

## Information communication technology enabled good governance in the World, India and Uttar Pradesh

<sup>1</sup> Heera Lal, <sup>2</sup> Dr. DS Yadav

<sup>1</sup> Research Scholar, Dr. A.P.J Abul kalam Technical University (AKTU) Lucknow, Uttar Pradesh, India

<sup>2</sup> Prof. Director, Govt. Engineering College, Banda & Research Guide, Uttar Pradesh, India

### Abstract

The enabling role of the Information and Communication technology (ICT) in the delivery of services in the public and government sector has gained acceptance. As a result, a revolution in terms of governance is taking place all over. E-Governance assumes greater importance in the context of management of today's governmental structures to achieve rapid economic growth and improved quality of life. The technology and the methods used in E-Governance project provide a roadmap for efficient delivery of services at the door step. In today's time the development of any country depends on the uses of E-Governance and also their penetration. Development of any country can be judge by the scope of E-Governance in that country.

The emergence of Information and Communication Technology (ICT) has provided means for faster and better communication, retrieval of data and utilization of information to its users. E-Governance is basically the application of ICT to provide government services to the citizens through internet. In developing countries like India, where literacy level is very low and even most of the people are living below poverty line, people are not even aware about the benefits of e-Governance activities and people do not use Information and Communication technologies to a much extent, there exist a number of problems to implement e-Governance activities. This research paper highlights the main challenges related to the implementation of e-Governance in India.

**Keywords:** Cost, different languages, e-readiness rank, e-Governance, ICT, literacy level, per capita income, separation

### Introduction

E-Governance is nothing but use of internet technology as a platform for exchanging information, providing services and transacting with citizens, businesses, and other arms of government. E-Governance provides a sound strategy to strengthen overall governance. It can not only improve accountability, transparency and efficiency of government processes, but also facilitate sustainable and inclusive growth. E-Governance also provides a mechanism of direct delivery of public services to the marginal segments of the society in the remotest corners, without having to deal with intermediaries.

Today, efficiency of a government is measured by how innovatively and satisfactorily it can serve its citizens. World has a come at a point where the general public is the God and everything which a government or the public sector undertakes has to be for their benefits. To serve this God governments are coming up with innovative idea and services and are trying very hard to please them. The term coined where the deeds, services or the work done by the government is for the betterment of the people is governance. Good governance is the involvement of the people at every level of decision making and providing services which consumer centric and is available to them with ease and 24\*7. By providing such services the government instills faith in the hearts of the people that it is working for them and in their best interest. Good governance is the need of the hour, as every country needs to prosper and grow and to provide the best possible services to its public. This level of efficiency and interaction between the public and the

government can be achieved by implementing the good governance practices which are based on the information and communication technology.

Information technology is used in every field now days, so why not governance. The application of IT for governance is e-governance. Governments all over the world are using e-governance to reach a large section of its citizens, as it has wider reach, it can reach the remotest of places where physical transportation is not possible. It provides every hour of the day, the information can be used at any point of time, etc. It has been of great help to the governments of various countries.

The most populous state of India is Uttar Pradesh where in also many e-governance services have been initiated to help simplify the lives of the public. A land scheme, scholarship scheme, utility bill payment scheme are few of the many initiatives which have been started by the Government of Uttar Pradesh. The e-services have been very successful in Uttar Pradesh in comparison to few other states because of the low literacy level in the state, low income group people residing in that area, etc. Still, the Government of Uttar Pradesh is trying to overcome these problems and is working towards proving a better future for the people of the state by inviting various IT companies in the state and building IT infrastructure in the state. The state has a long way ahead of itself but it has started on the path to a glorified future.

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 [7].

E-Governance was started in India by AHSAYA in Kerala. This project involves setting up around 5000 multipurpose community technology centers called Akshaya e- Kendra's across Kerala. Run by private entrepreneurs, each e-Kendra set up within 2-3 kilometers of every household, will cater to the requirements of around 1000-3000 families to make available the power of networking and connectivity to common man. Akshaya is a social and economic catalyst focusing on the various facets of e-learning, e-transaction, e-governance, information and communication.

E-Governance is not only popular in India but also worldwide. To make working of government more efficient, responsive and transparent many developed and developing countries have taken some useful steps for the expansion of e-governance in their respective countries. Countries which are in the race of e-governance implementation are UK, USA, New Zealand, Brazil etc. Below following countries with their respective projects has been described:-

**USA:** On July 18, 2001 Task Force to identify priority actions that achieve strategic improvements in government and set in motion a transformation of government around citizen needs was done <sup>[10]</sup>.

#### Various projects

**1. Recreation One Stop:** This project was started on 31 April 2002. It aimed to:

- Agreement with private sector reached on implementation of new recreation online projects.
- Additional recreation projects available online.

**2. EZ Tax filling:** This project was started on 31 April, 2002. It aimed to:-

- Filling and refunding of taxes online.
- Initial deployment of industry partnership free e- filling solution for 2003 season.

**3. Federal Assets Sales:** started on 31 March, 2003. It aimed to

- Develop pilot business integration
- Re-host federal sales.

**4. E-Payroll/HR:** started on 31 March, 2002. Aimed to:

- complete and submit business case to PMC
- integrated enterprise architecture

**5. E-Authentication:** started on 1 July, 2002. Aimed at:

- Initial authentication gateway prototype
- Full deployment

**UK:** In April 2000, the cabinet Office in the UK came out with the document 'E-Government: A Strategic Framework for Public Services in the Information Age' <sup>[9]</sup>.

#### Various projects

**1. Cornwall Electronic Health Record Pilot:** - this project was started in April 2000 <sup>[11]</sup>. It aimed to:-

- Pan-community EHR demonstrator
- Connect all General Practitioners to NHSnet (national-level NHS Virtual Private Network or intranet)
- 24 hour emergency care record
- Common information architecture
- □Condition-specific care modules - mental health, coronary heart disease, diabetic care

**2. Go-between Project:** this project is for Calne Community Area in Wiltshire. This project is designed to assist a local

rural community organize its transport services by identifying unmet local demand and matching it with spare capacity <sup>[12]</sup>

**3. Plymouth Bus Project:** Commissioned by Plymouth City Council to undertake a comprehensive study of the bus network and propose initiatives for its future development and investment. (Completed in January 2009) <sup>[12]</sup>

**4. Integrating Transport:** Started in South West Hertfordshire. Lead consultant on a project commissioned by Watford Borough Council. Preparation of a sustainable transport strategy for implementation over the next ten years. (Completed October 2008) <sup>[12]</sup>

#### New Zealand

In May 2000, Realising the importance of opportunities offered by ICT, the New Zealand Government came out with its e-government vision document and an 'E-Government Unit' was established by the State Services commission

#### Various projects

**The Treaty of Wetangi:** It is the founding document of New Zealand. This website, launched in 2003, to provide information and resources for an informed understanding and greater public knowledge of the treaty <sup>[13]</sup>. As people's want advancement in their lifestyle same they want in their government.

- The way the government works.
- Transparency in its working and information.
- Communication to its citizen.

In developing countries, Government beneficiary scheme can be reached to the lowest pyramid of society efficiently by implementing E-Governance projects. It can bridge the gap between rich and poor. Rest of the paper is organized as follows. Section 1.1 and 1.2 of the paper describes about E-Governance. Applications of E-Governance and challenges in implementing E-Governance have been described in section 2, 3, 4 and 5. In section 6; future technologies for e-governance are described.

**E-Governance:** Use of internet by the government to provide its services at the door step of customers, business and other stakeholder.

In E-Governance, government makes best possible use of internet technology to communicate and provide information to common peoples and businessman. Today, electricity, water, phone and all kinds of bills can be paid over the internet. All this is what government and citizens is using and doing. All are dependent on internet and when citizens depends on government internet services all that come is E-Governance. There are four pillars of E-Governance:-

- 1. Connectivity:** Connectivity is required to connect the people to the services of the government. There should be a strong connectivity for an effective e-governance.
- 2. Knowledge:** Here knowledge refers to IT knowledge. Government should employ skill full engineers who can handle the e-governance in an efficient way. These engineers also handle all kind of fault that may occur during the working of e-governance.
- 3. Data Content:** To share any kind of knowledge or information over the internet, there should be its database. This database should have the data content which is related to government services.

- 4. Capital:** Capital can be on public or private partnership. It refers to money used by government to provide their services or to that sector of the economy based on its operation
- Most of the finance and budget work are also done through e-governance.

**E-governance models**

E-GOVERNANCE services can be shared between citizens, businessman, government and employees. These four models of e-governance are as:-

1. Government to citizens (G2C)
2. Government to government (G2G)
3. Government to employees (G2E)
4. Government to businessman (G2B)

**Government to citizens (G2C):** This model of e-governance refers to the government services which are shared by citizens. Here, citizens visit to the link of services that they want to use. This models strong the bond between government and its citizen. Type of services which are provided by this model includes:

- Payment of online bills such as electricity, water, telephone bills etc.
- Online registration of applications.
- Copies of land-record.
- Online filling of complaints.
- Availability of any kind of online information.

**Government to government (G2G):** This model refers to the services which are shared between the governments. There is lots of information that need to be shared between various government agencies, department and organizations. These types of services or information are as:-

- Sharing of information between police department of various state.
- Government document exchange which includes preparation, approval, distribution, and storage of all governmental documents is also done through e-governance.

**Government to businessmen (G2B):** Through this model, bond between private sector and government increase and businessmen use to communicate. They share information through this model like:-

- Collection of taxes.
- Rejection and approval of patent is also done by this model.
- Payment of all kind of bills and penalty.
- sharing of all kind of information, rules and data.
- Complaints or any kind of dissatisfaction can be shown by this.

**Government to employees (G2E):** This model increases the transparency between government and its employee. Here, employee can keeps a check on the functioning and working of government and government can keeps on its employees. Information that can be shared by this model:-

- All kind of data submission(attendance record, employee record etc) from various government offices is done by this model
- Employee can file all kinds of complaints and dissatisfaction by this model.

- All kind of rule- regulation and information for employees can be shared by this.
- Employees can check their payment and working record.

**Government, Governance and Good Governance**  
**Government**

Government is the collection of people, a body which is entrusted with the work to govern a state, country/nation or other political units present in the country (Allen, 2000) [3]. The government’s job is to focus on the society and on the working in public interest. Government is one of the parts of governance (Pani & Mishra, 2009) [25].

**Governance**

Governance is not the same as government. The concept of governance is not new but has been present since the start of civilization. The concept of governance first came into existence in the 1990’s because of the political and economic changes in the decade and it was recorded the first time in a World Bank document on the Sub-Saharan Africa. It identified the four important dimensions of governance which are the management of public sector, accountability, legal framework for development and information and transparency in the working (Pani& Mishra, 2009; Wouters & Ryngaert, 2004) [25, 44]. Government is one of the components in machine of governance; other components include the civil society and the private sector. In the absence of these factors the government will not be able to provide its citizens a working governance model (Jabeen, 2006) [16]. Governance is the process of decision making and working together in cooperation and participation from all the sectors of the society (Pani & Mishra, 2009; TESEV, 2008) [25, 40], with the decisions being taken in a transparent, accountable, effective and responsible manner (TESEV, 2008) [40].

**Good Governance**

Governance is the path to reach the desired results and good governance is models which are implemented to lead to economic and social results which the citizens want. Good governance is the proper management of government (DeVries, 2013) [8]. Good governance is the use of resources and public power in a legal, accountable and effective way to accomplish the social-economic goals of the nation (Johnston, 2006) [18]. Good governance is major method in improving the quality of decision making process and it in turn improves the quality of life by effective and rational use of public resources (TESEV, 2008) [40]. Good governance is government steering, supporting, and guiding the process as opposed to the earlier practice of command and control (Jabeen, 2006) [16].

Good governance signifies a well functioning public sector and it also implies that the government puts its political, administrative and finance departments in proper order with socio-economic growth. But some of the countries are lacking in these concept of good governance because of the lack of man power and financial resources to carry out such a process (DeVries, 2013) [8].

**Good Enough Governance**

Implementation of good governance practices is posing a problem for the developing countries at the level of implementation of plans as different international agencies

propose different plans for the good governance plans. Concepts such as decentralization, privatization, public-private partnership has helped the developed countries transform themselves but they have made no headways in the developing countries, because the people in the developing countries look towards their government for the fulfillment of their needs (Jabeen, 2006) <sup>[16]</sup> defined good enough governance as the level of government performance and civil administration participation which is minimally acceptable, and that does not significantly prove to be a road block in the path of economic and political development and allows the working of poverty reduction programme. Though in its initial stage, it is proving to be a realistic agenda, which is universally applicable but it does provides some challenges at the concept building, methodology and practical level (Jabeen, 2006) <sup>[16]</sup>.

### Principles of Good Governance

In the country of Bangladesh some constitutional provisions for good governance have been formularized such as the equal participation of men and women in the every sector of the society, judiciary should be free to able to give proper judgment, constitution is above everything else in the process of good governance, it is the aim of the government to make the nation free from exploitation, good governance is protects the right of democracy of the citizens and equitable distribution of resources in the country (Alam & Hasina, 2014) <sup>[1]</sup>. Thailand also defined the characteristics of good governance in its legislature of The Regulation of Good Governance (1999). They are the Rule of Law, Rule of Moral, Rule of Participation, Rule of Accountability and Value for Money (Trakulmututa & Chaijareonwattana, 2013) <sup>[41]</sup>.

The United Nations has described eight important characteristics of good governance which every country should follow to provide a friendly and efficient work environment for its people. They are:

### Participation

For a god governance initiative to be successful both men and women should participate in the process of decision making and formulation of ideas. People should participate in the decision making but they should also be informed about the topic. The people should be heard in the decision making process if not individually then through a legitimate intermediary institution which would represent their interests to the government. This level of participation can only be build on the foundation of freedom of speech (Second Administrative Reforms Commission, 2007; Sheng) <sup>[33]</sup>. If all the stakeholders are included in the decision making process the possibility of implementing the service increases. Participation from not only the individuals but from the civil society is also required (TESEV, 2008) <sup>[40]</sup>.

To increase participation of the public in Tunisia, the Ministry of Education there launched a programme “Online Academic Orientation”. This service allows the students to interact with the academic staff, so they can receive advice and guidance for their studies and to apply to different courses. It has increased the participation of students in the processes of taking control of their studies.

In India public participation is of great importance to the government so that it can provide better services to its

citizens. The Government of Nagaland introduced the Programme of Communitisation of Public Institutions and Service. It covered the area of health, education, utilities, improvement in attendance of both students and teachers and the community school were made popular.

In the state of Uttar Pradesh also to increase the people participation an E-Procurement Initiative was launched. The system included various departments like Public Works Department, Irrigation, etc. The system has included all these departments under its domain to increase participation of people (Gosaliya).

### Rule of Law

Good governance is based on the principle that the services provided are legal and they are enforced impartially. The practices should protect the rights of the minorities. The major requirement for impartial enforcement of services is an independent judiciary and an impartial and non corrupted police force (Sheng, Second Administrative Reforms Commission, 2007) <sup>[33]</sup>. The decisions regarding the practices of good governance should be based on objective information which comes under the law and all the working is done through a legal channel (TESEV, 2008) <sup>[40]</sup>. All the rules and regulations should be enforced impartially regardless of the party organizing the practice, mainly the human rights laws. Under the practice of rule of law no one is above the law not even the government, so it makes the government more accurate in the decision making process. In our constitution every citizen is provided equality before law so the good governance practices should be formulated keeping in mind the rules of the country (Singh, 2013) <sup>[36, 45]</sup>. Rule of law should not only be followed but the citizens should be made aware about their rights and the laws of the country.

### Transparency

Transparency is the building block of good governance which means the decisions are taken and their enforcement is done in such a manner that is acceptable by law. It also means that the information will be freely available to all which would be affected by the new practice. The information provided hear in would be easily available and can be accessed through various medias platforms available (Sheng). All the information should be shared with all the shareholders of the country and flows freely in the country among its citizens.

To increase transparency and efficiency in the legislative process in Austria a digital law making system was incorporated. ‘eLaw’ which includes the involvement of all the institutional stakeholders and all the integrated parties in the process of law making. It was implemented as the people had no access to the legal acts, and it was making the judiciary opaque for the general public. Now all legal acts can be accessed online through ‘eLaw’ and they are accessible to all the citizens. It has helped in making the judiciary system transparent for the people and they are becoming aware of the rules, regulations and acts of their country.

The Government of Karnataka made a commitment to improve the governance in the state and to upgrade the states infrastructure and services. In view of these functions a Bangalore Task Force was formed which included prominent citizens of the city, industries and people from civil society

were taken up so they would be more involved in the development of the city.

### **Responsiveness**

Another important characteristic of good governance is that the government and the institutes should be responsive. Institution and government should serve all the stakeholders of the society. Another point being the services provided should be in a timely fashion which ultimately serves the needs of the citizens (Second Administrative Reforms Commission, 2007) <sup>[33]</sup>. Time bound completion of the work by the government will reduce the cases of corruption in the government machinery. When the people will have knowledge about the time frame under which the work should be done and if they are not provided with the services, they can complain to the relevant authority (Singla, 2011) <sup>[37]</sup>. Haiti developed a Sahana Disaster Management System which provides modular, web-based disaster management application. It has been deployed in many disasters around the world. It provides information needed for the relief operation. Many such services are provided through the Sahana Disaster Management System.

### **Consensus Oriented**

Every person in the society has their own view point about a problem. Good governance is unity of different interests in the society to reach a level of consensus which is acceptable by all in the society and is in the best interest of the society and the ways in which it can be achieved (Second Administrative Reforms Commission, 2007) <sup>[33]</sup>. The decisions taken should be based on policies and procedures of the government Second Administrative Reforms Commission, 2007) <sup>[33]</sup>.

The official website of Seoul, Republic of Korea is an apt example of engagement of general public. It is a website which provides information and services to a majority of people and is an important ingredient for any good governance or e-governance initiative to be successful as it should cater to the needs of the masses. Another such facility is I Health Record of the United States of America where the medical records are made available online for the masses to see. The people can visit the website and can make relevant changes which suit their needs. This facility serves a majority of people in United States of America (United Nations, 2006) <sup>[42]</sup>.

Project Swajal which works in 1000 villages of two states that is Uttar Pradesh and Uttarakhand is another example of a facility which serves the masses. It works in collaboration with the World Bank and the Government of India to provide better quality water, sanitation facilities and hygiene benefits to the rural people fulfilling their basic needs. It looks to providing drinking water to the villages in the draught hit area which is a necessity of the masses. E-District project of Uttar Pradesh works in 6 districts and provides 22 services to the masses. Services like certification, pensions, ration card, employment registration, etc which cater to the needs of the masses and provide them with better quality of services (Gosaliya).

### **Equity and Inclusiveness**

All human being are equal and have equal dignity and right. A society should ensure that all its members have a stake in

the working and are not excluded from the mainstream society. It requires all that all the groups and mainly the most vulnerable have a proper opportunity to improve in their life and are able to maintain their well-being (Sheng). Everyone in the society have the same rights and not discriminate on the basis of race, color, sex, etc and non-discrimination of people makes the basis freedom, peace and justice in the world. Both men and women should have equal opportunities to improve their lives (Second Administrative Reforms Commission, 2007) <sup>[33]</sup>.

To provide just and equitable services to all a system of Aadhar or Unique Identification has been implemented so that everyone is equally served during the development process. It is system of providing unique identification number to the citizen on the basis of which the government can authenticate the type of service one needs from the government. The scheme started in 2010 al over India (Rao, 2013) <sup>[30]</sup>.

To increase equality among the people of the state of Uttar Pradesh a service of e-scholarship was introduced to give a growth opportunity to the students without the consideration of their financial background. Uttar Pradesh is the first state in the country which has started online disbursement of scholarship to primary, upper-primary, secondary and higher education students who belong to Scheduled Caste, Schedule Tribe, OBC, Minority and BPL family in the state. The project will bring about socio economic equality in the education sector of the society (Gosaliya).

### **Effectiveness and Efficiency**

The resources used in the process and by the institutions should be effectively used (Second Administrative Reforms Commission, 2007) <sup>[33]</sup>. The decisions taken by the government should be beneficial to all the people equally and there should be reasonable correlation among the results to be achieved. The resources should be judiciously used and there adverse impact should be reduced. The results should meet the expectations of the society with the use of the best resources at their disposal. The work should be efficiency done so that the resources are utilized efficiently and the work should be such a way that it is environmentally friendly (Sheng). Imposing time limit also increases the efficiency of the work done by the government (Singla, 2011) <sup>[37]</sup>. The resources are used efficiently and effectively to produce the results which are expected by the people.

To bring about efficiency in the dissemination of giving out driving licenses and to do away with the middle men involved a new initiative Vahan has been started by the Government of Uttar Pradesh. It has computerized the working of 19 RTO and ARTO offices and in the years to come the project will be extended to other RTOs of the state also (Nandan).

### **Accountability**

It is the basic requirement for any good governance initiative to work properly and serve the nation. The government and the institution should be answerable to the stakeholders which would be directly affected by the decisions of the government and the institution (Second Administrative Reforms Commission, 2007) <sup>[33]</sup>. It is a proper accounting of the funds used by the public officials and then the budgets is prepared, so that the public officials can account for the amount spend (International Fund for Agriculture

Development, 1999). The accountability of the officials also depend on the factor that the decisions which are taken are internal or external (Graham, *et al.*, 2003; Second Administrative Reforms Commission, 2007) [33]. It goes a long way in making the government or institutions responsible for their actions and the general people can view the progress of their request or problem (Singla, 2011) [37].

Bhagidari is a programme developed by the Government of Delhi to increase the coordination between the public and policy makers, the people are able to give their inputs and discuss their problems. Interaction is between the various Bhagidari Cells, local groups such as the Resident Welfare association, Market and Trade Association and the policy makers in public services department. It was a stepping stone to the Right to Information.

### Factors Contributing to Good Governance

A survey was conducted to determine the factors which contributed to good governance programme are that the government should develop good education facilities which results in jobs, government should develop basic infrastructure like road, bridges, power, telecom, etc, law and order in the society, effectiveness and efficiency in the working of the government employees, reducing the inequalities in the economy, providing freedom of speech, religion, work and attitude towards the government, corruption free dealing with government, free working environment, citizen centric services by the government, etc.

### Model of Good Governance

Various models have been applied by different countries to reach a stand of good governance but a single model is not appropriate for all the countries. Like in the developing countries the population of the youth exceeds the population of older people so the government should focus on building and developing more schools and colleges than the developed countries which have high number of older people as they should be focused on building more old age homes. They follow the same path when they are faced with similar issues and make use of their data to set up a similar kind of model which meets the specific needs of the developing country (Andrews, 2008) [4].

### Challenges of Good Governance

Good governance is great concept if it has been implemented with proper research and it is able to reach the people who it is intended for. But sometimes it may not reach the respective people or the work is not managed properly to cater to the needs of the people. Illiteracy is a road block in the way of implementing good governance as people don't understand the good they will get out from the work (Alma & Hasina, 2014) [1]. Some of the general issues faced during the implanting of good governance programmes can be strict and excessive legislation and control as it does not provide enough freedom to the officials to implement the programme which would benefit the citizens. It lacks proper planning in the field of resource allocation and utilization. Government starts thinking in the short term which is not beneficial for the good governance projects which should work for the long term to provide the intended benefits (Johnston, 2006) [18].

### Importance of Good Governance

The importance of governance can be valued such that it provides the facilities or things which the citizens value the most. It was noticed in many instances that the government acting alone was not able to fulfill the needs, requirements of the citizens. To achieve the goals interaction with the citizens was needed and there was a need of interaction in the society to achieve the "good governance".

### E-Governance

Digital Technology which includes services like cloud computing and various mobile applications have come up as the main ingredient for economic growth and a source for empowering the people, and they are used by the people every day. It is a medium through which people connect, share their education and issues pertaining to them and they are also helpful in solving the issues in real time (<https://mygov.in/group/digital-india/>). E-governance is much more than just cutting short the process and efficiently delivering the services, but it is about changing the very working of the government and reinventing the way citizens participate in the democracy. E-governance is the use of information technology to provide government services at the door steps of the citizens, businesses and any other stakeholders of the government (Yadav & Singh, 2013) [36, 45]. It can be defined as the application of Information and Communication Technology to the administration of public services. It does not means a computerization of all the working or processes of the administration services but it means to bring about fundamental changes in the government working (Pani & Mishra, 2009) [25].

### E-Governance and E-Government

E-government is defined as the delivery of government services and the information regarding various plans, policies, services to the citizen using an electronic medium. Where on the other hand e-governance refers to the interaction and participation between the government and the citizens and it brings about a change in the working of the government (Pani & Mishra, 2009) [25].

### History and Evolution of E-Governance

Historically Chile was the first to provide e-governance solution to the masses in the seventies but currently what e-governance we see has been given by has come out from the "Information Super Highway" which was started by US Vice President Al Gore. Firstly it was started to expand the fiber optic network but later socio-economic considerations were also included in its scope (Walia, 2009). In the 1980's and 1990's government was lagging behind the commercial world in implementing the Information and Communication Technology (ICT) in their regular working and the governments were the last to use the ICT for the purpose of e-governance. Initially the government implemented ICT in only a partial manner along with the older manual procedure and it did not result in any improvement in the working of the government. Still the use of ICT has been limited to the use of e-mail, internet and video conferencing for various government functions. Proper implementation of the e-governance by the government has resulted in effective and efficient functioning of the government (Prabhu, 2013).

### Focus of E-Governance

The primary focus of the e-governance initiatives have been on the automation and computerization of the various public services. Whereas the State Government uses ICT tools for services ranging from individual departments, electronic filing, handling and work system, access to other entitlements from the government, public grievance redressal system, tax payment to meeting poverty alleviation goals and provisions for market information. One of them is connectivity which tells about the level of connection between the citizens and the services which are being provided by the government for their benefit. Lastly is based on the capital, a strong monetary base is needed for proper implementation of the e-governance initiative (Yadav & Singh, 2013)<sup>[36, 45]</sup>.

### Concepts of E-Governance

E-governance and e-government have the same relationship with the components. The various concepts include:

**G2G: Government to Government-** It is the relationship between the various governmental organization like interaction of the national, state and local government with the foreign government organizations. It allows the governments to share information about skills, databases, resources, capabilities, etc (Pani & Mishra, 2009; Rao, 2013; Sapru & Sapru, 2014)<sup>[25, 30]</sup>.

**G2B: Government to Business-**It is the interaction of government agencies and the private businesses. It reduces the time lag in delivery of goods and it simplifies regulatory processes and makes the businesses competitive. Web presence makes the work easier and in term saves cost (Pani & Mishra, 2009; Rao, 2013; Sapru & Sapru, 2014)<sup>[25, 30]</sup>.

**G2CC: Government to Citizen-** It allows interaction, promotes communication between the government agencies and citizens. It allows customers to access government services, facilities, health benefits, licensing services more conveniently, from anywhere by the use of multiple channels such as mobiles, phones, internet, etc (Pani & Mishra, 2009; Rao, 2013; Sapru & Sapru, 2014)<sup>[25, 30]</sup>.

**G2CS: Government to Civil Service-** This concept includes interaction of the government with the NGOs, PVOs, etc and maintaining a continuous interaction with them regarding various socio-economic policies (Pani & Mishra, 2009; Rao, 2013)<sup>[25, 30]</sup>.

### E-governance Models

Models of developed countries differ from the models that can be implemented in the developing countries. There are four generic models of e-governance for the developing countries and they are:

**Broadcasting/Wider Dissemination Model:** The model is applicable when the relevant information is already in the domain of the public but reach of the information to the masses is required through the use ICT. The models is used to make the citizen more informed about the government functioning and provide relevant information regarding the government. This project can be applied in situations like uploading government rules and regulations, contact information of the relevant persons, information about the various government plans, budgets, performance, providing court judgments for the people to view. It is the most

important model as it provides the most basic information about the government working (Prabhu, 2013).

**Critical Flow Model:** This model channels the relevant important information to the intended audience through the use ICT It also involves locating the users to needs the information more importantly. The application of this model serves in transferring the relevant information about the corruption to the intended agencies, can be applicable where research studies, enquiry reports need to be send to the affected parties by the government. The model is focused on the transfer of critical information to the concerned agency (Prabhu, 2013).

**Comparative Analysis Model:** The model continuously assimilates new information from the public and private domain and forms them as a benchmark for to influence or bring about changes in the current government policies and plans. It can also be used to evaluate the performance of a government official or ministry. The model is dependent on the availability of information and the ability of the users that they can decipher it (Prabhu, 2013).

**Interactive Service Model/ Government to Citizen to Government Model (G2C2G):** The model involves participation of the citizen in the government process. It makes the full use of ICT and improves participation, transparency in the government process and reduces cost and time on the part of the citizens. It allows the public to perform functions like payment of bills, taxes and vote in the online ballot (Prabhu, 2013).

Along with various models which formulate the working of the e-governance initiatives, the guiding principles which govern the formulation of e-governance practices in various countries include efficiency, participatory government, universal accessibility of the data, the service is user oriented, the working of the government is made transparent, it builds reliability, the service is user friendly, the services provide a one stop point for all the services, it makes the government accountable for the deeds, etc (Rabaiah & Vandijet, 2011).

### Stages of E-Governance

E-governance initiatives are mostly done in a phased approach in India. In India there is a four steps phased approach to bringing about an e-governance initiative into being. First is making a presence felt on the web like a government site providing information. Second is some kind of interactions between the government and the citizen. Third being the citizens are able to perform some functions on the internet like payment of bills. And the last is interaction and data sharing among various departments of the government and performing of all the functions on the internet (Alhomod *et al.*, 2012).

### Challenges of Implementing E-Governance Services

Implementing these e-governance involve a huge amount of cost in terms of the huge investment in the infrastructure building. The cost of designing the e-portal with all the hardware, software, personnel, designing and working on the website involves cost, maintenance and support of the hardware is also a costly work which involves big investment on the part of the government. Technology risks like the cyber attack also hamper the services provided by the government in terms of cost as blocking them is also a full time job. The cost of e-governance is not only bore by the

government but is also bore by the citizens also. Not all the citizens are computer literate so they have to learn working on one which involves money and people also have to incur the cost of buying a computer and an internet connection (Sheng, U.N.).

The growth of the e-governance services have been low and this can be attributed to various factors, such as: the general public lack the adequate knowledge about information technology and they are not aware about the benefits of the various e-governance programmes, A proper working e-governance project on the national level requires a strong and available infrastructure, and it is missing in the Indian context. Some officials may have the proper requirement for the project and they might excel but not every one of the official posses such quality of infrastructure (Sapru & Sapru, 2014).

### Benefits of E-Governance

The e-governance programme may be lacking on a lot of fronts but the benefits of such programs cannot be neglected, both from the citizen's point of view and the governments. Some benefits for the citizens include, a major benefit to the citizens is that is provides easy access to the government services and information which is a time saver for the citizens and especially people living in the remote areas and the disables. It provides access to government information and services 24\*7 and 365 days. All people rich or poor, businesses big or small receive the same kind of information and service from the websites (Sheng, U.N., Almoode *et al.*, 2012). The policy makers make better judgment calls as they know they are being watched by the general public whether or not they are fulfilling their work for the betterment of the citizens and they cannot hide the relevant information as they are watched over by the people (Prabhu, 2013).

### Trends in Growth of E-Governance

Press reports have shown an increase in the people opting for e-governance and making it a success. Government e-governance services have been mainly used for information search and for downloading the information searched. Online government transactions have shown an increase and the people providing their personal information has also increased. Australia leads in the area of the most increase in the number of people using the online governance systems provided by the government followed by Turkey, the Netherlands and the US (Prabhu, 2013).

### M-Governance

M-governance is another means of reaching the masses as it available anywhere, anytime and can be made available on any device which is internet enabled. It is not a replacement to the e-governance but an extension and a complement to the e-governance initiative of the government (Subhash, 2004)<sup>[5]</sup>. M-governance is of great value to those countries where internet penetration is low but the usage of mobile is on the rise. A wide of range of services can be made available through the mobiles which include health care, education, agriculture, employment, transportation, law and order, etc (Hellstrom, 2011).

### Benefits of M-Governance

Some of the benefits of m-governance for the citizens include: it is very convenient to use mobile services and mobiles have a wide access and reach a large plethora of people, people living in far off area can receive health care through m-services and they can contribute in the public safety also, baking and finance facilities can be provided to the people through the use of mobiles and they reach the people who is the correct recipient of it and teachers have also started using m-services to reach their students for educational purposes. Some basic benefits which can be provided through the use m-services includes facilities like it can reach the different sections of the society like the older people, people with disabilities, etc.

### Challenges of M-Governance

M-governance also presents some challenges which the government needs to overcome to provide a better service to the citizens include: technology failure is a matter of great concern many services could not be implemented because of the non-existent technology or the people are not able to use the technology. The government also faces financial and economic challenges like the cost incurred on the implementation, all the government working needs to be re-engineered to infuse the m-services, expenses on the long-term contract with the private sector and expenditure on the safety of the services and the data (Organisation for Economic Co-operation and Development, 2011).

### Other Electronic Services provided by the Government

M-governance is gaining a lot of popularity in today's world but there are some other methods also which are being used by the governments all around the world. One such new method is the use of social media by the governments. The use of social media around the world has more than tripled from 2010 to 2012 and it also shown a 50% rise till 2014. They are a great hit in the remote areas and where the individual use of ICT is not in use and people don't have knowledge about it.

### Good Governance in the World

#### Good Governance Practices in Various Countries

Good governance is being followed in many countries for the betterment of their citizens. Various innovative practices are being followed in the field of public delivery system, human rights, policy making through innovation, improving transparency in the government process, etc. Various examples of the best practices of good governance worldwide are as follows:

In Albania good governance was employed to protect the human rights and to develop a transparent constitution as for many decades the people of Albania were living under political and civil unrest. To renew the confidence of the people in the government and constitution, a renewal of the constitution was needed which would be transparent and which would involve the public and protects its rights. A national program for public participation was formulated and inputs from the people were collected. The constitution was legit in the eyes of the citizens as they had helped in formulating it and their inputs were heard.

**Ecuador:** In the 1990's Ecuador witnessed a major macroeconomic crisis which decreased the public spending



and increased poverty, inequality and exclusion of certain minority groups. There was wide spread unemployment and fall in the spending on hospitality industry. This information has improved the social dialog between the citizens and the government and it has improved the policy formulation part of the government.

**Sweden:** City of Pita in Sweden developed a comprehensive system of benchmarking system to promote interaction between government and citizen and would increase the input of citizens in planning the budgetary expenditure. Before its implementation people had little knowledge about the expenditure planning of the government and there was no way to access the public satisfaction. It brought about effective decision making in the government and in the budgetary system.

### E-Governance

E-government is the opportunity with which the public administration can be transformed. E-government as defined by the United Nations is the use and application of Information Technology in public service delivery to make the work flow more efficient, to manage the information and data more efficiently, improve the quality of public services delivered and to build a strong communication network to empower people. E-government can help in making the governments more environmentally friendly, which includes proper utilization of natural resources and improve economic growth and social inclusion. E-government with ICTs is becoming a platform to share knowledge, skill development in the society, it also increases employment in the society and better facilities of health and education can be administered through the efficient and proper utilization of e-government programs in the countries.

The United Nations has adopted three dimensions of the e-government approach, they are online services are made available, connectivity infrastructure or the telecommunication infrastructure and human capabilities are enhanced that the people are able to use the services intended for them.

### Various Worldwide E-governance Services

Republic of Korea is the undisputed leader in providing innovative e-governance services to its citizens and it is followed by Australia and Singapore. Countries worldwide have adopted various e-governance schemes to help their fellow citizens to lead a comfortable, relaxed and health life. Some country wise initiatives are given below:

**Ghana:** School of public health at the University of Ghana, United Nations Information Technology Service and World Summit on the Information Society started the project to cater to the health needs of the people of Ghana. It kept a computerized record of names, ages, pregnancies, illness, births, etc which were used for better health care in the future (United Nations, 2006) [42].

**Mauritius:** The Ministry of Finance started The Contributions Network Project; it connects all the large employers with the government tax department for the payment of tax at single point. All the payments are made electronically and the payer receives a confirmation of the payment from the site (United Nations, 2006) [42].

**South Africa:** Cape Gateway Portal provides all the information about the government including information

about health departments, transport, licensing, education etc. It provides conscience and simplicity to the people of South Africa (United Nations, 2006) [42].

**Africa:** Association for Progressive Communications (APC), HIVOS have developed an ICT APC-Africa-Women programme which is instrumental in bringing gender equality. It provides support to the women and does various studies on the gender equality topics (United Nations, 2006) [42].

**Australia:** Information Management Initiative provides cost effective facilities to various government department. They include Fedliink, Open Source Content Management, etc for the proper working of the government (United Nations, 2006) [42].

**Baharin:** Baharin e-visa service provides facility to the applicants to pay the fees and application for the visa processing. It monitors each visa for security threats and connects to the relevant agencies (United Nations, 2006) [42].

**United Kingdom:** 3 Island Project aims at reaching the remote areas of Colonsay, Islay, Jura and connect them e-technology and address the problem of public service delivery (United Nations, 2006) [42].

**Qatar:** Qatar e-governance portal is a useful e-service provided by the government. It provides services like students registration, payment of fines for traffic violation, applying for visas, etc. The site is in Arabic version but few pages can also read in English (Hafeez & Sher, 2006). The Millenium Development Goals (MDG) which had been set by the leaders of the world has made an impact on the lives of billions of people, like it has reduced poverty, has made progress in providing safe drinking water to the people, housing facilities, providing proper HIV treatment and it has also increased the number of children attending school.

### M-Governance

**Some World Wide examples of M-Governance Services** (Organisation for Economic Co-operation and Development, 2011)

- a. **Mexico City, Mexico:** It uses a SMS based system to warn people and sends alert messages about high-rain in the area, low temperatures, potential disasters and emergency locations and contact number.
- b. **Australia:** It uses a SMS system to alert about the delays in the transportation services, notification of examination results, parking space availability, etc.
- c. **Uganda:** Uganda's m-service PurcAI Mobile allows teachers to enter grades of the students and which can be assessed by the students, teachers and parents using SMS service.
- d. **Republic of Korea:** It also uses m-services which provide public transportation maps with real time information of traffic conditions. Train passes can also be purchased through it and reservation conformation information can be checked on the mobile.
- e. **Brazil:** A SMS system for registration of unemployed people and the employers provides the notification for the job and a 24 hr notice to appear for the interview.
- f. **Norway:** In Norway tax can be paid via SMS service. If a person has to make no changes in the form they have received in the mail the number along with few other details can be send through SMS to the relevant authority

and it reduces cost and allows efficient tax payment in the country.

- g. United States:** United States uses mobile technology for better coordination among emergency professionals, police officers, fire fighters, public works department professionals with field reporting, ambulance tracking and other necessary communication between them.
- h. Bangladesh:** The country provides SMS classified ads which serve as a market place for buying and selling of goods and services.
- i. Hong Kong:** It uses PDA technology to enter inspection at the scene, review of the results of the past inspection. It is being used by China's Mobile Field Inspector System and the system provides them easy use, saving time and increasing productivity.

## Good Governance in India

### E-Governance in India

E-governance is no longer just a concept for the Government but it has become a reality which allows the citizens to participate in the Government and the democratic processes of the government. E-governance has insured that the outcomes of the policies are up to the expectations of the people and they are of quality. These e-services increase democratic participation, accountability on the part of the government, transparency of the working and improve the quality and speed of the service delivery (Kalsi, *et al.*, 2008)<sup>[20]</sup>. The Government of India has approved the formation of National E-Governance Programme (NeGP) in 2006, whose main focus is on delivery of government services to the citizen and businesses through electronic transactions ([www.digitalindia.gov.in](http://www.digitalindia.gov.in); Sapru & Sapru, 2014). In 1980's India saw a rise and importance of the computerization in the government process and 1990's saw computerization of the Indian working system. The e-governance initiative took the shape of it is today in the decade of 2000. To deal with the growing need of the e-governance every state has State Electronic Mission (SEM) which looks after the e-governance needs of the state. Along with the various agencies helping in the implementation of e-governance programme in India, e-governance programmes are also backed by three layer architecture. First layer constitutes with the citizen, businesses and other stakeholders through various channels like e-mail, website, touch screen, kiosks, etc. Second layer comprises of the data centers, servers, network, gateways which help in the working. And lastly the back-office layer which comprises of core and common applications and services (Rao, 2013)<sup>[30]</sup>.

The Mission Mode Projects under the NeGP did not give any fruitful results and they have not fulfilled any of the e-governance objectives. So, it was felt that the country required a new programme which would help in the growth of the electronic services, products, devices, increase job opportunities and electronic manufacturing would also show a growth. To bring about a transformation in delivery of public services through the use of technology, the Government of India launched the Digital India Programme which will make the society and the economy empowered and knowledgeable ([www.digitalindia.gov.in](http://www.digitalindia.gov.in)).

### Digital India

A mass coverage project of the Indian government involving

the use of ICT for good governance was formulated the "Digital India" programme. It is an umbrella programme which covers a wide range of ministries and departments. Digital India works in coordination with DeitY and is being implemented by the entire government (NeGP, 2015). Few key points of the Digital India programme can be pointed out like higher broadband connectivity, phones can be accessed anywhere easily, public internet access programme, reforming/ reengineering the structure of the government through technology e-governance, delivery of services electronically- the "e-kranti" project, information is made accessible to all, electronics manufacturing will increase and in turn will increase employment in the economy (Jani & Tere, 2015).

### E-Kranti

One of the pillars of the Digital India programme is the e-kranti mission, which is the electronically delivery of all government services. The Government of India has defined some objectives and some key features of e-kranti. Some objectives of e-kranti include increasing the number of citizen oriented services, the e programs should use ICTs for delivering services to the masses, apply different models of service implementation and to make use of the emerging technologies. Some of the key principles of e-kranti are all the proposals should increase the delivery of services in some way or another, all the Mission Mode Projects under e-kranti need to undergo Government Process Reengineering (GPR) without which new projects would not be sanctioned, e-kranti says to give freedom to the states to decide regarding which programme to implement keeping in mind their socio-economic needs, e-kranti initiatives encourages Public Private Partnership.

The government is doing its part in the form of the biggest initiative "Digital India" but some other points can be concluded about the state of e-governance in India. Some of the factors which the residents of India feel are important and contribute to good governance in the economy include are: (i) education facilities which are provided by the government and which ultimately help in reducing unemployment (ii) development of the infrastructure of the country like the construction of bridges, airports, transport services, etc. (iii) condition of law and order and safety of life and property (iv) reducing unemployment by creating new jobs in the private and the government sector (v) efficient working of the government and its staff (vi) providing a free market economy which gives impetus to the business environment in the country (vii) reduce the digital divide in the country and work in the favour of the poor section of the society (viii) give its citizen freedom of speech, religion, work and freedom of non-interference by the government (Kalsi, *et al.*, 2008)<sup>[20]</sup>.

### DeitY

It is a department of the Government of India which is working e-development of India, which will transform the country in a developed and empowered nation. It provides infrastructure support for the delivery of service, impetus for the manufacturers of hardware and the IT industry and provides support for the development of e-skills. It promotes the use of ICT and it works towards enhancing the role of

India on a Global platform of Internet Governance (<http://deity.gov.in/content/vision-mission>).

### NeGP

A major part of the DeitY is the National E-Governance Plan which is working towards making the services accessible to the common man with a single point of service delivery which will ensure efficiency, transparency and reliability in the delivery of service. A need was felt to encompass all the National, State, District and even block level e-services to be brought under one roof, which would involve sharing of core and support infrastructure, standardized procedures in the implementation, etc. They need to be guided a common vision, strategy and their core objectives should be same which is to benefit the ultimate user that is the citizens. NeGP was formulated to govern the e-services throughout the country. NeGP consists of 27 Mission Mode Plans which are to be implemented at the National, State and Local Levels and it also comprises of common core and support infrastructure (NeGP, 2011).

### NITI Aayog

NITI Aayog helps in facilitating and is a major requirement of good governance in India. It helps in making good governance activities people centric, participative, collaborative, and transparent and policy driven. NITI Aayog will help in the development process of the nation, will be focused on bringing about some constructive outcomes and will bring about some new ideas for the development process (Government of India, 2015). It works on the concept of feedback from the public and incorporates them in the new framework to bring about corrective measures in the existing system. One of the functions of NITI Aayog is to maintain a resource centre which will be like a depository of research on good governance and best practices for sustainable development. Another centre of focus for the NITI Aayog is up gradation and building infrastructure for the technical progress in the country (<http://niti.gov.in/content/functions.php>).

### Various E-Governance Services provided by the Government in India

All the states in India are implementing various e-governance initiatives, and the state leading in this race are Chhattisgarh, Himachal Pradesh and Meghalaya (NeGP, 2015). The citizens are expecting more and more services in the online mode from the government and the government officials and leaders of the nations have come to the conclusion that e-governance is a necessity as it involves the public in the decision making process. Soon e-governance would not be optional for the governance but would become necessary as the demand of implementing e-governance initiatives is coming from the citizens themselves. So various e-governance projects have been implemented in various fields for the betterment of the public, which would be beneficial to the citizens by the government. Some of the cases are:

**Transportation:** in the form of issuing time table of buses, booking facilities in buses, improvement management. Indian government has started various e-governance services in the context of making transportation easier:

- a. **CFST-** Citizen Friendly Services of Transport Department by the Andhara Pradesh government, which

issues learner, renewal of licensees, etc (Yadav & Singh, 2013)<sup>[36, 45]</sup>.

- b. **HRTC:** Himachal Road Transport Corporation allows for booking, cancellation, enquiry of buses and seats, etc (Yadav & Singh, 2013)<sup>[36, 45]</sup>.

**Online payment of bills and taxes:** Services are provided in the form of online transactions, payment of bills, taxes, EMI's. Some of the services under this head are:

- a. **E-SEVA-** Started by the Andhara Pradesh government for the payment of the utility bills, getting the trade licenses (Yadav & Singh, 2013)<sup>[36, 45]</sup>.
- b. **DOMESTIC:** Started in Daman and Diu for the payment of electricity bills (Yadav & Singh, 2013)<sup>[36, 45]</sup>.
- c. **VAT Information Computerization to Optimize Revenue Yield:** It is a Jharkhand initiative which aims to provide a fully automated tax payment system online (Rao, 2013)<sup>[30]</sup>.

**Municipal Services:** Services relating to maintaining property records, house tax assessment, billing, payment and issue of the death certificates are provided through e-governance programmes.

- a. **E-Panjeeyan-** It deals with the land sales, legal heir certificate, issue of passport through e-services (Yadav & Singh, 2013; Rao, 2013)<sup>[36, 45, 30]</sup>.
- b. **Palike-** It is software that deals with the property tax and payment details of the citizen (Yadav & Singh, 2013)<sup>[36, 45]</sup>.

**IT for the masses:** IT services are provided at the door step of the general public through this and for especially those living in the remote area.

- a. **E-Mitra:** An initiative in the state of Rajasthan which works on the public private partnership. Services provided under it are payment of electricity bills, payment of taxes, making reservations, passport application form, issuing death and birth certificate, etc (Rao, 2013)<sup>[30]</sup>.
- b. **E-Seva:** An e-governance initiative by Andhra Pradesh which provides solution in the field of financial information, human resource management, provides the facility of e-procurement and information about past acts, rules, judgment, policies, etc, provides the facility of registration of vehicles, issue of licenses, etc (Rao, 2013).
- c. **E-SLA:** An e-service for the public of Delhi which manages the citizen's grievances, various forms are available for various services, gazette notifications are also available, etc (Rao, 2013)<sup>[30]</sup>.
- d. **Jeevan:** An initiative in Delhi which provides all citizens centric services (Rao, 2013)<sup>[30]</sup>.
- e. **E-Smapark:** It provides all the services centered on the citizen at a single place/ window in the state of Chandigarh (Rao, 2013)<sup>[30]</sup>.
- f. **E-Gazette:** An e-service provided in the state of Goa which provides information regarding orders, circulars, rules, schemes, notices, tenders of the government and provides e-forms regarding the same (Rao, 2013)<sup>[30]</sup>.
- g. **E-Disha:** It provides an interface between the citizens and the government and provides information about

- court cases and provides tracking information to the people of Haryana (Rao, 2013) <sup>[30]</sup>.
- h. **Friends:** A state of Kerala initiative to provide one stop solution to all the bill payment, information related problems of the citizen (Rao, 2013) <sup>[30]</sup>.
  - i. **Choice (Chhattisgarh online Information System for Citizen Empowerment):** It is e-governance service of Chhattisgarh which provide facilities like the caste certificates, income certificate, birth and death certificate, certificate of residence, it also deals in public complains, it also has the facility of payment of electricity bills, etc (Subramanian & Saxena, 2008) <sup>[38]</sup>.

**Treasury E-management:** Various sites are working to provide information about the government's treasury department.

- a. **E-Khajana:** An e-service which caters to the need of treasury accounting and management of services in the state of Bihar (Rao, 2013) <sup>[30]</sup>.
- b. **E-Kosh:** An online service of Chhattisgarh which looks after the treasury department (Rao, 2013) <sup>[30]</sup>.

Various e-services in rural areas have also been started to provide the benefits of e-services to the rural public:

**Local Information:** Government has started various e-services to provide the public with information regarding prices of seeds, fertilizers, etc.

- a. **E-Jansampark-** Started in Chandigarh. A common man is provided with services and information in his locality to meet his basic requirements (Yadav & Singh, 2013) <sup>[36, 45]</sup>.
- b. **Prajavani-**It a service which monitors public grievances through online system in Andhra Pradesh (Yadav & Singh, 2013) <sup>[36, 45]</sup>.
- c. **E-Samadhan-** It is an e-service which provides timely redressal of grievances of general public in Himachal Pradesh (Yadav & Singh, 2013) <sup>[36, 45]</sup>.

**Disaster Management:** State government uses e-services to manage disasters which are unpredictable.

- a. **Chetana:** It an e-service in Bihar which deals with the occurrence of floods and earthquakes (Yadav & Singh, 2013) <sup>[36, 45]</sup>.

**Land Record Management:** E-services which maintains million of land records on the electronics.

- a. **Bhoomi:** It was the first land record management system which provided e-services which provided its services to the people of Karnataka (Yadav & Singh, 2013; Rao, 2013) <sup>[36, 45, 30]</sup>.
- b. **Comprehensive Modernization of Land Records (CMLR):** It involves electronic property registration, updating of survey maps, etc in the state of Andhra Pradesh (Yadav & Singh, 2013) <sup>[36, 45]</sup>.
- c. **Land Record Computerization:** The programme allows computerization of land transfer deeds, regularization of the occupied land, etc at the district level (Yadav & Singh, 2013) <sup>[36, 45]</sup>.
- d. **Him Bhoomi:** An e-initiative of Himachal Pradesh which keeps a computerized records of the land deeds in the state (Rao, 2013) <sup>[30]</sup>.

- e. **Dev Bhoomi:** A Uttarakhand state initiative, its aim to provide computerized land records (Rao, 2013) <sup>[30]</sup>.

**Panchayat:** It involve e-services which cater to the issue of birth and death certificates, names in the voter list, conduction welfare schemes of the poor, rural water supply and sanitation facilities.

- a. **E-Gram Viswa Gram Project:** An initiative in the state of Gujarat which connects 13716 Gram Panchayats and 6000 Common service centers (Yadav & Singh, 2013) <sup>[36, 45]</sup>.
- b. **Samanya Mahiti:** An initiative in the state of Karnataka for the connectivity of panchayats (Yadav & Singh, 2013) <sup>[36, 45]</sup>.
- c. **CA Pnic:** E-governance initiative which comes under Kerala which manages the allotment of seats in the professional courses (Yadav & Singh, 2013) <sup>[36, 45]</sup>.
- d. **VHSE Examination System:** E-service which handles pre-examination activities of vocational higher education (Yadav & Singh, 2013) <sup>[36, 45]</sup>.

### Major E-Governance Initiatives

Some other E-governance initiative by the Indian Government may include:

#### Indian Passport System

The service is an initiative by the Ministry of External Affairs of the Government of India and the National Informatics Centre for the online issue of passport. The site has helped increase the transparency in the passport issue process and reduced the time involved in the issue process. The website has reduced the travelling time there by making the system fast and has decreased the role of intermediaries. Website also provides the provisions to make appointment at the office which reduces the waiting at the office.

#### Indian Railway Passenger Reservation Enquiry System

It is an e-governance initiative under the Central Railway Information System. The main feature of the website is that it earns its revenue through advertisement. To make the website more relevant for the users the website is also available in Hindi and all the documents can be easily downloaded and are provided in small sizes. The website is compatible with various formats and browsers. Train schedule, PNR status, seat availability, etc can all be done on the website.

#### Issues Concerning E-Governance Practices in India

The state of e-governance can be transformed in India if due diligence is paid to some factors like the network infrastructure and the connectivity issues, the interface should be user friendly which includes content in the native language, the management process of the e-governance service should be effective and a Chief Information Officer should be appointed to look after the implementation, designing, developing of the e-governance services and to promote the e-governance initiative and educate the people about the merits of such a system. Some factors which the Indian citizens feel are required to make an e-governance initiative successful are that the service should increase the convenience of the people by providing solutions to all their needs at a single place, the service should reduce the corruption level in the economy and should make the

government working transparent, it provides and maintains all the data and information of the government readily and e-initiative should be simple and friendly (Kalsi, *et al.*, 2008) [20].

### Challenges in Implementing E-Governance Projects in India

Indian politicians don't have the will to implement e-governance programmes; people are not ready to change their practices as they still work with the old mind sets. The e-governance practices have not gained importance in the state of Chhattisgarh because of the wide spread poverty in the state and people cannot afford to learn about computing and cannot bear the cost of computers and the state lacks the infrastructure facilities which are needed for the proper functioning of any e-governance project (Suramanian & Saxena, 2008) [38].

Some issues which hamper the working of e-governance, such as the technical issues which may include privacy, security. There may be organizational issues also which may be short on the staff of the people capable in operating, different languages spoken in different regions, population density in India. Economic challenges are also present which may include cost of the structure, portability of the structure of e-governance (Yadav & Singh, 2013) [36, 45].

### M-Governance

#### Some Examples of M-Services in India

A SMS service is provided in India to empower people against pollution. People can send alerts regarding smoke-bleaching public buses and other vehicles and it also involves people in the fight against crime and illegal drugs use.

- a. Dar Net is a store and it is a forward wireless broadband network. It uses a Mobile Access Point, which is mounted on a regular bus to transmit information between the village and headquarters. Villagers who request land records through village kiosk receive their information through this.
- b. India also provides a weather forecast system which helps the farmers and fishermen about when to plant, harvest and water their crops and when to fish. The system has greatly helped in improving the wealth of the farmers and fishermen.

### E-Governance in Uttar Pradesh

As we have seen in the above section the use of e-governance is growing and many states are following the example of the successful programmes, but there are still some states which lack in the growth of e-governance initiative. One such state is Uttar Pradesh which still has a long path to travel to provide its citizens the benefits of e-governance. Uttar Pradesh is most populous state in India and the growth of the state has not been satisfactory to the point (Nandan).

#### Some Examples of E-Governance Initiatives in the state of Uttar Pradesh

1. **eSuvidha:** It was developed as a bridge between the general public and the government departments and it is an example of public-private partnership. It provides the public with a single window to deposit their electricity, water, house tax, telephone and mobile bills. It is now being expanded to include services like passport

services, tourism, and many more (Nandan; Yadav & Singh, 2013) [36, 45].

2. **Bhu-Lekh:** It is a land record initiative in state of Uttar Pradesh (Yadav & Singh, 2013; Nandan) [36, 45] which was initially formulated to benefit the government but with 'Khatauni on Web', 'RoR Aapke Dwar' the project has helped government, banks, NGOs, etc and it has been implemented in 305 tehsils of the state (Nandan; Gosaliya).
3. **Lokvani:** a Uttar Pradesh government initiative which provides information regarding tender, rules, e-mail directory, right to information, publications, etc (Rao, 2013) [30].
4. **Prerna:** It is a one stop electronic solution for property registration. It provides assistance to the general public and farmers particularly; on the registration service is also provided by it (Gosaliya).

### Obstacles in Implementing Projects in Uttar Pradesh

UP has not been able to reap all the benefits of the e-governance projects as to the weakness of the policy, vision and priorities of the e-governance projects. A major obstacle in providing better services to its public has been illiteracy among the people of the state. The practices which have been implemented have mainly benefited the upper and the middle class and ignoring the poor section of the society.

### Solutions for the Growth of E-governance Services in Uttar Pradesh

People need to be made aware about the services provided by the government. The cost of services provided by the government should be reasonable so that even the poor section of the society can avail them. The Government needs to evolve its practices during a time frame so they are able to meet the newer needs of the society (Radhkumari, 2004) [29]. To tackle the problem of illiteracy among the people of the state more than 100 Technical Colleges, Polytechnics and Multi Disciplinary Universities have been set up where in 5000 students graduate every year in IT discipline (Gosaliya).

### References

1. Alam MA, Hasina N. Constitutional Voice for Good Governance in Bangladesh. 2014.
2. Alhomod SM, Shafi MM, Kousarrizi MN, Seiti F, Teshnehlab M, Susanto H *et al.* Best practices in E government: A review of some Innovative models proposed in different countries. International Journal of Electrical & Computer Sciences. 2012; 12(01):1-6.
3. Allen R. The New Penguin English Dictionary. Penguin. 2000.
4. Andrews M. The good governance agenda: Beyond indicators without theory. Oxford Development Studies. 2008; 36(4):379-407.
5. Bhatnagar Subhash. E-government from vision to implementation, Sage, New Delhi. 2004.
6. Department of Economic Affairs 2014. United Nation E-Government Survey 2014 E-Government for the Future we Want.
7. Department of Electronics and Information Technology, Ministry of Communication and Information Technology, Government of India, 2015. Office Memorandum: Subject- Approval of Approach and Key

- Components of e=Kranti: National e-Governance Pan (NeGp) 2.0; 5(12)/2015-EG-I; 08<sup>th</sup> May, 2015.
8. DeVries M. The challenge of good governance. *The Innovation Journal*. 2013; 18(1):1.
  9. Gani A. Governance and growth in developing countries. *Journal of Economic Issues*. 2011; 45(1):19-40.
  10. Gisselguist RM. Good governance as a concept, and Why This Matters for Development Policy. UNU-WIDER Working paper No. 2012/30.UNU-WIDER: Helsinki, Finland. 2012.
  11. Gosaiya, Ashik. Transforming Uttar Pradesh Through ICT Based Innovation.
  12. Government of India. From Planning to NITI Transforming India's Development Agenda, NITI Aayog. 2015.
  13. Hafeez S, Sher SW (Eds.). UN Global E-government Readiness Report 2005: From E-government to E-inclusion. United Nations Publications. 2006, 6.
  14. Hellström J. Mobile governance: Applications, challenges and scaling-up. In *Mobile Technologies for Conflict Management* (pp. 159-179). Springer Netherlands. 2011.
  15. International Fund for Agriculture Development. Good Governance: An Overview, Executive Board, Sixty-Seventh Session, Rome. 1999, 8-9.
  16. Jabeen N. Good or good enough governance in South Asia: constraints and possibilities. Inaugural address as professor to the Prince Claus Chair in Development and Equity. 2006-2007.
  17. Jani, Jinal, Tere, Girish. Digital India: A Need of Hours. *International Journal of Advanced Research in Computer Science and Software Engineering*. 2015, 5(6).
  18. Johnston M. Good Governance: Rule of Law, Transparency, and Accountability. New York: United Nations Public Administration Network. 2006.
  19. Kalsi NS, Kiran R, Vaidhya SC. ICT and Good Governance: A Study of Indian Environment. In *International Conference on E-governance*. 2008, 18-20.
  20. Meso P, Musa P, Straub D, Mbarika V. Information infrastructure, governance, and socio-economic development in developing countries. *European Journal of Information Systems*. 2009; 18(1):52-65.
  21. Nandan S. Lesson from E-government Initiatives in Uttar Pradesh.
  22. NeGP. Saaransh: A Compendium of Mission Mode Projects Under NeGP", Department of Information Technology, Ministry of Communication and Information Technology, Government of India. 2011.
  23. NeGP. Ministry of Communications and Information Technology, "Good Governance Week, 2015; Indian Habitat Centre, New Delhi. 2015.
  24. Organisation for Economic Co-operation and Development. M-Government: Mobile Technologies for Responsive Governments and Connected Societies. OECD Publishing, 2011.
  25. Pani, Niranjan, Mishra, Santap Sanhari. E-Governance. 2009.
  26. Prabhu CSR. E-governance: Concepts and case studies. PHI Learning Pvt. Ltd. 2013.
  27. Punyaratabandhu S. Commitment to Good Governance. Development, and Poverty reduction: Methodological Issues in the evaluation of progress at National and Local levels. 2004.
  28. Rabaiah A, Vandijct E. A Strategic Framework of e-Government: Generic and best Practice". *Leading Issues in e-Government Research*, Academic Publishing International Ltd. 2011, 1-32.
  29. Radhakumari Ch. Impact of E-Seva in Andhra Pradesh: A Study. In Gupta, MP (Ed.) *Promise of E-Governance: Operational Challenges*, 419-426, Tata McGraw-Hill Publication Company Limited, New Delhi. 2004.
  30. Rao VR. A framework for unified digital government: A case of India. *Journal of E-Governance*. 2013; 36(1):35-55.
  31. Sapru RK, Sparu, Yudhishtira. Good Governance Through E-Governance with Special Reference to India" *Indian Journal of Public Administration*. 2014; 9(2).
  32. Saxena KBC. Towards excellence in e-governance. *International Journal of Public Sector Management*. 2005; 18(6):498-513.
  33. Second Administrative Reform Commission. Sixth Report on Local Government; An Inspiring Journey Into the Future, Government of India. 2007.
  34. Sharma, Sudhir Kumar, Lama, Vandana, Goel, Nidhi. Digital India: A Vision Towards Digitally Empowered Knowledge Economy, *Indian Journal of Applied Sciences*. 2015; 5(10).
  35. Sheng YK. What is governance? United Nations Economic And Social Commission for Asia and the Pacific.
  36. Singh BP. The Challenge of Good Governance in India: Need for Innovative Approaches. *Yojana*. 2013; 57:4-10.
  37. Singla SK. Combating corruption through e-governance in public service delivery system. *Journal of Global Research in Computer Science*. 2011; 2(7):96-100.
  38. Subramanian M, Saxena A. E-Governance in India: From Policy to Reality. a Case Study of Chhattisgarh Online Information System for Citizen Empowerment (CHOICE) Project of Chhattisgarh State of India. *International Journal of Electronic Government Research*. 2008; 4(2):12.
  39. Suri PK. Strategic Insights into an E-governance Project- A Case Study of AGMARKNET based on SAP-LAP Framework. *Global Journal of Flexible Systems Management*. 2005; 6(3/4):39.
  40. TESEV, Türkiye Ekonomik ve Sosyal Etüdler Vakfi. Good governance: Improving quality of life. F. Toksöz (Ed.). 2008.
  41. Trakulmututa J, Chaijareonwattana AB. Factors affecting the achievement of good governance in HRM: The empirical study of local governments in Southern Part of Thailand. *International Journal of Business and Social Science*. 2013, 4(7).
  42. United Nations. Compendium of Innovative E-Governance Practices. Department of Economic and Social Affairs. 2006, 2. ST/ESA/PAD/SER.E/96.
  43. Ward Carl. Cloud Computing, Mobile Governance and Web 2.0 technologies, Conference Proceedings Report, The Society for Promotion of e-Governance. 2009.

44. Wouters J, Ryngaert C. Good governance: lessons from international organizations. Good Governance and the European Union. 2004.
45. Yadav N, Singh VB. E-governance: past, present and future in India. arXiv preprint arXiv. 2013, 1308-3323.
46. [http://www.coe.int/t/dgap/localdemocracy/Strategy\\_Innovation/12principles\\_en.asp](http://www.coe.int/t/dgap/localdemocracy/Strategy_Innovation/12principles_en.asp) visited on 13.03.16
47. <http://deity.gov.in/content/vision-mission> visited on 11.04.2016
48. <http://deity.gov.in/content/functions-deit> visited in 11.04.2016
49. <http://www.digitalindia.gov.in/content/about-programme> visited on 11.04.2016.
50. <https://mygov.in/group/digital-india/> visited on 11.04.2016.
51. <https://publicsector.wa.gov.au/public-administration/public-sector-governance/good-governance-guide-public-sector-agencies> visited on 13.03.2016
52. <http://niti.gov.in/content/functions.php> visited on 25.04.2016