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## UNIT 4 ROLE OF ICT IN ADMINISTRATION

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### 4.0 LEARNING OUTCOMES

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After studying this Unit, you should be able to:

- discuss the essential components for ICT implementation in administration;
- examine the role of ICT in the vital areas of administration; and
- suggest measures for effective implementation of ICT in administration.

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### 4.1 INTRODUCTION

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In the early 1990's, with the coming of globalisation, liberalisation and privatisation, the governments, especially of the developing world, found themselves under remarkable pressures of economic reforms. They sought to create social and economic systems that could compete effectively in the globalising world. There was also a continuous pressure from the citizenry for reinvention of governments. The traditional bureaucracy focusing on hierarchy, authority, control, rigidity, rationality, centralisation, etc. found itself challenged by these changes. It was now to pave way for restructured administrative organisation, re-engineered work processes, strategic management, decentralisation, delegated authority and control, delegated decision-making, localness, shared and participative vision and purpose, and entrepreneurial skills, insightfulness and innovativeness.

ICTs emerged as major instruments in facilitating and enabling these changes. ICTs enabled the restructuring of hierarchical organisations, re-engineering of work processes and effective and participative decision-making. ICTs are helping governments to perform

the new roles of serving, steering, coordinating, reinventing and realignment. The tools and applications of ICT are the new modes of enabling multi-stakeholders' participation in policy making. They have helped in achieving citizens' engagement in policy deliberation and implementation process. ICTs have also given a new meaning and definition to administration. Administration has now become efficient, accountable, digital, responsive, transparent, equitable, qualitative, participative, team spirited, vision based, paperless and flexible.

In this Unit, we will discuss the role of ICT in facilitating three vital areas of administration, namely,

- Internal Administration;
- Planning and Decision Making; and
- Service Delivery

However, before we proceed to discuss the role of ICT, we will delve upon certain conditions that are necessary for effective ICT implementation in administration. Also, we would like to mention that the words 'administration' and 'governance' have been used interchangeably, without any distinction. Though we are aware of the distinction, they are used for convenience sake.

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## **4.2 ICT IMPLEMENTATION IN ADMINISTRATION: ESSENTIAL COMPONENTS**

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Before we proceed to discuss the role of ICT in governance, we will delve upon certain conditions that are necessary for effective ICT implementation. According to A. Sawhney, we need to have a proper and well laid down ICT architecture that can provide strong technology framework for e-government initiatives. It should lay down the design imperatives and constraints each project must adhere to and ensure that various projects and initiatives are interoperable and capable of being combined in a logical and cohesive manner to add value to each other. It should ensure that the architecture components are extensible and scalable to adapt to the changing environments. ICT architecture encompasses the following components:

- Application-software application, which includes database programmes, word processors and spreadsheets;
- Information- processed data;
- Groupware- also known as collaborative software, is an application software that integrates work on a single project by several concurrent users at separated workstations;
- Componentware-computer and associated physical equipment directly involved in the performance of data processing or communication functions;
- Shared Database-especially pertaining to citizens, organisations or establishments;
- Middleware- in a distributed computing system, middleware is defined as the software layer that lies between the operating system and the applications on each site of the system. These are the intermediate software layers hiding distribution, that

is, the fact that an application is usually made up of many interconnected parts running in distributed locations; hiding the heterogeneity of the various hardware components, operating systems and communication protocols; providing uniform, standard, high-level interfaces to the application developers and integrators so that applications can be easily composed, reused, ported and made to inter operate; and supplying a set of common services to perform various general purpose functions in order to avoid duplicating efforts and to facilitate collaboration between applications. Hence, the role of middleware is to make application development easier by providing common programming abstractions, by masking the heterogeneity and the distribution of the underlying hardware and operating systems, and by hiding low-level programming details;

- Integration-combining software or hardware components or both into an overall system;
- Network- Wide Area Network, Local Area Network ensuring connectivity;
- Platform- it describes some sort of framework either in hardware or software, which allows software to run. Typical platforms include a computer's architecture, operating system or programming languages;
- Security Policy- security certifications and standards for data and system security.

Besides the above, an e-government model needs to have:

- Shared software applications that would be deployed across:
  - i. all the departments in the state, such as, the software suite built around Multi-purpose Household Survey Citizens' Database, e-procurement portal, or Human Resources Management System, or an Integrated Financial Information System, or Social Benefits Management System or Online Transaction Processing System;
  - ii. a group of departments, such as, software for all engineering departments or health departments that would integrate with the core applications and deal with common processes across such groups; and
  - iii. departments integrating the core and group applications.
- Shared delivery channels relating to services from several departments and organisations being delivered across the same counter in single window centres or through a comprehensive citizen services portal on the internet, which can be accessed by citizens cyber cafes or internet kiosks. This enables well-defined quality of services;
- Public- private partnerships for generating resources; and
- Training of manpower-officials and employees.

We will now discuss the role of ICT in the three vital areas of administration individually.

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### **4.3 ROLE OF ICT IN ADMINISTRATION**

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ICT enables administration to be efficient and effective by facilitating the three core areas

of its functioning. It helps administration perform its public functions by simplifying the work processes and internal functioning via internal computerisation and automation, thus fostering transparency and accountability. Further, ICT facilitates policy formulation through multi-stakeholders participation enabling administration to incorporate the ideas and suggestions of professionals, academicians, private sector, civil society organisations, media, community and individuals in policy making. In addition, it renders public goods and services to the people by making the service delivery much more convenient, customer oriented and cost-effective.

We will now examine these roles in detail.

### **4.3.1 Internal Administration**

ICT has brought about an electronic transformation in the traditional functioning of administration and has made it accountable, transparent, decentralised and citizen-centric. ICT:

- tends to reduce the inordinate delays in file processing and movement caused by multiple levels in the departments/organisations (Gupta, et.al). From the lowest level of receipt of application to the highest level of action taking is the involvement of online file movement. Once the concerned official does noting, it is sent online to the next official. Hence time is not wasted in unnecessary physical movements. Computerised database is available for ready reference and it becomes possible for the officials to reduce the number of file movements;
- promotes centralised storage of files and data. This enhances maintenance, reduces unnecessary effort, minimises storage place and lessens security risks. As the files and data are maintained in the electronic form, location and retrieval becomes easy and time saving. The entire office management system is electronised;
- establishes efficient communication system between employees of departments thereby reducing wastage of time. Technology promotes connectivity and closer collaboration between departments and helps them to work in an integrated manner increasing overall productivity and reducing time overheads. This will not only benefit the employees of the organisation but also the citizens who would experience a much shorter turnaround time and a greater degree of transparency (paraphrasing Gupta, et.al);
- replaces the manual system of using standard process sheets and similar documents for processing leave applications, transfer orders or General Provident Fund advances of the employees. These process sheets can be maintained in the electronic form in a computerised environment (Gupta, et.al); and
- shapes the environment in which the department is operating and enhances the knowledge and skills required by administrators and staff. It facilitates organisational learning and adaptation to the changing global environment by way of partnership, participation, information sharing and delegation- a complete shift from the functional traits of classic administration.

Now there is a shift from the traditional administration to a modern electronised administration. ICT modernises the traditional pattern of administrative functioning in the following way:

<b>Traditional Administration</b>	<b>Electronic Administration</b>
• Unwieldy paper files	Computer based files
• Hierarchical authority	Networked power
• Wielding power through hiding information	Empowerment by sharing information
• Expenditure orientation	Performance orientation
• Individualistic	Organisational
• Batch processing	Online processing
• Delayed access	Instant access
• Delayed response	Prompt response
• Manual data entry	Electronic data entry
• More time for routine repetitive work	More time for creative work
• Fear of unknown	IT savvy
• Status quo	Continuous improvement

Source: Jagdish Kapoor, IT and Good Governance

### **Technology for Effective Internal Administration**

Internal functioning of administration will become effective with the application of the following devices. (Gupta, et.al.)

- **Wireless Devices**

Wireless communication devices, like cellular phones, can help in accessing the internet. Hence, with mobile phones it is possible to access people even when they are outside their offices through email or voice mail. Important and urgent matters can be immediately attended even when the officials are not in office. According to the Gartner Research Report, integration with such wireless devices has facilitated effective communication and has increased productivity (by 30%). Hence, integration with wireless technology should be taken up for effective functioning of our departments. A suitable system for interfacing with mobile devices through such channels as wireless email, SMS and voice mail, so as to harness time and cost saving, must be incorporated.

- **Unified Messaging**

Unified Messaging (UM) is a part of unified communications which provides users with the ability to access, receive and send different types of messages-faxes, emails, and voice mails-through a single common interface, such as, a browser on a PC or web enabled wireless devices. This makes it easier for the user now to access multiple messages-

voice, fax and email- through wireless devices or a PC browser. Equally, it is possible to save time in sending fax by over 80% (Captaris and ComGroup). Hence, UM can save time and money and increase productivity through effective communication system, especially in government departments, where there is reasonably enormous inter-employee communication.

- **E-mail**

E-mail facilitates inter-employee communication and inter-department communication, as communications can be sent, received and replied across electronically. Internal communication will be improved by increasing use of e-mail in the government. Even mobile wireless devices, such as, mobile phones and Personal Digital Assistants (PDA) can be used to access the message. Hence, users can now have multiple interfaces apart from computers.

- **File Tracking Module**

All files move from one section to the other and from one desk to the other in a well-laid down pattern. The file-tracking module helps to maintain a central record of the status of the files. So, whenever a file crosses one desk or checkpoint the dealing assistant enters it in the central record. Hence, all related officials and staff can access the information from the central location. This facility not only reduces the unnecessary procedure of maintaining file registers but also helps in locating all information pertaining to a single file at a central place in an electronic form that can be accessed online. Thus, the transactions can be processed online achieving greater efficiency, higher productivity and less paper work.

### **Steps Taken**

- Most of the states have fully automated the budgeting process. The revenue collection offices have been computerised. Border check posts have been connected with central computerised system at the headquarters of respective states. Relevant data of those who pay different kinds of taxes are computerised. States like, West Bengal, has taken the effort of National Informatics Centre (NIC) in preparing software for implementing a model value added tax scheme. Tripura has taken up the computerisation of taxes and treasuries;
- States like, West Bengal, has computerised the registration of documents relating to immovable properties in transactions involving sale, mortgage, lease, etc. with the help of software prepared by NIC. In Andhra Pradesh, the Computer-aided Administration of Registration Department Project has transformed the government to citizen interaction through application of ICT and has introduced a transparent system of property valuation. This Project has helped in replacing the manual system of copying and filing documents with a sophisticated document management system that uses imaging technology replacing the manual system of indexing, accounting and reporting; and introducing electronic document writing;
- Letters and files tracking system for different offices have been implemented in states like Maharashtra. Software for fund flow system, file monitoring system, letter monitoring system including receipt and despatch of letters have been developed by NIC and are in use in many departments in West Bengal;

- Government of Delhi has not only taken steps to automate its existing procedures but also reinvent government processes and redefine the role of bureaucracy. This would enable the Government to make its functioning citizen-centric, transparent and efficient;
- Video teleconferencing is used to centrally address the officials and staff at secretariat departments. Even training is being conducted through this mode. The Andhra Pradesh Government has created a requisite information infrastructure to support IT solutions in Government for disseminating relevant information for improving productivity and efficiency at all levels. It has set up a state-of-the-art video conferencing network for this purpose;
- Regional language software package with keyboard has been prepared by states, like West Bengal, for office work. West Bengal and Sikkim have integrated multi-lingual interface with Hindi data support using GIST SDK Software of C-DAC for data entry, validation, mutation, report generation, security, querying etc. of land records;
- NIC has developed an intranet based system for the management of personnel within each department providing for leave management and processing of benefits like house building advance, computer advance, TA/DA, LTC claims, etc. The Planning Commission and the Ministry of IT has already demonstrated the software for the purpose;
- In West Bengal, software of pension calculation has been developed by NIC for the primary and secondary school teachers as well as employees of the municipalities and panchayats. The State has developed software for pension file monitoring system of papers at each table of operation and tracking from entry point to despatch; and pension information system facilitating payment of gratuity, commuted value of pension, etc. to the employee at the date of his/her retirement;
- States have taken up training of employees and officials concerned in computer literacy. West Bengal has training in computer for both staff and officials of the Departments/ Directorates and District Offices. A Bengali Software package with keyboard has been prepared which will be used for office work in Bengali. Orissa has started Centre of IBM Software for imparting high-end software training. Tripura has taken up programme of training its officers and staff in basics and slightly more advanced concepts of computing.

### 4.3.2 Planning and Decision Making

ICT enables planning and decision making with the help of following applications:

#### Information Systems

Storage of information in electronic databases opens up significant possibilities for sharing information and creating new information and knowledge. Such information can be retained as individual data elements, as combinations of data to support decision-making, and with the application of judgement, as accumulated knowledge and wisdom (Gupta, et.al.). Information collected for one purpose can be re-used for multifarious policies and

plans. Geographic Information Systems and Management Information Systems (MIS) have enabled effective planning and decision-making by government departments.

- **Geographic Information Systems (GIS)**

GIS are special category of Decision Support Systems that can capture, store, check, integrate, analyse and display data using digitised maps. Every record or digital object has an identified geographic location. By integrating maps with spatially oriented databases and other databases, government departments can generate information for planning, problem solving and decision making, thereby increasing their productivity and quality of decisions. With help of GIS, use and analysis of spatial information in conjunction with connected socio-economic information is possible, which provides an ideal basis for planning. GIS is used for systematic town planning, establishing network, taking stock of country's agricultural and other resources, identifying natural resources through remote sensing; and developing infrastructure projects through spatial digital information to meet the growing needs of urbanisation (Gupta, et.al.).

GIS has been used for local level development planning in the country. The Department of Science and Technology has implemented a UNDP assisted Project on 'GIS-Based Technology for Local Level Development Planning' in association with leading academic institutions, data generating agencies and NGOs in the country. The Project helps in local level planning by using remote sensing, GIS and modern data communication facilities. Tools and techniques, such as, Geo-referenced Area Management or the GRAM++GIS package and Decision Support Modules were used for selected sectors of local level planning, for example, water resources management, land use planning, energy budgeting and infrastructure development (<http://www.undp.org.in>).

Besides, GIS-Based Decision Support System was implemented in Kutch district in Gujarat. The System helps in processing of survey data. Geo-database prepared by laying the various databases on the district, taluka (block) and village maps of the district is used for decision-making at the local administration level (<http://www.undp.org.in>).

Andhra Pradesh has employed comprehensive GIS for the State under the A. P. Development Monitoring System, which combines satellite imagery with digitised district, mandal (block) and village maps with several thematic layers covering aspects, such as, contours, soil, roads, irrigation and so on. This has helped in local level development planning.

In West Bengal, the Land Record Data Retrieval System at Block Land and Land Reforms office has been initiated. Digitisation of cadastral maps has taken place, which has made their availability to the Ryots (farmers) easy and highly cost effective. A Land Acquisition Information System has been developed by NIC for the State to ensure speedy disposal of land acquisition cases.

In West Bengal, GIS is being implemented in municipalities. It will cover geographical layout, land use, physical infrastructure and socio-economic scenario with special emphasis on education, health and family planning.

Vikas Darpan is a GIS based Planning and Decision Support System in Rajasthan, which covers more than 40000 blocks on about 200 demographic and socio-economic indicators.

Department of Telecom, Ministry of Defence and Maharashtra Earthquake Emergency Response Project are also using GIS applications.

- **Management Information Systems (MIS)**

There have been various instances of state initiatives in the application of MIS in decision-making and planning. Comprehensive MIS has been undertaken for the Department of Irrigation in Maharashtra. The infrastructure in the State includes a network among various levels in the Irrigation Department starting at Mantralaya (secretariat) upto the Divisional Offices. Hence, all information is smoothly exchanged among these levels and database is consolidated for planning and monitoring irrigation schemes. The network mainly constitutes of a dialup network for communication with various offices and ethernet for local network.

The Land Records Management Information System in Andhra Pradesh has provided land records database, which apart from furnishing land record certificates to the people, helps in land reforms planning. Now land records database can be easily accessed and used for planning land reforms. In West Bengal, the Land Records Data Retrieval System at Land and Land Reforms office at the Block level has enabled effective system of land management. A Land Acquisition Information System has been developed by NIC to ensure speedy disposal of land acquisition cases and has been in use in states like West Bengal. Tripura has also taken up the project of transport MIS for traffic management. Infrastructure for rural and urban areas can be well planned with the help of MIS as in Tripura, which has taken a project on computerisation and information system for rural infrastructure.

In Maharashtra, Cabinet Meeting Information System for the Chief Secretary's office has been implemented. Executive Information System for the CM and other ministers and senior bureaucrats is also undertaken. This will have well defined canned queries for the use of various ministers and executives and these queries will be accessible over a web interface.

The Sales Tax Department of Maharashtra has developed and deployed an Integrated Information System to facilitate electronic business, such as, web filing of returns and payment of taxes. The application forms can be downloaded from the web and used. It enables dealer specific queries and complaints. 'News Flash', 'Opinion Poll', and 'Chat with the Commissioner' are added features for the web-based solution. It also helps the dealers with accurate tax collections and simplified interpretation of the Sales Tax Act.

Information systems help in data communication as we can see in the case of AP Irrigation Information System. It encompasses development of information infrastructure in the form of radio based voice communication system at the field office level, telemetry system with limited coverage of selected project locations and use of existing Department of Telecommunications lines for networking the higher level offices. The existing NICNET terminal at important project sites also facilitates data communication to the State Headquarters at Hyderabad.

### **Computerisation**

Computerisation of all sections of the government departments has made the system efficient in policy making and policy implementation. Properly maintained and updated centralised database and records in the computer has made decision-making quick and

easy. It has become possible for the local offices to access data more conveniently for day-to-day decision-making. Computerisation, therefore, aid in the preparation of data repository.

Today, most of the departments have been computerised. Computerisation has modernised departments, such as, the police department. They are able to now effectively operate control rooms with all vehicle registration figures computerised. They are able to plan policing system for urban areas also. ICT has, further, helped in modernising the criminal-tracking system.

West Bengal has computerised its government departments and directorate. The State has computerised the transport system so that the traffic police can get automated access to vehicle data. It has computerised the preparation of land records, which enables the collection of certified copies of land records readily from the local offices of the land records directorate against some fees. Budgeting process has also been fully automated. Revenue collection offices have been computerised. Relevant data of about lakhs of professionals paying profession tax has been computerised. Treasuries have also been computerised. All Land Acquisition Offices and Offices of the Divisional Commissioners are computerised. The Home Department is providing computer network to all police stations in Kolkata. Transport Department is using Smart Cards for registration certificates and driving licenses.

Computerisation at even the village and taluka (block) level, e.g., in Tamil Nadu, has facilitated free flow of information and data for planning for these levels.

Maharastra, AP, Gujarat, Tamil Nadu and UP have implemented the Voucher Level Computerisation System for Offices of the Accountant General.

Maharastra has automated the back-end operations of the Motor Vehicle Department for purposes of registration of new vehicles, issue of licenses, tax collections and defaulter prosecutions.

Andhra Pradesh has computerised the Registration Department with the Project, namely Computer aided Administration of Registration Department.

Besides States like Rajasthan, Haryana and Tripura have also taken similar steps and initiatives.

### **Connectivity**

Connectivity among various government departments is provided horizontally and vertically through LAN and WAN. With networking they are able to smoothly transfer files, papers, records, information and notifications on intranet. Transfer and exchange of data is now immediately done. Wide area network has helped in linking state headquarters with district and cities and even the villages. Departments are now able to stay connected with their local units. Reports and data from the grassroots offices can be sent via e-mail. Linking the offices at the cities' and village level has helped in policy monitoring.

Post &Telegraphs Department has connected Postal Directorate at Delhi with the Northeast Postal Circle and the Assam Postal Circle with internet. This helps in sending directives and matters related to policy via internet and email.

The AP Secretariat Campus Network has linked the various secretariat departments. This Network has been integrated with AP Wide Area Network linking all government and public offices with State Secretariat including the district headquarters with facilities for data, video and voice communications. To enhance good quality communication of sufficiently high speed between departments, LAN has been set up. Equally, the government departments located all over Hyderabad and Secunderabad have been integrated under the TWIN Cities Project.

West Bengal has set up State Wide Area Network to provide backbone networking for e-governance projects. The departments have taken steps to provide connectivity from their district offices to the respective District Magistrates' offices to enable data flow. Rajasthan and Tripura have also followed suit by networking the secretariat departments. Rajasthan has developed intranet for city police. Maharashtra has set up a backbone LAN for entire Mantralaya. In West Bengal, the departments, such as, transport and traffic police are electronically connected at Kolkata, enabling automated access to vehicle data and speedy disposal of cases by the traffic police.

Project implementation and monitoring can be done with the help of such networking. A system for monitoring of various aspects of rural development schemes implemented at the district level has been made available to the Department of Rural Development. The state and central government departments can monitor online the progress made in the implementation of the poverty alleviation schemes. This has been implemented in State of Madhya Pradesh.

### **Video Teleconferencing**

Video teleconferencing can be used to decide urgent matters in consultation with senior officers without calling them over from their offices. This will make them accessible to the people even while being in a position to confer with other officers in matters which are urgent and cannot wait for a formal meeting to be convened.

The AP State Wide Area Network provides connectivity across 25 key locations that can be used for data, voice and video communications. The state departments are able to address their units with the help of this Network. The Network connects the State Headquarters with key locations in the district and cities and provides video teleconferencing which is used by the Chief Minister, Ministers and Heads of Department to hold frequent reviews of various programmes without requiring the district officers to travel and be physically present in the State Headquarters. This has proved to be extremely effective tool for managing natural calamities and drought relief, handling health related epidemics, tracking performance and organising state-wide campaign for various programmes and themes.

Teleconferencing has enabled citizens' participation in decision-making, especially in matters concerning them. Rather, multi-interest groups' participation, deliberations and discussions have become possible through teleconferencing in areas of wider and broader concerns of the community.

ICT has further enabled a direct form of democracy through e-polls, e-consultations, e-discussions and e-ballots. Political parties, governmental institutions, non-governmental organisations and media get the opinions and feedback of the people through e-polls on

policy matters and on crucial issues. The suggestions are important inputs to planning and policy making by the government. Recently, we can see the emergence of Internet Discussions proving to be a significant tool in involving the citizens and civil society organisations in policy making.

### 4.3.3 Service Delivery

ICT helps administration to perform its duties towards citizens by efficient and effective delivery of public services. With ICT enabled service delivery, administration is able to provide:

- qualitative and comprehensive information on departmental websites, especially in local languages. Internet and websites are used to disseminate information pertaining to various policies and programmes of the government. Government departments also host notifications and various Acts promulgated from time to time on the web, fostering information sharing and effective communication. Government is now able to provide information to those who are living in remote and disadvantaged areas where they have no access to libraries, newspapers, etc.

Most of the state governments like Andhra Pradesh, Kerala, Maharashtra, Karnataka and others are now hosting bilingual websites enabling easy access to information and services by the people. Information on utility services and welfare schemes, as those given below, is now being hosted on bilingual websites.

- i. rural services relating to land records;
  - ii. police services concerning FIR registration and lost and found matters;
  - iii. social services relating to pension scheme, schemes for elderly and widows, schemes for physically challenged, licenses, motor vehicle registration, ration cards, certificates relating to births and deaths, domicile, caste/tribe, etc;
  - iv. public information regarding employment exchange registration, employment opportunities, examination results, hospitals/beds availability, railway time tables, airline time tables, government notifications, government forms, government schemes, etc.;
  - v. agricultural information on seeds, pesticides, fertilisers, crop disease, weather forecast and market price;
  - vi. utility payments of electricity, water and telephone;
  - vii. commercial services pertaining to taxation and return filing; and
  - viii. public grievances matters pertaining to civic amenities, such as electricity, water, telephone, ration card, sanitation, public transport, etc. (Sawhney)
- integrated and seamless services to the citizens. All service providers, all services and all service channels are integrated to provide seamless services to the people. It is now possible to deliver the services seamlessly across governments and across the delivery channels of the internet, telephone, and service counters. Citizens are able to access the services in a seamless fashion (fluid, agile, integrated, transparent and

connected) as per their needs (Kernaghan). Thus, they are saved from travelling distances and spending time and money for getting services, as everything is available at a single window centre.

The single window system will provide all government services and information online at a single point, that is, web portal. All the citizens' requests can be handled through the portal. The single window system helps in compilation, presentation and delivery of government services in an integrated manner where searching, finding and accessing different possible services is effortlessly achieved by citizens (Gupta, M. P. et.al.) Comfort and satisfaction is ensured, as administration is now able to render services that can be conveniently accessed from any place and anytime from the net.

In Andhra Pradesh, government departments and organisations are providing public services through the single window and one-stop shop, namely, e-seva kendras and city civic centres. The people can visit the e-seva kendras and city civic centres and avail information on employment schemes, development programmes and government notifications. Departments can now get online payments on the utilities (electricity, water and telephone) they provide to the citizens. Departments have now enabled the people to file returns and taxes, lodge grievances, and apply for various certificates using e-seva or civic centre facilities. In addition, departments are able to host information pertaining to a number of social services, such as, schemes for widows, old and physically challenged online.

Civic departments are able to use one-stop centres of FRIENDS Project in Kerala to provide public information and utility services to the people. The FRIENDS centres are fast, reliable, instant and efficient networks for disbursement of services by departments. These centres render one-stop, front-end, IT enabled payment counter facility for citizens to make all kinds of government payments. Hence, the government is able to get increased revenues, as now there is no scope for intermediaries and corruption.

In States like West Bengal, queries relating to sales tax, luxury tax, coal cess, etc. are received over e-mail from citizens and are replied via e-mail. Land records preparation has been computerised that enable the pattadars to get certified copies of updated land records from the local office of the Directorate of Land Records and Surveys. Public Grievance Monitoring System has been implemented at most of the District Offices and also at New Secretariat Building. These systems are connected in a network for enabling proper and prompt services to the public. A government portal has been set up for providing information to the citizens in English and Bengali.

The National Capital Territory of Delhi has set up citizen service points, which could be used by the citizens to access any information about government services from any location. These citizen service points are electronically linked to government departments through websites. The government has also put up Suvidha Points at each department to enable the citizens to interact at only a single point. At these Suvidha Points the applications are accepted and acknowledged and the citizens are given a date by which they can expect a response from the department.

States like Tripura have opened Information and Facilitation Centres in the State Secretariat. This enables the departments to highlight their activities and use database

at the backend to respond to citizens' queries. Likewise Delhi, Orissa and Rajasthan have undertaken similar initiatives in service delivery.

NIC has developed a web-based Public Grievance Redressal Monitoring System for the Directorate of Public Grievances enabling the citizens to file their grievances to the Directorate. The system also helps in monitoring the status of grievance redressal.

Thus, with ICT in service delivery:

- public interaction has become maximum. It has taken government at the doorsteps of the people. One stop information centres render all services to the people without the need for them to visit the departments personally. Administration has become people-oriented providing high quality services through a very large set of conveniently located access points (AS). Government has facilitated comfort and satisfaction to the people, as they can avail public services of their own choice conveniently from any place and at any time. Government departments are able to render improved, qualitative and comprehensive services and information to the people even in their regional languages;
- administration has access to multiple service delivery channels now. Government uses integrated service channels, such as, internet, website, computers, CDs, mobile and other wireless devices, television, radio, etc. in delivery of services. Hence, ICT has provided multiple electronic channels to the government departments to render different types of services and to reach to those far-flung areas, which have connectivity and bandwidth problem. ICT has ensured seamless service delivery involving all service providers and all service channels for all services;
- openness is ensured. Government departments have become transparent in sharing information with the people. There is no secrecy and administration has become open in giving information. This has ensured the right to information to people; and
- accountability and efficiency has increased. Administration has now become hassle free, as they are able to dispose of cases online. With service delivery becoming integrated at both front-end and back-end, their burden of facing hundreds of people every day and being tangled in the file work has been reduced. Now, departments can focus on their core functions. Also, internal monitoring of disposal of applications is possible and delay, harassment and corruption can be checked. The system brings in transparency relating to the number of applications received and the concerned department to which they relate.

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## 4.4 SUGGESTIONS

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For effective implementation of ICT in the three vital areas of administration, there is need to have the following:

- each ministry/department need to provide PCs with necessary software to all officials, especially upto the level of section officer. They all should be connected through the LAN. This will facilitate two main areas of internal functioning, namely: internal communication and data handling;
- each ministry/department should start using the Office Procedure Automation Software developed by NIC for keeping record of receipt of dak (post), issue of letters, as

well as movement of files in the department. Internal communication will be improved by increasing use of e-mail, bulletin boards and video conferencing in the government.

Pay roll accounting and other housekeeping software should be put to use in day-to-day operations. Notices for internal meeting should be sent by email to the officers. Similarly, submission of application for leave and for going on tour should also be done electronically. Ministry/department should also set up on-line notice board to display orders, circulars, etc., as and when issued;

- state WAN should be provided to ensure connectivity across districts and blocks with the state headquarters for data, voice and video communications. This would facilitate video teleconferencing enabling departments to address, interact and hold frequent reviews with their local units;
- all ministries/departments should use the Web-enabled Grievance Redressal Software developed by Department of Administrative Reforms & Public Grievances;
- each ministry/department would also make efforts to develop packages so as to begin electronic delivery of services to the public. Each ministry/department should have its own website. Websites of ministries/departments/organisations should specifically contain a section in which various forms to be used by citizens/customers are available. The forms should be available for being printed out or for being completed on the computer itself and then printed out for submission. Attempts should also be made to enable completion and submission of forms online. Bilingual version of the content of the websites should be developed simultaneously;
- all Acts, rules, circulars should be converted into electronic form and made available on the internet and be accessible from the information and facilitation counters. The government should issue multi-purpose electronic cards to citizens for accessing services offered by different departments. Such cards will serve the purpose of being a driving license, or an identity card, or ration card, etc.;
- full-fledged training should be imparted to the staff in use of computers. For this purpose, ministries/departments should set up or share learning centres for decentralised training in computers as per the guidelines issued by the Department of Information Technology. Rather, modules for IT courses should be specifically designed for imparting computer training and education to produce knowledge workers in government. Annual confidential reports of employees should reflect the employee performance in using IT. Employees should also be given the benefits of loans for purchasing computers. Also, appropriate level of computer literacy should be made an essential requirement in the recruitment rules;
- handbook with successful ICT initiatives should be prepared for ready reference and avoidance of duplication of efforts; and
- internet based information delivery systems in combination with conventional broadcast media- TV and radio- could act as a major vehicle to educate citizens regarding their duties to the nation and the State. This will immensely help in people's participation in programmes of government (<http://egov.mit.gov.in/minagenda.asp>).

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## 4.5 CONCLUSION

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ICT in administration has led to positive developments. With ICT enabled administration, there is/are:

- citizen-centredness in service delivery;
- restructuring of government departments;
- better working methodologies and re-engineered work processes;
- better decision-making, implementation, monitoring and evaluation;
- increase in efficiency and productivity;
- cost effectiveness, consistency and seamless services;
- participative and collaborative policy making;
- openness and wider accessibility; and
- accountable, responsible and decentralised governance.

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## 4.6 ACTIVITY

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1. Let us know about some of the ICT applications being implemented in the secretariat departments of your State.
2. Discuss the civic services rendered by your area local body through the Information and Facilitation Counters.

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## 4.7 KEY CONCEPTS

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|-------------|---|
| Ethernet    | : is a frame-based computer networking technology for local area networks. It has become the most widespread LAN technology in use during the 1990s to the present. In telecommunications, a frame is a packet which has been encoded for transmission over a particular link. A packet is the fundamental unit of information carriage in all modern computer networks.      |
| Telemetry   | : basically refers to wireless communications and is a system for acquisition, storage and transmission of real time data from remote locations. It is a technology that allows the remote measurement and reporting of information of interest to the system designer or operator. The word is derived from Greek word- 'tele' meaning remote, and 'metron' meaning measure. |
| Application | : software application, which includes database programmes, word processors and spreadsheets. Application software sits on the top of systems   |

software because it is unable to run without the operating system and system utilities. It is defined subclass of computer software that employs the capabilities of a computer directly to a task that the user wishes to perform.

Spreadsheets : is an accounting or bookkeeping programme that displays data in rows and columns on a screen. It is a screen-oriented interactive programme enabling user to lay out financial data on the screen.

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## 4.8 REFERENCES AND FURTHER READINGS

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- Sawhney, A., n. d., IT Harmony, [http://www.icaai.org/media/ithar\\_july3.html](http://www.icaai.org/media/ithar_july3.html)
- <http://www.encyclopaedia.thefreedictionary.com>
- Kapoor, Jagdish, IT and Good Governance, IJPA, July-September 2000, Vol., XLVI, No. 3
- Gupta, M., P., P., Kumar, and J., Bhattacharya, 2004, Government Online-Opportunities and Challenges, Tata McGraw-Hill Publishing Company Ltd., New Delhi
- Gartner Research Report for Intel Corporation, July 2001, Benefits and TCO of Notebook Computing, Gartner Consulting, San Jose CA., quoted in Gupta et. al., ibid
- Unified Messaging Time Savings Study, January 2000, Published by Captaris and ComGroup, quoted in Gupta et.al.,ibid
- <http://www.nic.in>
- <http://www.mit.gov.in>
- <http://www.delhigovt.nic.in/itpolicy>
- <http://www.undp.org.in>
- Kernaghan, Kenneth, Moving Towards the Virtual State: Integrating Services and Service Channels for Citizen-Centred Delivery, International Review of Administrative Sciences, IIAS, 2005, Sage, London
- Bhatnagar, Subhash, 2004, E-government- From Vision to Implementation- A Practical Guide with Case Studies, Sage, New Delhi
- Bhatnagar, Subhash, and Robert, Schware, 2000, Information and Communication Technology: Cases from India, Sage, New Delhi
- <http://egov.mit.gov.in/minagenda.asp>