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Digitized aids of governance have come into existence in the last few years. The need of the hour is to move towards e-governance and e-governance has already started to change the way of governance. In this chapter, we will discuss what is meant by e-governance, its scope, its content, and its evolution. We will also discuss the present global trends of growth in e-governance. We will also discuss the challenges faced by e-governance and the measures taken to overcome them. We will also discuss the future of e-governance and the role of e-governance in the digital economy.

INTRODUCTION TO E-GOVERNMENT AND E-GOVERNANCE

E-governance is a term used to describe the use of information and communication technologies (ICTs) to improve the efficiency and effectiveness of government operations. It refers to the use of computers, networks, and other electronic devices to facilitate the delivery of public services, such as taxation, welfare programs, and law enforcement. E-governance can be used to improve the way governments interact with their citizens, businesses, and other government agencies. It can also be used to improve the way governments collect and analyze data, make decisions, and implement policies.

CHAPTER OUTLINE

After comprehensive study of this chapter, you will be able to:

- E-governance – Overview
- Need of E Governance
- Issues in E-Governance Applications and the Digital Divide
- Evolution of E-Governance, Its Scope and Content
- Present Global Trends of Growth in E-Governance: Other Issues



E-GOVERNANCE OVERVIEW

E governance which stands for Electronic governance is the implementation of Informational and Communication technology for providing government services and exchange of information.

What is E-Government?

It refers to the implementation of information and communication technology like the internet. Through the use of technology, it improves the government activities and process. Government is embedded in combinations of political conditions as well as cultural, technological and organizational changes designed to support and drive a profound transformation in government units.

Generally, the e-Government concept brings four domains,

e-Administration - Improving government processes by using ICTs and government process management. No paperwork, each and every process need to be done via the use of ICT.

e-Government services - Delivering government services electronically to citizens, businesses and government employees. Example- application for citizenship through the online system.

e-Democracy - Improving transparency and democratic decision making, as well as citizens participation in public decisions. e-Voting is a perfect example here.

e-Governance - It is a development, deployment, and enforcement of the policies, laws, and regulations necessary for developing cooperation, networking and partnerships between government units, citizens and the business. Citizen will get government services using technology.

BENEFITS OF E-GOVERNMENT

- Better provision of government services
- Improved interaction with different groups and citizen
- Citizen empowerment through access to information
- Efficient government management
- Easy implementation of Right to Information
- It is a two-way process Government to citizen and vice versa.

What is E-Governance?

It is a part of e-Government. E-Governance is dealing with all regulations and policies to control the services provided by the e-Government. However, the E-Government is an electronic government, which should be regulated by the E-Governance.

Moreover, e-Governance refers to the utilization of information and communication technology (ICT) for providing government services, disseminating information, communication operations with the general public.

Benefits of E-Governance

- Information delivery is greatly simplified for citizens and businesses.
- It gives varied departments' information to the public and helps in decision making.
- It ensures citizen participation at all levels of governance.
- It leads to automated services so that all works of public welfare is available to all citizens.
- It revolutionizes the functions of the government and ensures transparency.
- Each department and its actions is closely monitored.
- Public can get their work smartly done and save their time.
- It provides better services to citizens and brings government close to public. Public can be in touch with the government agency.
- It cuts middlemen and bribery if any from the picture.

The Key difference between E-Government & E-Governance?

- e-Government is a system whereas e-Governance is a functionality.
- e-Government means the application of ICT in government operations, as a tool to make better government. e-Governance, on the other hand, implies the use of ICT in transforming and supporting functions and structures of the system.
- It is a one-way protocol but e-Governance is a two-way protocol(government to citizen and vice versa)
- e-Governance is the part of e-Government. e-Governance never comes alone.

E-Governance is a form of e-business in governance comprising of processes and structures involved in deliverance of electronic services to the public, viz. citizens. Good governance can be enabled by e governance if it is implemented properly. Here good governance stands for SMART (Simple, Moral, Accountable, Responsive and Transparent) governance which is very important for developing nations. It is needed for public or citizen to interact with government through electronics means in order to get the services as ease.

Different types of e governance includes

- G2G(Government to Government)
- G2C(Government to Citizen)
- G2B(Government to Business)
- G2E(Government to Employee)

Government-to-Citizen (G2C)

The Government-to-citizen mentions the government services that are acquired by the familiar people. Most of the government services come under G2C. Similarly, the primary aim of Government-to-citizen is to supply facilities to the citizens. It also helps the ordinary people to minimize the time and cost to carry out a transaction. A citizen can retrieve the facilities anytime from anywhere.

Similarly, spending the administrative fee online is also possible due to G2C. The facility of Government-to-Citizen allows the ordinary citizen to outclass time limitation. It also focuses on geographic land barriers.

Government-to-business (G2B)

The Government-to-business is the interchange of services between Government and Business firms. It is productive for both government and business firms. G2B provides access to pertinent forms needed to observe. It also contains many services interchanged between business sectors and government.

Similarly, the Government-to-business provides timely business information. A business organization can have easy and easy online access to government agencies. G2B plays an important role in business development. It upgrades the efficiency and quality of communication and transparency of government projects.

Government-to-Government (G2G)

The Government-to-Government mentions the interaction between different government departments, firms and agencies. This increases the efficiency of government processes. In G2G, government agencies can share the same database using online communication. The government departments can work together. This service can increase international discretion and relations.

G2G services can be at the local level or at the international level. It can convey with both global government and local government. It also provides safe and secure inter-relationship between domestic or foreign government. G2G builds a universal database for all members to upgrade service.

Government-to-Employee (G2E)

The Government-to-Employee is the internal part of G2G section. It aims to bring employees together and improvise knowledge sharing. It provides online facilities to the employees. Similarly, applying for leave, reviewing salary payment record and checking the balance holiday. The G2E sector yields human resource training and development. So, G2E is also the correlation between employees and government institutions.

Main aim of e governance can be considered as to simplify and improve governance and enable people's participation in governance through mail, and Internet.

E-GOVERNMENT AS INFORMATION SYSTEM

To understand this topics we need to first know some terms like information technology, system information system and E-Government system. Let us see all of them one by one, Information technology (IT) is the use of any computers, storage, networking and other physical devices, infrastructure and processes to create, process, store, secure and exchange all forms of electronic data.

System is defined as a set of components for collecting, creating, storing, processing, and distributing **information**, typically including hardware and software, **system users**, and the data "Information systems are interrelated components working together to collect, process, store, and disseminate information to support decision making, coordination, control, analysis, and visualization in an organization."

It must be seen as much more than just the technical elements of IT. Instead, it must be seen to consist of technology plus information plus people who give the system purpose and meaning plus work processes that are undertaken.

E-Government means office automation and internal management information systems and expert systems, as well as client-facing web sites. It must be seen to consist of technology plus information plus people who give the system purpose and meaning plus work processes that are undertaken.

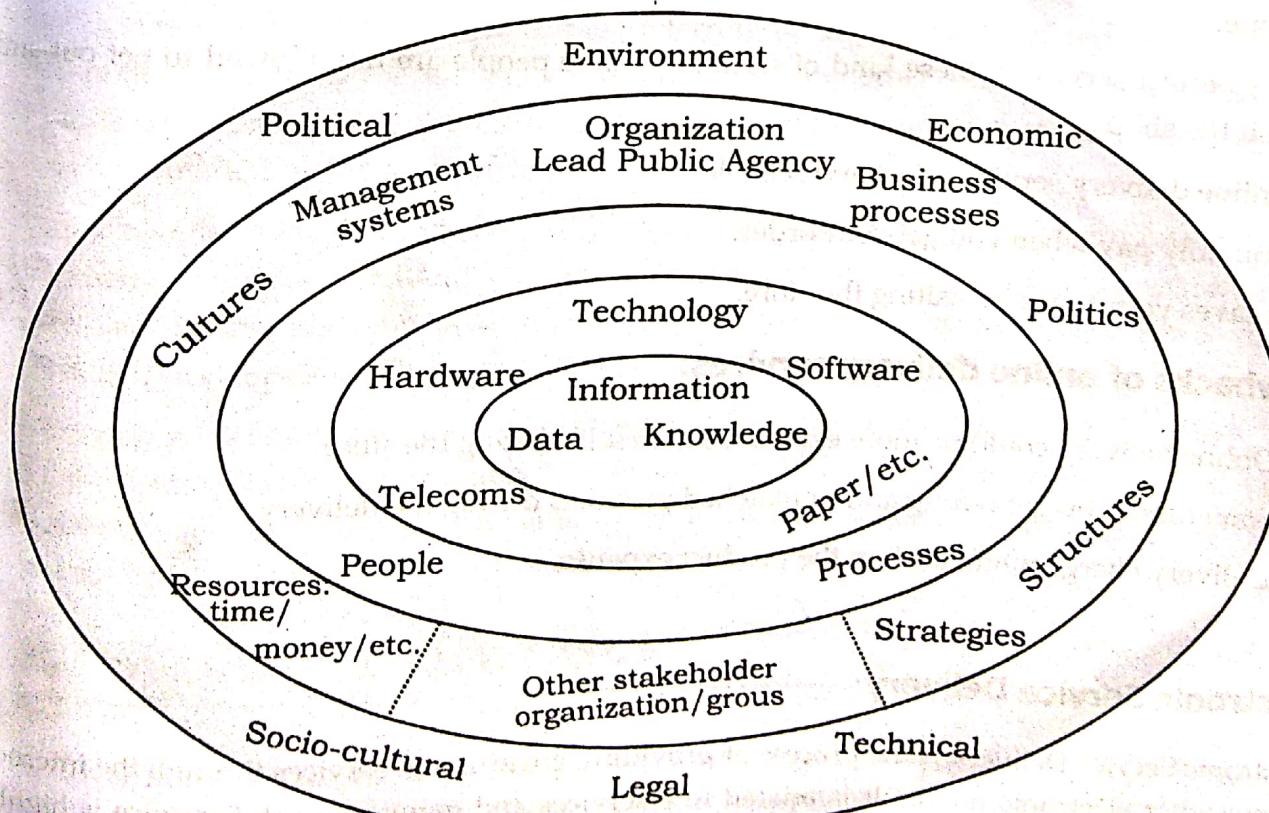


Fig: E-Government as Information System

ONLINE SERVICE DELIVERY AND ELECTRONIC SERVICE DELIVERY

Online service delivery is an effective way to build closer relationships with customers, partners, and the public while simultaneously cutting costs and reducing delays. Increasingly, organizations across a number of sectors are offering external-facing online services. They are also looking for the best ways to overcome challenges presented by registering and managing external identities, providing secure authentication, and managing access rights.

Online Service Delivery

Online service delivery is an effective way to build closer relationships with customers, partners, and the public while simultaneously cutting costs and reducing delays. Online services were first introduced in 1979 through CompuServe and The Source. These services not only allow subscribers to communicate with each other, but they also provide unlimited access to information. Online services can range from simple to complex.

Benefits of online delivery services

- We can keep choosing for days until you get the right product you are looking.
- Don't have to reach out the shop and search for one, you can simply order staying at your home.
- It is perfect service in these kind of situation where people are not allowed to get out and visit the shop.
- Online delivery service is fast and reliable
- You only pay when you get your order.
- It saves your times in visiting the store.

Drawbacks of online delivery services:

- Online delivery could be more expensive than self-visiting the store
- Sometimes you get wrong and unmatched products during the delivery
- Delivery charge might add up the product expense.

Electronic Service Delivery

Electronic Service Delivery is the process of providing government services through the internet or any other electronic media. It is related to e-services and e-government. E service is highly generic term usually referring to "The provision of service via the internet".

The three main components of e-services are- service provider, service receiver and the channels of service delivery (i.e., technology). For example, as concerned to public e-service, public agencies are the service provider and citizens as well as businesses are the service receiver. The channel of service delivery is the third requirement of e-service. Internet is the main channel of e-service delivery while other classic channels (e.g. telephone, call center). It may also include e-commerce and also noncommercial services provided by the government.

E-Participation

E-Participation is a medium that is provided to engage citizens in policy-making, decision-making and design services through the use of information and communication technologies. Citizen engagement through e-participation has always been recognized by the Government so that the agency can:

1. Local development / new services and insights from the perspective of the people,
2. Identify sources of information/services needed by the people,
3. Decision-making and progress with regard to the potential reserves of the people.

However, people have to abide by the terms and conditions of a predetermined time to provide feedback. E-Participation initiative provided in the Ministry / Department / Agency is such as e-information, e-consultation and e-decision.

Electronic services delivery or ESD refers to providing government services through the Internet or other electronic means. It is related to e-services and e-government. E-service (or eservice) is a highly generic term usually referring to 'The provision of services via the Internet (the prefix 'e' standing for 'electronic', as it does in many other usages), thus e-Service may also include e-Commerce, although it may also include non-commercial services (online), which is usually provided by the government.

'An umbrella term for services available on the Internet, e-Service include e-Commerce transaction services for handling online orders, application hosting by application service providers (ASPs) and any processing capability that is obtainable on the Web.' (Computer Desktop Encyclopedia, 2009)

E-Service or 'electronic service' constitutes the online services available on the Internet, whereby a valid transaction of buying and selling (procurement) is possible, as opposed to the traditional websites, whereby only descriptive information are available, and no online transaction is made possible.

E-GOVERNMENT LIFE CYCLE

E-Government development project typically consists of five stages; (1) project assessment, (2) analysis of current reality, (3) design of the new system, (4) system construction, and (5) implementation and beyond.

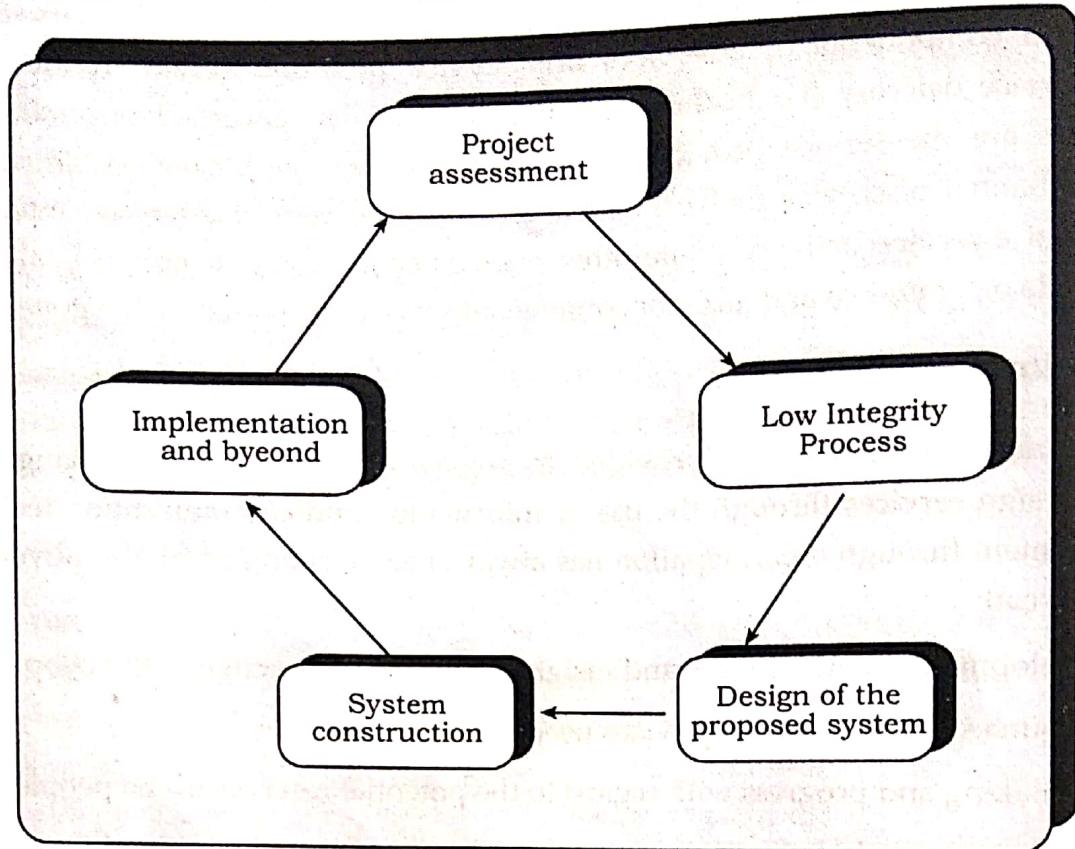


Fig: E-Governance project life cycle

Project assessment, in the development model is the identification of possible e-government projects. At this stage the outline of basic project parameters is completed, with the assessment of whether or not to proceed with a project. New e-government projects are typically initiated based on: "a problem that needs to be solved" or "identification of an opportunity which could be seized". That kind of opportunity can arise from several different sources, such as from internal sources or external (environmental) sources. Examples of external sources are: complaints from the media, politicians or citizens, new legislations or directives, technological innovation, and economic crises. Examples of internal sources are: strategic planning, staff problems, and the individual's desire to give his/her career a boost.

Analysis of current reality means that descriptions of information, technology, processes, objectives and values, staffing and skills, management systems and structures, and other resources such as money and time are created. This stage consists of a mixture of hard and soft techniques such as an information systems audit, an information systems analysis, a problem analysis, a context analysis, etc., in order to build an overall picture. A SWOT-analysis can, for example, be performed.

The design stage of the proposed new situation consists of setting objectives related to the above mentioned dimensions of the new system – putting together the different objectives for the new system to meet. In this stage issues of software and hardware need to be dealt with. Work processes are also necessary to take into account from a design perspective, and not just the front-end processes, but also the underlying processes.

System construction consists of the process and activities in acquiring any new IT, undertaking detailed design of the new e-government system (for example a system installation), building it, testing it, and documenting it.

Implementation and beyond is represented by the planning of implementation processes, for example: training users to use the new information system; converting data from old to new formats; systems maintenance activities; introducing the new e-government system; monitoring and evaluating its performance and context; and undertaking necessary activities. The efforts concerning post implementation tasks such as marketing and support, in order to avoid the common "build it and they will come" strategy, are also important.

ONLINE SERVICE DELIVERY AND ELECTRONIC SERVICE DELIVERY

Online service delivery is an effective way to build closer relationships with customers, partners, and the public while simultaneously cutting costs and reducing delays.

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NEED OF E GOVERNANCE

E governance is a fundamental and important aspect in developing country like ours. The main motive of E governance is to provide SMART government to the citizens of country. The main difficulty faced by peoples while dealing with government work is the delay and the problem created by the middleman. Hence to minimize the interruption of middleman and make it easy for people to get all the services provided by the government. E governance is needed or important for various reasons some of them mentioned below:

- Information delivery is greatly simplified for citizens and businesses.
- It gives varied departments' information to the public and helps in decision making.
- It ensures citizen participation at all levels of governance.
- It leads to automated services so that all works of public welfare is available to all citizens.
- It revolutionizes the functions of the government and ensures transparency.
- Each department and its actions is closely monitored.
- Public can get their work smartly done and save their time.
- It provides better services to citizens and brings government close to public. Public can be in touch with the government agency.
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EVOLUTION OF E-GOVERNANCE, ITS SCOPE AND CONTENT

Evolution of E-governance, Its Scope and Content

- Initiatives were take up as early as 1972 by Chile
- Prof. Stafford Beer implemented for President Allende of Chile, the first governance software that would help the government survive a severe crisis.
- Major contribution by US Vice President Al Gore in early 1990s which rooted worldwide in the information superhighway.

- Widespread in US, UK, Canada, Australia and India
- Focus largely on development of infrastructure such as fiber optic networks.
- Concept of Information Society or Knowledge Society evolved
- E-governance came into a formalized and focused manner with partial success to implement Information System in the government departments and public organizations
- During 1980s and 90s, govt. all over the world lagged behind the commercial world in accepting and implementing ICT.
- Commercial and industrial world went far ahead all over the world in harnessing the potential of ICT in their core and peripheral activities. They used ICT to reach out to their customers and business partners, thereby impressively enhancing their quality, speed and convenience.
- Visible success cases of use of ICT
 - ATM services
 - 24 hour call center
 - E-Shopping
- Software export increase (banking, financial, aviation, industrial sector from India, Ireland, Israel, China)
- 1990s and 2000 - Development of ITES (IT enabled Society)
 - resulted in remote services like call centers, data entry

Initial Efforts in E-Governance

- Partial automation of existing paper bases manual process
- Did not result in significant Business Reengineering Process compared to private sector
- No big changes seen in government enterprises due to Conservatism, Resistance to change , Rigidity of legislative body

Thus, the scope of ICT implementation in government machinery can result in :

- improvement of efficiency and effectiveness of the executive functions of the government, including delivery of public services;
- greater transparency of government to citizens and business, permitting greater access to the information generated or collated by the government;
- fundamental changes and improvement in relation between citizen and the state thereby improving the democratic process; and better interactions and relationships amongst different
 1. wings of the same government
 2. state of local governments within a country,

3. countries whose governments are web-enabled.

Any e-governance activity/project involves appropriate

- hardware and corresponding system software,
- networking of the hardware identified above—both the Internet and Intranet environment, and
- application software along with appropriate database management software

PRESENT GLOBAL TRENDS OF GROWTH IN E-GOVERNANCE: OTHER ISSUES

Governments are called to take on a new role in this favorable convergence, giving up on passively submitting to the winds of innovation. "The focus must now lie on the digital transformation of society as a whole. Governments are no longer only providing services to end users, whether these are citizens or businesses.

Press reports (during the end of 2002) indicate a trend of global growth in e-governance utilization by people in different categories. They indicate the following:

- The proportion of adults worldwide using the Internet to access government services or products during the past 12 months has increased by around 15 percent, according to the findings of the second Government Online Study published by Taylor Nelson Sofres.
- Three out of ten citizens (30 percent) globally said that they had accessed government services online compared with only (26 per cent) questioned a year ago. Government online services are most commonly used to search for information (24 per cent users) and to download information (11 per cent of the users).
- The increased use of government online services is primarily due to rise in the proportion of people searching for information (from 20 to 24 per cent during the period from September 2001 to September 2002).
- Globally, online government transactions increased from just 6 percent to 7 percent during this period and the percentage of those providing personal details to government increased from 7 per cent to 8 per cent. In some countries, percentage increase has been significantly higher than in others.
- Among the most significant increases in the use of government services online are Australia (from 31 per cent to 46 per cent), Turkey (from 3 per cent to 13 per cent), the Netherlands (from 31 per cent to 41 per cent), and the US (from 34 per cent to 43 per cent).
- In contrast, in Japan, however, government online usage fell by 4 per cent (17 per cent to 13 per cent of the citizens) between 2001 and 2002.

- While security issues about accessing government services online were the main concern for many countries during 2001, perceptions of safety improved globally during 2002. When 23 per cent of citizens worldwide said that they feel safe disclosing personal information such as credit card and bank account numbers online compared to just 14 per cent of citizens in 2001, representing thus an increase of almost two-thirds (64 per cent).
- As for the use of government online, the Scandinavian markets (Denmark, Finland, Norway, and Sweden), together with some South East Asian markets (Singapore and Hong Kong), have perceived the highest levels of safety (around one-third of users), in the system. In contrast, the greatest safety concerns were expressed by citizens in Japan (90 per cent said they felt accessing government service online was "unsafe"), Germany (82 per cent) and France (76 per cent).

Other Issues

- Globally, government online use is more prevalent among men (33 per cent) than women (26 per cent), and among those aged under 35 compared with other age groups.
- During the past 12 months substantial increases in government online use have taken place among 35-44 years-olds (from 22 per cent to 36 per cent) and 55-64 years-olds (from 2 per cent to 18 per cent).
- In contrast, use among those aged 65 and above decreased (from 7 per cent in 2001 to 5 per cent in 2002).
- Globally, the proportion of Internet users who have made transactions using government services online is equal to the proportion of users who made online shopping transactions.
- Fifteen per cent of Internet users have made an online government transaction and in addition 15 per cent have made an online purchase at least once during the past 12 months.

The percentage of Internet users who access government online services varies considerably across different countries from 16 per cent in Hungary to 81 per cent in Norway. Wendy Mellor, Director, Taylor Nelson Sofres commented:

The increase in the use of government online services at a global level suggests that the public see the Internet as a more acceptable means of getting involved in the government activity at both national and local levels. However, significant differences exist between countries, may be due to, awareness of services, perceptions of safety, relevance of the site to users, and access to the Internet, among others.

In countries such as Singapore, Norway and Sweden, where the use of government services online is high, it is likely that a significant proportion of citizens feel comfortable with this approach of dealing with government. Yet in countries such as Britain, New Zealand and South

Korea, where usage lags behind general Internet use, more needs to be done to assess why uptake of online services is slow and what steps need to be taken to address this. All the above statistics on usage is time bound. Over the years there has been a definite rise in the usage of e-governance all over the world.



DISCUSSION EXERCISE

1. What is e-governance? Why do we need it? Discuss its scope and content in detail.
2. Discuss different IT tools that are used to deliver services to citizens.
3. Discuss the E governance initiative taken by government of Nepal in present context.
4. What are the issues related to E governance application? Why do we need to consider these issues?
5. E governance has helped to reach unreached? Explain the statement with reference to the undertaking in Nepal?
6. Explain the issues in E government application and the digital divide.
7. What is the content of e governance? Explain in detail.
8. Explain the need of e governance with context to reference of Nepal.
9. Explain E government Life Cycle.
10. Explain the current trend of development of E governance in Nepal.
11. Explain the e- governance initiative taken by government of Nepal and also explain the challenges for this initiative.
12. Short Notes:
 - a. E government as Information System
 - b. Global trend of growth in E governance
 - c. E governance trends in developed and developing countries.
 - d. Reaching the unreached through e governance
13. What are some successful examples of e-government?
14. What are the differences between "e-government" and "smart government"?
15. How does digital government become better government?
16. How can the internet be used to bring better governance to people?

