UNIT 6 NEW TECHNOLOGIES AND PUBLIC SYSTEMS MANAGEMENT

Structure

6.0 LEARNING OUTCOME

After reading this unit, you should be able to:

- Appreciate the importance of Information and Communication Technology (ICT) in the context of good governance
- Understand the concept of network society
- Explain the role of new technologies in public systems management
- Highlight the role of ICT in public policy and public service delivery
- Examine a few case studies to know the application of ICT-enabled initiatives and their impact on public systems management; and
- Identify the problems in application of new technologies.

6.1 INTRODUCTION

The twenty first century is regarded as information era. Information has the potential to influence every aspect of our lives at the individual as well as societal levels. In the

present competitive environment, information is being treated as the most important resource. Information facilitates sharing, exchanging, retaining as well as properly managing the knowledge output. It is the lifeblood of public governance. Information and Communication Technologies (ICTs) are being seen as having the potential to contribute towards sustainable growth in all countries. The major objectives of ICT are to bring efficiency, responsiveness, openness and participation in public governance. The focus of this Unit is to discuss the role of new technologies and their impact on public systems management.

6.2 INFORMATION AND COMMUNICATION TECHNOLOGY AND GOOD GOVERNANCE

The human society is undergoing a rapid change due to phenomenal growth of information and application of information technology. One of the significant features of globalisation is the signal role played by Information and Communication Technology (ICT). Information and Communication Technology denotes computing and telecommunication technologies that provide automated means of handling information with the object of improving public system methods of operation. In the context of globalisation, ICT is all about sharing global knowledge, access, participation and governance in the information age. ICT is creating the 'knowledge society' where information circulates to millions of people around the world creating a global consumer society for goods and all kinds of information and services. ICT helps to promote good governance by

i) Enhancing efficiency in delivery of public goods and services

ii) Increasing transparency, information dissemination, and accountability

iii) Facilitating accurate decision making; and

iv) Structuring public participation for public services management.

The third world countries including India have introduced 'good governance' and managerial reforms in the interest of improved public service management as also in fulfillment of the aid conditionalities imposed by the World Bank and IMF. Good governance has two major goals. The first is making administration accountable and citizen-friendly. The second is ensuring transparency and right to information. ICT acts as an important instrument to achieve the goals of good governance. ICT is widely being used in India as a strategy to realise the goals of good governance as well as to improve the processes of governance at all levels. Effective use of ICT is becoming synonymous with good governance. A major stumbling block in the governance process could be overcome through information sharing and better communication amongst the concerned stakeholders. ICT could play a positive role to achieve this objective. A novel feature of ICT is its accent on public-private partnerships in facilitating governance. It also provides ample opportunities for continuous monitoring and control of the production and delivery systems and easy communication with the people and other stakeholders related to the processes of public systems management. ICT is a technique to ensure accountability of the public systems management to the citizens. In order to transform public systems into positive and responsive social institutions, there is a need to explore new technologies for better governance. New technologies facilitate good governance in terms of capacity building to respond more effectively to the needs of the people. They also facilitate better interface between people and government, and more transparency in the operation of public systems. The initiatives launched in the form of ICT-enabled services ensure to improve quality and delivery of public services. Therefore, there is

a need to draw up a clear strategy to redesign public systems' processes and select appropriate technology solutions to provide good governance.

6.3 NETWORK SOCIETY

Human societies have transformed from one stage to another based on technological innovations. The influx of information technology is changing the industrial society to an information society. The internet is changing the present information society to a global society. The significant indicators of the information society are:

- Utilisation and exploitation of information for development
- Right access to right information at the right time
- Introduction of computers and telecommunication technologies in dealing with information
- Information as a strategic resource base rather than mere capital
- Growth of infrastructure for information technology applications; and
- Shift in occupational structure from manufacturing to information-based activities.

Modern societies are network societies. Technological innovations coupled with globalisation seem to be ushering in a new network age. The concept of network is central to the processes of globalisation. Network technology has created 'virtual reality' wherein a person can work or even do shopping from the residence on-line. The technological developments have resulted in unprecedented benefits in the dissemination of information and building a network society. The future lies in a network of computers spanning the globe. Networks facilitate the dissemination of information, thereby increasing learning opportunities through easy access and allow ideas to travel speedily from place to place for use by a large number of user-families.

Public administration being a multi-actor phenomenon, networks are natural to it. . Public governance is part of multiple networks – organisational, human and electronic, that are working to generate policies, services and knowledge. They have become an important feature of modern public policy and decision-making and administrative management. Network transcends organisational and national borders and challenges many of the traditional structures and processes of public systems management. A large number of problems of modern governments such as delay, corruption and red tape can be minimised, if not eradicated altogether, by technology-based networking which would also ensure transparency and accessibility of information to citizens.

The information revolution and its most penetrating product, the 'Internet', have produced a new territory called borderless cyberspace. A survey conducted in 2002 revealed that there are more than 38 million websites on the Internet. Google, one of the most popular search engines stated that there are more than two billion web pages. Much of this information is free, open and accessible to those who can afford it. The internet stimulates the activities of individuals and private institutions by removing the barriers of time and space reducing the costs of transborder communication. Development gateway, I connect, 'yahoo' digital groups are some examples of cross-country virtual networking groups sharing information and knowledge on different facets of development from cross country experiences.

The Government of India and other states are moving in a big way for creating websites or home pages that give information about policies and programmes. These

websites are created by the National Informatics Centre. The governments, both at the centre and in many of the states have set up internet kiosks, which are often franchised, to private operators. These kiosks use internet to provide information relating to various subjects like college admissions, prices of agricultural products, irrigation, weather forecasts etc., even in regional languages. In India, public policy seems to be moving steadily towards the spread of a vast network of call centres and information technology- enabled services in the country. The World Economic Forum (WEF) Report 2002 stated that while the internet was increasingly becoming popular in India, there were only 4.5 million internet users and 43 internet service providers. The disadvantaged sections of the society do not have access to internet services. The Government of India is taking steps to establish 'Internet Dhabas' in rural blocks to promote internet services in rural and remote areas by facilitating internet access to disadvantaged sections. It needs cautioning, however, that mere launching of interactive websites with all necessary information about government ministries and departments is no panacea for many of the basic sufferings of the citizens such as poverty, illiteracy, ill health and malnutrition, homelessness and social oppression.

6.4 ROLE OF NEW TECHNOLOGIES IN PUBLIC SYSTEMS MANAGEMENT

Information technology, global pressures and institutions and the need for internal efficiency and productivity in the domestic sphere are all changing the character of the State and the nature of public administration. The third world countries have introduced major reforms in their public systems to comply with the global pressures as well as to respond to internal domestic demands. These reforms primarily focus on the following:

- Improving service delivery to people
- Empowering people through dissemination of information
- Increasing transparency in government and business transactions
- Creating competitive environment by establishing synergy between public and private sectors, and
- Enhancing the administrative capacity and organisational efficiency of governmental systems through the application of information technology.

The above reform measures are introduced under the garb of New Public Management (NPM). In the NPM regime, public systems have been shifting from process- to result-oriented performance with increasing focus on outcome than inputs. Good governance and NPM are mutually supportive reforms towards the realisation of more efficient public system functioning.

In the developing countries, the application of Information and Communication Technology (ICT) is intended to attain increased responsiveness of public systems towards the citizens. The major objectives of ICT initiatives are to bring efficiency, responsiveness, openness and participation in governance. As it has been aptly pointed out, the significance of ICT applications in fostering governance lies in :

- Providing decision inputs to administration for improved planning, implementation and monitoring of development programmes
- Improving citizen-administration interface and public service delivery
- Empowering citizens to access information and knowledge

- Fostering transparency in service delivery and information sharing
- Highlighting key issues such as project justification, multiple service centers, and sustainable training in planning and implementing ICT applications
- Encouraging public debate on development issues
- Enhancing the accountability of governance mechanisms
- Sustaining the development of human resource towards the use of ICT; and
- Involving the grass roots groups and associations in development.

In India, steps have been already initiated for the development of ICT in several spheres. The Information Technology (IT) Act, 2000 has been a prominent initiative with a potential to regulate cyberspace and define offences and penalties against various types of cyber crimes. The Government of India has also constituted a National Task Force on IT and a Software Development Committee on Improving Efficiency in Government. The Ministry of Communication and Information Technology and Centre for e-governance are playing an important role for the development of ICT initiatives. The Government of India and many state governments have taken commendable initiatives in ICT. Creation of infrastructure, maintenance and upgradation of systems, management of partnership arrangements with technology providers, building trust among the public on the reliability of systems, making them accessible to large numbers, addressing the needs of multi-lingual users, subsidising the costs, building competencies among staff and users are some of the important concerns of ICT. There is evidence to suggest that new technologies in the areas of information and communication are greatly influencing public systems management in India. (The Indian Journal of Public Administration, 2004).

6.4.1 Electronic Governance

In the past few decades, ICT has been increasingly used to improve government services. This kind of technology application to public system management is called e-governance. It is a form of governance comprising the processes and structures involved in the delivery of electronic services to the public. The aim, ultimately, is to simplify procedures, enable people's participation and bring about improvement in governance through mail, telecommunication and the internet. Various manifestations of e-governance initiatives are using IT tools as (i) E-Mail, (ii) Internet web sites publishing, (iii) On-line interactive transactions, (iv) Wireless Application Protocol (WAP) application and publishing, (v) Short Messaging Service (SMS) connectivity, (vi) Internet development and usage, (vii) Promotion of citizen access. Electronic governance is the latest trend in the governance process all over the world.

Electronic governance refers to public systems' use of technology particularly web-based internet applications to enhance the access to and delivery of public services to citizens, employees and other public entities and stakeholders. It is an IT driven public and development administrative system. With the use of ICT, e-government projects have worked out a multimedia network of government agencies, citizens and businesses to facilitate a collaborative and efficient administrative environment and improved delivery of government services. This collaboration and commitment will assure efficient and high quality administrative services to citizens, streamline government's internal processes to improve quality of services, reduce costs and increase citizen participation in public systems management. The scope of ICT implementation in public systems can thus result in:

- Improvement of efficiency and effectiveness of the executive functions of government, including delivery of public services.
- Greater transparency of government to citizens and business, permitting greater access to the information generated or collected by the government.
- Fundamental changes and improvement in relations between citizens and the State thereby strengthening the democratic process, and
- Better interactions and relationships amongst different wings of the same government, state or local governments within a country and countries whose governments are web-enabled.

Electronic governance goes far beyond mere simple computerisation of stand alone back office operations in government offices. It implies a drastic change in the way the government operates, and this means a new and redefined set of responsibilities for the executive, the legislature and the judiciary.

Initially, the e-governance activity starts with providing information services by the government departments to the public in terms of state websites. These websites provide information about the department concerned, its aims, objectives, citizens' charters, organisational details, facilities available and services provided to the public along with the fees payable, etc. In view of developments in information technology, the websites of government departments attempt at providing more advanced services such as dynamic information as also specific transactions. The government departments are now better equipped to interact with citizens and provide services over the internet. Thus, the citizens are enabled access to government documents, file taxes, make payments as utility bills, obtain or renew licenses and make bookings and reservations for utilising public services. The preliminary indications are that e-governance increases efficiency, speed, effectiveness and citizen satisfaction.

In India e-governance initiatives are being undertaken both by the central and various state governments. The advent of many e-government projects and their eager acceptance by the public underline the need for governments to more vigorously implement ICT to improve service delivery to the public. It provides an opportunity to reinvent government. The reduced costs of data communications and electronic storage as well as wide area inter-operability through standard networking protocols offer the benefits of integrated government. Apart from lowering the costs of administration, the issue of shrinking resources and the continued pressure to do more with less can also be addressed through ICT. The implementation of ICT initiatives allows for the reduced use of human resources while providing greater service capability and quality with less human error and high delivery speed. It ultimately leads to the establishment of streamlined, flexible and citizen-focused public systems.

6.4.2 Digital Governance

Electronic governance can be introduced in multifarious ways and models. Digital governance is one of the models of e-governance. Digital governance system uses internet as a means by which people and government get connected. This model is at the initial stage now in most developing countries. Prabhu (2004), has highlighted six generic models of digital governance in developing countries:

i) **Broadcasting / Wider Dissemination Model:** The model is based on dissemination of information relevant to better governance that is already in the public domain into wider public domain through the use of ICT and convergent media. The rationale behind the model is that a more informed citizenry is able to understand better the governance mechanisms and is more empowered to make informed choices and exercise its rights and

responsibilities. This model opened up an alternative channel for people to access information as well as validate locally available information from external sources. The government departments have been adopting this model to disseminate information to the public in general. After the advent and popularity of internet, almost all government departments have been maintaining websites providing information to the public.

ii) **Critical Flow Model:** This model is based on channeling information of critical value to a targeted audience or spreading it in the wider public domain through the use of ICT and convergent media. The strength of this model is the inherent characteristic of ICT that makes the notion of distance and time redundant. This model is more focused in terms of its information content and intended users.

iii) **Comparative Analysis Model:** The model is based on exploring information available in the public or private domain and comparing it with the actual known information, sets to derive strategic learning and arguments. The strength of this model lies in the boundless capacity of ICT to store information in a retrievable manner and transmit it almost instantaneously across all geographical and hierarchical barriers. Developing countries can effectively use this model to their advantage as ICT opens access to global and local knowledge products at a relatively low cost.

iv) **Mobilisation and Lobbying Model:** It is one of the most frequently used digital governance models and has often come to the aid of civil society organisations in developing countries to impact international decision-making processes. The model is based on planned, directed, strategic flow of information to build strong virtual allies to strengthen action in the real world. The strength of this model is in the diversity of its virtual community, and the ideas, expertise and resources accumulated through virtual forms of networking. The model is able to effectively overcome the geographical, institutional and bureaucratic barriers to shape concerted action. Another important feature of this model is that it enhances the scope of participation of individuals and communities in policy issues and debates. This model could be effectively used by the government to encourage public debates and to gauge public opinion on a particular issue as a part of good governance strategy.

v) **Interactive-Service Model:** This model utilises the potential of ICT and leverages it for greater participation, efficiency and transparency in the functioning of government as well as savings in time and costs relating to decision-making. The model makes possible various services offered by the government to be directly accessible to citizens. It creates an interactive government–to-citizen-to-government channel in various functions. This model adopts the following methods for interactive purpose:

   a. Establishing an interactive communication channel with policy-makers such as video conferencing and online dialoguing.

   b. Conducting public debates / opinion polls on issues of wider concern before formulation of policies and legislative frameworks.

   c. Filling of grievance petitions, feedback and reports by citizens with the concerned governmental body.

   d. Performing governance functions online such as revenue collection, filing of taxes, governmental procurement, payment transfers, etc.

vi) **e-governance Maturity Model:** The model is based on the fact that speed, openness and ubiquity and some of the major capabilities of ICTs can be leveraged for generating transparency, responsiveness and accountability in the system on the one hand and empowering the common citizen by providing faster access to right information at the right time on the other. This model is based on a service-oriented approach. Public administration is seen as a professional activity. Efficient delivery of services to the internal and external users is emphasised as a key performance indicator of the government departments.

The model proposes some levels of maturity, depending on the effectiveness with which the e-governance efforts would be initiated, implemented or successfully completed. The model also provides for identification of key focus areas that need to be concentrated for attaining a specific maturity level.

The digital governance models exhibit several variations dependent on the local situation and the governance functions carried out through these models. These models bring about a radical transformation in the existing forms of governance as they change the nature of citizen-governance relationship and bring in new agents and mechanisms to influence the governance processes.

6.5 ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN PUBLIC POLICY

Public policy is an important mechanism for transforming a social system. The application of ICT provides comprehensive database, which helps policy makers to design, formulate and evaluate policies. It facilitates the strategic planning process, which helps government to clearly lay down the objectives, goals, programmes and projects.

Globally, new public management has emerged as a revolutionary wave, which has introduced a series of methods and techniques in the governmental system. This wave began in the early 1980s. The objective of the wave is to make the public policies efficient, effective and economical through the use of ICTs. The new public management reforms focus on privatisation, marketisation, contracting out, deregulation, de-bureaucratisation, downsizing and so forth. All reform efforts are intended towards building effective governance systems. In this reform era, governance is a synergy between various key players, i.e., State, civil society and market. In this context, the task of public policy formulation and implementation has assumed the nature of cooperative endeavour of governmental organisations, State institutions and social groups. The present governance system has a multi-actor and multi-level character. Therefore, technology is a very important aid to the complex processes involved in public policy exercise. It will help in bringing objectivity in monitoring the policy implementation and carryout impact assessment. The government has now realised that without active participation of beneficiaries directly in public policy planning, scheduling policy implementation and deciding the mode of implementation, it is not possible to implement public policies in an effective manner or reshape policies through a feedback mechanism. New technologies play a vital role in all the stages of public policy formulation and implementation. In addition, technology helps to enhance participatory approach towards public policy formulation and implementation. New technologies such as telecommunications, computers, optical fibers, communication satellites and the internet, which increasingly depend upon the collection and storage and processing of information generation and its use, will contribute to achieving objectivity and rationality in public policy initiatives. The

application of ICT will be helpful in public policy making and implementation in the following areas:

- There is a greater scope to influence policy – makers and members of civil society through collective opinion, direct participation, involvement in public debates and use of advocacy tools.
- Policy-makers become more aware of the public opinion and can effectively involve them in policy-making mechanisms. They realise that their actions are under the scrutiny of many more watchguard organisations. Information also becomes difficult to obliterate.
- Information becomes difficult to be capitalised by a few for political gains at the expense of ignorance of citizens.
- They open up avenues for flow of information both vertically and laterally to encompass a wider foundation of the civil society. The right to voice and expression get gradually embedded among people through digital means.

However, it may be noted that the application of ICT in public policy exercise requires information egalitarianism and a well-established democratic system. The ICT-enabled initiatives in public policy formulation and implementation will directly connect people with policy makers and implementing officials, and in turn, it will make the government more responsible and accountable to the citizens. In Andhra Pradesh, the women in villages form self-help groups popularly called DWCRA groups to mobilise and utilise micro-credit for small local projects. Many of these groups have been successful to set up their own banks, which use ICT to a significant level. The application of ICT in civil society groups and organisations is also slowly but steadily catching up.

6.6 ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN PUBLIC SERVICE DELIVERY

Traditionally, some of the services have been provided by the government through establishing booths and counters, as well as channels such as the post office for payment of utility bills and others. Service delivery is a core component of any government's obligation to citizens. Today citizens are demanding more efficient and responsive services from the government. In other words citizens now demand the same standards of service delivery from the government as from the private sector with significant emphasis on high quality services. As a result, governments around the world are becoming more and more pressured to reinvent themselves and produce innovative solutions in delivering public services. With the advent of ICT, there is now a greater need for governments to draw on these mechanisms to provide more efficient and responsive services to the public.

The quest to improve service delivery through the use of ICT in governments typically focuses on four main dimensions as under:

1) **Government-to-citizens (G2C):** This focuses primarily on developing user-friendly one stop centers of service for easy access to high quality government services and information.

2) **Government-to-business (G2B):** This aims to facilitate and enhance the capability of business transactions between the government and the private sector by improving communications and connectivity between the two parties.

3) **Government-to-government (G2G):** This is an intergovernmental effort that aims to improve communication and effectiveness of services between central, state and local governments in the running of day to day administration.

4) **Inter government:** This aims to leverage ICT to reduce costs and improve the quality of administration and management within government organisations.

The above dimensions have led many governments to take on major transformation processes that maximise the utilisation of information and communication technologies through e-government initiatives. Government will use effective and varied delivery channels to reach the target user groups. By delivering the services through multi-channels such as interactive and digital T.V., interactive voice response, public kiosks and mobile phones, government seeks to ensure that services can be accessed at any time and from any place without being constrained by any factor. Of all the types of delivery channels available, the internet is currently by far the most ideal platform for e-government. Innovations are also being introduced in many e-government projects around the world to further enhance communication of government-to-citizen and government-to-business. This includes wide usage of mobile phones through SMS, WAP or GPRS allowing subscribers to access the world wide-web on their phones.

The traditional channels of service delivery continue to play an important role in bridging and complementing electronic channels for transactions since they cater especially to those who are unfamiliar with technology or electronic transactions. With the availability of the different channels of service delivery, it is of prime importance that governments create awareness and educate the public on how to use these channels. Through proper citizens' education, they can get to know the changes that governments are promoting and reap the benefits of ICT in the provision of information and services.

The next section of the Unit provides practical experiences gained in designing and implementing e-governance projects in various facets of administration that are operating at union and state government levels.

6.7 INFORMATION AND COMMUNICATION TECHNOLOGY INITIATIVES: CASE STUDIES

This section presents four case studies – three Indian case studies and one international case study to understand the application of ICT – enabled initiatives and their impact on public systems management. The case studies relate to secretariat administration, judiciary, local government and service delivery.

6.7.1 Sachivalaya Vahini

This case study highlights the application of software packages to improve the functioning of state secretariat in Karnataka.

Secretariat is the apex policy-making body in state government. It is a key decision-making authority at the state level. Therefore, it needs to be managed efficiently for achieving the desired objectives. The secretariat has to deal with a large number of departments, organisations and individuals. It involves enormous amount of communication, besides holding, maintaining and processing of large volumes of data files or other formats. In Karnataka State Secretariat, all the files were created and maintained manually prior to introduction of Sachivalaya Vahini. As a result, the progress of work at Secretariat was very slow and inefficient.

National Informatics Centre (NIC), Karnataka State Unit, Bangalore, designed, developed and implemented tailored software package in all the 40 departments of the Secretariat, under the name of "Sachivalaya Vahini". The objective of the scheme is to promote e-governance by facilitating the policy and decision-making process. It was also intended to introduce the concept of Information and Knowledge Management making use of large network. The Directorate of Information Technology (DIT), Government of Karnataka, Bangalore set up Secretariat LAN (Local Area Network), the fibre optic Internet which connects more than 1000 computers spread across 40 Secretariat departments catering to the needs of 6000 employees of the Secretariat. The various components of Sachivalaya Vahini are:

- ***Patra – the Letter Monitoring System (LMS):*** This is a software package for managing the large number of letters received in any department of the Secretariat. The letters can be scanned and moved from desk to desk and even across departments for action to be taken, till the letters are filed or disposed of. Records of dispatched letters can also be maintained.
- ***Kadatha –File Monitoring System (FMS):*** This is a decision support system aiming at monitoring, tracking and helping in the speedy disposal of files, thereby increasing the efficiency of the workforce. Electronic files can be moved from desk to desk and even across the departments.
- ***Mokaddame - Court Case Monitoring System (CCMS):*** This package is to monitor the court cases in which government is the respondent or petitioner. This system efficiently manages case details, court orders and cases put up for hearing on a particular day.
- ***Aayayaya – Budget Monitoring System (BMS):*** This module aims to arrive at the budget estimate and to monitor the proposals, once the budgeted amount is allocated to the department. Government allocates funds to departments under various heads of accounts to implement development schemes. All the actions in the process are computerised, monitored and required queries and reports can be generated.
- ***Sibbandi – Personnel Information System (PIS):*** This package captures all the details of the employees as recorded in the service register. All the details of the secretariat employees as recorded in the service register are captured through this system. As and when, transfer, deputation, promotion, retirement etc., occur, details can be updated and necessary orders can be generated. A secretariat employee can apply online for any type of leave and sanction is sent through email.
- ***Customer Support System (CSS):-*** Through this system any complaints by customers regarding hardware, network, application, software system, etc., can be lodged, and the system will help monitor the complaints by giving online information. This is to facilitate customers in lodging complaints, as Secretariat LAN is a large network and users are bound to encounter problems. Through CSS, complaints received from the users can be recorded and immediate action can be taken.

All the above software applications are integrated with one another so that one application can access the data of another application. National Informatics Centre has trained more than 6000 Secretariat staff of all levels on the application packages. Sachivalaya Vahini software packages have contributed to the improvement of the processes of administration in Karnataka State Secretariat.

6.7.2 e-judiciary

India has an independent judiciary. Indian judiciary comprises the Supreme Court at the apex level, followed by the High Courts, District Courts, the Sub-District / Session Courts and the lower Judiciary. The National Informatics Centre (NIC) has played a unique role in developing e-judiciary applications at various levels of the judiciary in the country. e-judiciary is a term used to indicate IT applications in judiciary. In this case study, some of the successful e-judiciary applications have been explained.

In India, a project named COURTIS (Court Information System) was launched in 1990 for the benefit of the entire legal community. This project was commissioned for streamlining registries of various courts. Subsequently, all the High courts have been computerised and web- enabled both locally and nationally through NICNET. The following applications have been successfully implemented at the Supreme Court level and also in the 18 High Courts in the country.

- ***Case Status:*** This web site provides Supreme Court's pending and disposed case status information to litigants /advocates on the internet. Case-status gives the latest information with respect to the status of a case which could stand as disposed / adjourned, lower court details, party and advocate names, waiting position etc. Pending case status can be accessed through case number, title, advocate names and lower court details. The litigants can maintain their own case files by downloading all orders pertaining to a case. An advocate can download all his/her cases pending and disposed of, and maintain his/her own cases database.
- ***Judgement Information System(JUDIS):*** This is the Judgement Information System on CD-ROM consisting of complete texts of all reported judgements of the Supreme Court of India from 1950 to 2000. The judgements of 2001 onwards are available on the Internet. NIC Services Incorporated (NICSI) is marketing JUDIS CD on a membership basis.The judgements are available on the website within 24 hours of their delivery in the court. The judgements of Delhi High Court since 1999, the High Court of Andhra Pradesh since 1999, the High Court of Jammu and Kashmir since 2001 and the High Court of Orissa since 1985 are available on the Web
- ***Causelists on Internet:*** Cause lists are schedules of cases to be heard by the courts the following day. These lists of Supreme Court and all High Courts are available on NIC web servers. Prior to this package, the courts used to take a lot of time for generation and supply of the cause lists to the advocates at their offices or residences. This process costs each High Court lakhs of rupees every year. By making the cause lists available on the internet, no High Court is incurring any expenditure for this purpose. This software application has received huge response from the advocates and litigant public.
- ***Daily Orders on Internet:*** The daily orders of Supreme Court and the Delhi High Court are available on the internet. As soon as the orders are signed by the Judges, they are made available on the internet. This is the easiest way for litigants to get a copy of the latest order delivered in the court from their residences /offices. The free text based search enables the user to access relevant orders of the court on the same subject. It also helps the users in accessing orders without knowing the case number, or party name.

The end result of e-judiciary applications has been convenience, improvement and speed of legal services for everybody associated with the judicial system – the judges, advocates, the litigants, the media, and the law students and scholars.

6.7.3 e-panchayat

The Government of Andhra Pradesh has introduced e-panchayat software in Ramachandrapuram Gram Panchayat, Medak district, as a part of its e-governance initiatives. The software is web enabled and citizen-centric.The e-panchayat has been designed taking into consideration all the information and knowledge management requirements in a Gram Panchayat. The software product is conceptualised, designed and developed by the National Informatics Centre, Hyderabad. The functions of village Secretariat and village Secretary besides the elected representatives of the Gram panchayat are all considered in this package. The Panchayati Raj (constitutional amendment) Act 1992, of the Government of India and the success stories of the Gram panchayats in various states in the country have been taken into consideration while developing e-panchayat. Thus e-panchayat fits well into the information systems at Gram Panchayat level. The pilot e-panchayat Project of Andhra Pradesh comprises nearly 30 main modules, and nearly 150 sub-modules in line with the 30 sectoral functions of the gram panchayats.

The e-panchayat has already been operationalised in several pilot villages in Andhra Pradesh. It aims to cover all information requirements of the village panchayat administration. A rollout plan for implementation at the national level is being taken up.

6.7.4 Malaysian e-government Project

Electronic-government initiatives are focused on harnessing information technology and multimedia towards greater productivity and service excellence. This case study provides some insights into the Malaysian experiences in implementing ICT to improve the government's service delivery.

The objective of Malaysian e-government project is, first and foremost, to reinvent the government by redefining the relationships between government and citizens, business and within the government itself. This has been done through improved connectivity and communications between all parties.

In Malaysia, with the advent of the Multimedia Support Corridor (MSC), the public service has been able to leverage the potential for revolutionising service delivery through seamless and integrated government via its e-government flagship applications. The Malaysian e-government initiative is set up to catalyse the MSC through a number of pilot projects that have resulted in smart partnerships between local and international consortia working together with the government in developing leading edge e-government solutions. Through this structure, a first wave of e-government pilot projects has been implemented. These include e-services, e-procurement, Electronic Labour Exchange (ELX), Generic Office Environment (GOE), Human Resource Management Information System (HRMIS) and Project Monitoring System (PMS). This case study will focus on the e-services.

e-services

e-services is a capability that enables citizens and businesses to conduct transactions through a one-stop service window and provides easier access to government agencies such as the Road Transport Department, the Ministry of Health and the utility

companies. Citizens are provided with a choice of multiple delivery channels with 24 hours access that is available anywhere at their convenience; citizens are no longer limited to conducting these transactions at agency branches and utility offices. In addition, the use of ICT allows for multiple language capabilities for each access device and the services offered are tailored to be more user-friendly, multimedia-based and responsive in addressing the needs of such segments of the population as the elderly, the ICT disadvantaged and physically disabled persons. The implementation of the project has resulted in significant improvements in service delivery, including the provision of free services for summons and utility bill enquiries. The ease of access to these services has also encouraged users to be more regular and responsive in paying bills.

Malaysian e-government initiatives have brought dramatic improvements in services, and more services are being offered online. There is greater access to more convenient, responsive, higher quality and potentially less expensive services. The e-government initiatives have also brought, within the government, the new relationship signals, improved information flows and communication and better coordination of resources. The launch of e-government project in Malaysia is due to its aggressiveness in encouraging wider ownership of personal computers, tax deductions and providing IT facilities in rural areas such as the internet. The ICT infrastructure readiness of the country is an important factor for the success of e-government projects in Malaysia. A UN report on ICT infrastructure statistics has shown that, in most cases, Malaysia's infrastructure measures are above the Asian regional means.

6.8 PROBLEMS IN APPLICATION OF NEW TECHNOLOGIES

New technologies, it should be clear by now, bring advantages like cost effectiveness in operations, new forms of market access, competitiveness of product of service, ability to adopt to change and introduce new products and services. Though there are several advantages of ICT, critics are questioning the relevance of increased emphasis of ICT-based development in a country like India where more than 50% population is illiterate. According to OECD Public Management Service Rreport(1988), ICT has not done much to promote democratic rules of frequency and quality of participation or enhance transparency of policy-making. The information resource is not available to or shared by all the stakeholders. The World Economic Forum Report 2002 stated that India has only 1.65 percent of total population accessing the internet and internet impact covers only 6 percent of population. This penetration is comparatively low as compared to countries in the Asian region. For example Hong kong has 56.5 percent, South Korea 54.3 percent, Taiwan 51.3 percent, and Singapore 51.2 percent.

The disadvantaged sections of the society do not have access to ICT. The ICT precipitates disparities between the rich and the poor, the governors and the governed leading to a discriminatory 'digital divide'. Digital divide basically refers to lack of access of poor people and rural people to internet. To bridge this digital divide, steps would have to be taken to introduce delivery of services like tele-medicine, tele-education, tele-marketing and e-commerce to the rural areas. Also, in many cases, the reluctance on the part of government functionaries or lack of will to share the information with citizens /beneficiaries defeats the aims of ICT. Some of the major problems of widening the application of ICT in India have been succinctly summarised by Dhameja and Medury (2004).

These are, inadequate infrastructure, language barriers, ineffective and absence of right mind set of government officials, lack of capacity building exercises, absence of effective grievance mechanisms, non-availability of information, and differences in

the utilisation of information. ICT infrastructure readiness of the country is also of prime importance. This may be measured through the following factors:

1) The internet penetration rate in the country – problems may exist if a large percentage of the population is computer illiterate and / or has no access to the internet. In addition, government should take into consideration the difficulties faced by people with disabilities or language barriers when accessing websites.

2) The number of households that have personal computers. This indicates the level of IT literacy and penetration in the country.

3) The availability of telephone lines and mobile telephones coverage. This reflects the level of usage of other channels of service delivery.

The success of new technological initiatives hinges on how and when the governments in India at all levels decide to address the requirements of the downtrodden and the marginalised sections who constitute a large section of India's population. The country must create conducive atmosphere for the promotion of ICT initiatives and be receptive to the benefits and changes they bring forth. India being the world's largest home of scientists and engineers and the fourth biggest hub of IT specialists should now make huge strides in building up the capacity to innovate, adapt and regulate technology for serving the needs of the millions. ICT in the government machinery will go a long way in improving the quality of life of people. ICT revolution has become an essential ingredient of effective public system management in this era of accelerated democratisation and global competition.

6.9 CONCLUSION

Modern societies are network societies. The concept of network is central to processes of globalisation. Among the many developments and challenges facing governments today, perhaps the most important is the challenge that arises from the increasing influence of ICT. The major objectives of ICT initiatives are to bring efficiency, responsiveness, openness and participation in governance. Various manifestations of ICT initiatives are revolutionising the governance process. They are playing an important role in public policy and public delivery systems to provide citizen-friendly administration. A developing society like India has been facing a number of problems in the field of application of ICT and the politico-administrative atmosphere is also not quite conducive to promotion of ICT initiatives. In India, the success of new technological initiatives would, to a great extent depends on when and how the governments at different levels decide to address the requirements of the downtrodden and the marginalised sections of the population who constitute a large portion of India's population. At the same time, it is being realised that the ICT revolution has become an imperative necessity for effective management of public systems.

6.10 KEY CONCEPTS

Development of Women and Children in Rural Areas Programmes (DWCRA): This was launched in India in 1982 as part of Integrated Rural Development Programme. Its aims are to empower rural women living below the poverty line (BPL) by way of organising them to create sustainable income generating activities through self employment. It aims at economic and social development with focus on health, education, sanitation etc. It emphasises on group activity, encouraging regular savings, and income generating schemes.

Digital Governance

It refers to governance processes in which Information and Communication Technology (ICT) plays a significant role. It ensures active participation of citizens in decision making processes and their accessing public services. Digital governance uses ICT to bring about changes in the delivery and standards of public services and the ways of interaction and participation of citizen in governance.

General Pocket Radio Service (GPRS)

It is a new non voice value added service that allows information to be sent and received across a mobile telephone network. It facilitates instant connection whereby information can be sent or received, immediately as the need arises subject to radio coverage.

Information Society

It is a society in which low cost information and ICT are in general use. It emphasises on investment in human and social capital and considers knowledge and creativity as the key factors.

Knowledge Society

It is a society in which people have open and timely access to information and knowledge. This is utilised for informed decision making and transformation to quality life.

Strategic Planning

Strategic planning is long term planning of the organisation. It involves a clear statement of organisation's mission, strategic goals and objectives, which are key to the organisation, identifying the different stakeholders and developing strategies to achieve them.

Wireless Application Protocol (WAP)

It is a facility that allows users to access information instantly through wireless devices such as mobile phones, pagers etc.

6.11 REFERENCES AND FURTHER READING

Arora, Ramesh K, (Ed), 2001, *Management in Government: Concerns and Priorities*, Aalekh Publishers, Jaipur.

Arora, Ramesh K, (Ed.), 2004, Public *Administration Fresh Perspectives*, Aalekh Publishers, Jaipur.

Dhameja, Alka and Uma Medury, 2004, "ICT and Governance: The Socio-Economic Concerns, *The Indian Journal of Public Administration,* Volume L. No.1, January-March.

Dhameja, Alka (Ed), 2003, *Contemporary Debates in Public Administration*, Prentice-Hall of India Private Limited, New Delhi.

The Indian Journal of Public Administration, 1998, Special Number on "Towards Good Governance" New Delhi, Vol. XLII, No. 3, July-September.

TheIndian Journal of Public Administration, 2003*,* Special Number on IT and Indian Administration, New Delhi, Vol. XLVI, No. 3, July-September.

The Indian Journal of Public Administration, 2004, Special Number on Governance for Development New Delhi, Vol. L. No. 1, January-March.

Karim, Muhmmad Rais Abdul, 2003, "Technology and improved service delivery: learning points from the Malaysian experience" *International Review of Administrative Sciences*, Vol. 69, Number 2, June.

Prabhu, C.S.R, 2004, *E-Governance: Concepts and Case Studies*, Prentice-Hall of India Private Limited, New Delhi.

Sahni, Pardeep and Uma Medury, (Eds), 2003, *Governance for Development Issues and Strategies*, Prentice-Hall of India Private Limited, New Delhi.

The Hindu, March 22, 2005.

Vayunandan, E, and Dolly Mathew (Eds), 2003, *Good Governance: Initiatives in India,* Prentice-Hall of India, Private Limited, New Delhi.

Website

http://www.informatics.nic.in/archive/inf2004 jan/state infocus.htm.

6.12 ACTIVITIES

1. Select any one of the public organisations and analyse the effectiveness of new technological applications adopted by it in dissemination of information to citizens and also the effectiveness of public service delivery.
2. Prepare a report on a government department which is using website as an information device. The study can cover public perceptions about the service.