):** AEPS is a bank led model which allows operations online and Aadhaar authentication is used for financial transaction through the business correspondent of any bank. The four Aadhaar enabled basic types of banking transactions are as follows:-

  1) Aadhaar to Aadhaar funds transfer

  2) Cash deposit

  3) Cash withdrawal

  4) Balance enquiry
The benefits of e-Government are connected with everyday life of the citizens of the country. Figure 1.4 shows the benefits of e-Government.

E-governance Does Not Only Hold Economic Potential…

Stronger Society ↔ Stronger Economy

Better informed, connected citizens

Increased Productivity

Awareness

Govt online Core element of 21st century Knowledge-Based Economy/Society

…but social potential as well!

Figure 1.4 Benefits of e-governance
We can state a few of them as follows:

To citizens:

- 24x7 (24 hours, 7 days a week) round-the-clock service (always available)

- Economical (no need for physical visit to an office)

- Fast and efficient service (electronic)

- Transparent (no speed money)

- Equitable (any one can access it)

- Convenience (can be accessed while on move or at home)

To business:

- Reduced time in setting up new business

- Conducting e-business and e-commerce (online business)

- Better conformity to government rules and regulations for running business

- More convenient and transparent way of doing business with government through e-procurement

- Better control over movement of goods through online monitoring of clearances

- Conducting monetary transactions online (e-banking, e-payment)
To government:

- Better policy making and regulatory and development functions as result of better and

- up-to-date information

- Very fast acquisition, storage and retrieval of data leading to better decision-making

- Better management of government processes

- Dissemination of government rules and regulations

- Better performance in regulatory functions like taxation

- Better performance in social sectors like education, health and social security

- Creates the positive image of modern and progressive government

1.7 ADVANTAGES AND CHALLENGES OF ELECTRONIC GOVERNMENT

The advantages as well as the disadvantages of going electronically are unique and specific in their own way. The main advantage will be in improving the efficiency of the current system of administration; also, saving
money and time is possible. Better communication between government and business is created and thereby facilitating open market and strong economy. In addition to this, when an office moves to an electronic system, it would reduce the need for man power and therefore to reduce the cost of operations.

- **Speed:** Technology makes communication speedier and clearer. Telephone, internet, cell phone have reduced the time taken in usual communication (Insights Active Learning 2014).

- **Cost reduction:** Stationary cost is the reason for most of the government outflow. Communication based on paper requires lots of printers, stationary, computers, etc. which calls for continuous heavy expenditure. Internet and phone make communication cheaper saving valuable money for the government.

- **Transparency:** The application of ICT makes governing process transparent. ICT helps make the information accessible online eliminating all the possibilities of concealing of information.

- **Accountability:** Government is automatically made accountable, once the governing process is made transparent. Accountability is the need to be responsible to the people regarding the function of government. An accountable government is a responsible government.
- **Convenience:** e-Government brings public services to citizens on their schedule and their venue.

- **Improved customer service:** e-Government allows shuffling the resources from backend processing to the front line of customer service.

- **Increased access to information:** Accessibility of government information is improved by e-Government to citizens allowing it to become a significant resource in making the decisions that affect daily life and so it helps in the empowerment of citizens.

The following are the challenges to be addressed in the e-Governance:

- **Legislative barriers:** A proper legal frame work should exist for e-Government initiatives. The process and services of e-government processes should be equivalent with paper-based processes.

- **Digital divide:** It refers to level of access to the internet between individuals, business and communities. The social, infrastructural and economic are the indicators of digital divide.

- **Technology change:** The e-Government initiative has the ability to work in technology change such as software integration and middleware technologies.
Almost all the sectors are benefitted by e-Government services and produce excellent outcome than manual services. One important part of governance is the conduct of elections. The elections decide the representatives of the people who in turn will take care of the government. In this important field of democratic activity, the traditional Polling place voting method alone is followed in our country. It is said to note that there is less voter turnout in every election. Keeping in mind the existing availabilities regarding ICT applications in our country and the enthusiasm of the people towards it, online voting can be introduced in our country. It will increase the voting percentage remarkably. This will have an impact on the political atmosphere of the country which is heading towards free and fair polls with less expense. This research work tries to prove the concept of e-voting by using various existing algorithms and proposed an efficient decision tree algorithm to ensure the concept. To substantiate the study, a questionnaire is framed to gather the public opinion on e-voting from various assembly constituencies in Tamil Nadu and it is analyzed using Statistical Package for the Social Sciences (SPSS). It too supports the implementation of online voting to get increased voter turnout in elections.