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ELEVENTH REPORT

SECOND ADMINISTRATIVE REFORMS COMMISSION

PROMOTING e-GOVERNANCE
The SMART
Way Forward

e-GOVERNANCE

DECEMBER 2008

GOVERNMENT OF INDIA

SECOND ADMINISTRATIVE REFORMS COMMISSION

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PREFACE

In his *Grundlegung Zur Metaphysik de Sitton*, Immanual Kant says, *"So act as to treat humanity, whether in their own person or in that of any other, in every case as an end withal, never as means only"*. Kant's observation is even more valid today. The citizens are ends in themselves, rather than as means to other ends. The colonial view of the Government used to be as a 'controller' and 'ruler'. It is now that of a coordinator and provider. Government is responsible for providing certain services to the citizens, just like an organisation is responsible for managing a value chain that leads to output. Business corporations have discovered over the last few decades that information technology can make the value chain more efficient and lead to quality improvements and cost savings. Similarly, Governments have discovered that information technology can make the provision of services to the citizen more efficient and transparent, can save costs and lead to a higher level of efficiency.

e-Governance is in essence, the application of Information and Communications Technology to government functioning in order to create 'Simple, Moral, Accountable, Responsive and Transparent'[1] (SMART) governance. In this report on e-Governance, the Second Administrative Reforms Commission (ARC) has tried to analyse the successes and failures of e-Governance initiatives in India and at the global level, in order to extrapolate the best practices, key reform principles and recommendations that can help the government to implement a new paradigm of governance in the country. This new paradigm would focus on the use of information technology to bring public services to the doorsteps of our citizens and businesses on the basis of revolutionary changes in our institutional structures, procedures and practices that would transform the relationships between our three levels of government, our businesses and our citizens.

The revolution in Information and Communications Technology (ICT) has brought a whole new agenda for governance into the realm of possibility. e-Governance comprises decisional processes and the use of ICT for wider participation of citizens in public affairs. Citizens are participants in e-Governance. The purpose of implementing e-Governance is to improve governance processes and outcomes with a view to improving the delivery of public services to citizens. Some authors have defined e-Governance as the e-business of the

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[1]Paragraph 83, Report of the Working Group on Convergence and E-Governance for The Tenth Five Year Plan (2002-2007), Planning Commission, November, 2001

State. This seems appropriate as both e-Governance and e-business use similar technologies, infrastructure and hardware. However the market models are widely different thus justifying e-Governance as a separate area of research (Gisler, 2001). Although there are many definitions of e-Governance, the objectives of governments are indisputable: maintaining collective security, administering justice, providing the institutional infrastructure of the economy and ensuring that vital social capital is enhanced through improvements in health and education and through strong families and communities (Dawes et al. 1999). A more comprehensive definition of e-Governance proposes changes of government in two related aspects: 1) transformation of business of governance i.e. reducing costs, improving service delivery and renewing processes; 2) re-examination of the functions and processes of democracy itself (Aicholzer and Schmutzer 2000). The resulting impacts are reduced costs, lesser corruption, increased transparency, revenue growth and convenience for the citizenry.

India, being the largest democracy in the world, has much to gain from e-Governance, especially when citizen participation in governance is one of the features of the fully evolved stage of e-government. Many e-readiness assessments have been carried out at the global level that show the current state of India's e-readiness. Some of the more recent study findings are as follows: The July 2002 EIU ranking found that 55 of the countries navigating the information super highway account for 98 per cent of all IT in 150 countries. It ranked India at 54 among the group of elite 55. The May 2001 Mc-Connell ranking of e-readiness assessment indicated that substantial improvements were needed in the area of connectivity. Improvements are also required in the areas of E-Leadership, E-Business, Information Security and Human Capital. The Global Information Technology Report, 2002-03, ranked India 37 above China which is ranked 43rd, whereas the 2001-02 Report ranked India 54 (adapted from INDIA: E-Readiness Assessment Report 2003, Department of Information Technology, Government of India).

Singapore has 'SINGAPORE ONE', an e-Governance suite that offers very comprehensive services to its citizens. Once a child is born, the data base keeps track of this child during its primary and secondary school days, graduation degree, employment, marriage, housing loans, passport, business etc. South Korea is another country that has developed a number of e-Governance projects. This country boasts of the best connectivity in the world. The UK also has an excellent e-Governance system and a lot can be learnt from how the government has transformed itself in the new era. While the India processes are based on the UK processes, they have remained antiquated. They need to be updated and changed as per current circumstances.

e-Governance refers to the use by government agencies of Information Technologies (such as Wide Area Networks, the Internet and mobile computing) that have the ability to

transform relations with citizens, businesses, and various arms of government resulting in better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resultant benefits are less corruption, increased transparency, greater convenience, revenue growth, and cost reductions.*

Analogous to e-commerce, which allows business to transact with each other more efficiently (B2B) and brings customers closer to businesses (B2C), e-government aims to make the interaction between government and citizens (G2C), government and business enterprises (G2B), and inter-agency relationships (G2G) more friendly, convenient, transparent, and inexpensive.

The goals of e-Governance are:

a.   Better service delivery to citizens

b.   Ushering in transparency and accountability

c.   Empowering people through information

d.   Improved efficiency within Governments

e.   Improve interface with business and industry.

e-Governance needs to transform all levels of Government but the focus should be on local governments since local governments are the closest to citizens, and constitute for many, the main interface with government. The relationship of citizens and local authorities tends to be one based on proximity as the interests at stake for both parties are closely entwined concerning issues such as public services, local development, education etc. e-Governance based administrative reforms in local governments can have maximum impact on citizens.

The benefits of information technology have not been evenly distributed. It has been noticed that most of the time the benefits of e-Governance are also reaped by the affluent sections of society. Therefore a concerted effort has to be made to direct e-Governance reforms towards the common man.

The advances in information and communications technologies and the internet provide opportunities to transform the relationship between governments and citizens and business in new ways that contribute to the attainment of good governance. They provide opportunities for people and business to involve themselves in the process of governance at all levels. They facilitate better service delivery to clients, in terms of timelines and quality,

*The World Bank

thus making governance more efficient and effective. In addition, the use of ICT may lower transaction costs both for citizens and government operations and public services can be made more affordable to the people at large.

e-Governance has to be comprehensive; mere introduction of the IT component is not an end in itself. Comprehensive e-Governance reforms cover (1) the process, (2) preparedness and the technology (3) and the people. Introduction of e-Governance needs process engineering as the first step. Unless the processes and procedures and even structures of government are re-engineered so as to be e-Governance compatible, e-Governance projects cannot succeed. The technology and the hardware and software come second, only after the processes have been re-engineered. And ultimately, in order to make the reforms sustainable the people in the concerned departments/agencies have to internalize the changes. This is also one of the reasons why e-Governance projects succeed at the pilot level but 'when up-scaled' they become unsustainable.

Different States in India are at different levels of e-readiness: while implementing e-Governance reforms in different parts of the country, this aspect has to be kept in mind. This makes implementation of national e-Governance projects in a uniform way difficult. Therefore, it is necessary to bring all States at the same or comparable levels of IT readiness. Today, there are a number of successful projects of e-Governance running in the country. But there are very few which are on a nation-wide basis. The challenge is to replicate and upscale the successful models.

A large number of e-Governance projects can be implemented in the public-private partnership mode. It is a challenge to integrate the professional approach of the private sector with the social concerns of the Government. It is necessary to evolve some norms for such partnerships. It is also very important to provide all services to citizen at one common counter/platform, preferably close to where the citizen lives. This is possible through e-Governance. But this requires all the individual services to be brought to the same levels of computerization which poses a serious challenge. The next step thereafter is to use mobile technology and India's increasing mobile telephony penetration rates to allow citizens to transact many services on the move without even needing to come to a common counter let alone queue up for the services.

The types of services possible through e-Governance can be broadly classified into three categories (1) providing information (2) improving processing efficiency and (3) facilitating transactions. Amongst these, providing information is the simplest and the degree of complexities increase as we move from information to transactions. But it is the second and the third category of services that provide maximum convenience to the citizens. The challenge is to cover such services.

e-Government is not about 'e' but about 'government'; it is not about computers and websites, but about services to citizens and businesses. e-Government is also not about translating processes; it is about transforming them. e-Government is concerned with the transformation of government, modernisation of government processes and functions and better public service delivery mechanisms through technology so that government can be put on an auto-pilot mode.

The four pillars of e-Government are:[#]

- People

- Process

- Technology

- Resources

The challenges in e-Governance have been described as centred around for key areas viz people, process, technology and resources. The key considerations in e-Governance are described below:

e-Governance imperatives

Process	Simplicity	Efficiency	Citizen-centricity	Sustainability	Cost-effectiveness
People	Vision	Leadership	Commitment	Competency	Change
Technology	Architecture	Open Standards	Reliability	Scalability	Security
Resources	Holistic	Efficient	Service-oriented	Sustained	Adequate

To compete successfully in a network based global economy, governments need to be both leaders and facilitators. The leadership and facilitation roles comprise the following elements:

- Developing a national e-strategy, making ICT adoption and network readiness a national priority;

- Undertaking innovative projects that make a difference, to lead by example, adopting best practices;

- Reforming government processes covering areas such as revenues, expenditures, procurement, service delivery, customer grievances etc;

[#] This and subsequent paragraphs are adapted from a paper prepared/presentation made by Dr. P.K. Mohanty

- Tracking, storing and managing information, promoting production of national content online and through electronic media; and documenting "successes" and "failures";

- According high priority to protection of individual rights, intellectual property, privacy, security, consumer protection etc. and mobilising the civil society; and

- Developing a supportive framework for early adoption of ICT and creating a regulatory framework for ICT-related activities.

Creating the macro-economic environment for growth and innovation in ICT, including fiscal policies (cost, innovation, investment, and venture capital), legal and regulatory environment (competition, independent regulator, rule of law, intellectual property protection) and channelizing and mobilization of resources for ICT is an important corollary to e-Governance as is implementing an education policy for the right quantum and quality of manpower resources for a network-ready economy-curricula, ICT training facilities and wiring/networking of educational institutions. Addressing the 'digital divide' domestically and internationally, giving signals to markets - articulating a national vision of ICT, according national priority to ICT, undertaking large projects, promoting innovation and risk taking through fiscal concessions and availability of venture capital; creating an investment climate for domestic and foreign investment in ICT sector; championing national interests in international forums etc. are equally important.

Despite important policy initiatives and significant achievements in the economic and social sectors in our country, we still have a long way to go before achieving our full potential for development. This is because there is still a wide gulf between our policy initiatives and intents and the actual achievements. Among the major reasons for this gap include outmoded systems of governance, cumbersome processes and procedures, prevalence of corruption and lack of accountability in our functioning. A pertinent question, therefore, is how can these deficiencies be best redressed. An obvious answer is through adopting e-Governance as an inextricable part of government functioning, be they in routine matters or major projects. In this context I would like to share some of the successful initiatives in e-Governance which were undertaken when I served as Education and Finance Minister and later as Chief Minister in Karnataka. These include use of e-Governance both in routine matters as well as in major initiatives. Some of these are:

- Introduction of computerised counseling in the Common Entrance Test (CET) for admission to Professional Colleges in Karnataka.

  This involved creation of a computerized system to manage the processing of the results of CET, to prepare merit lists and thereafter on the basis of the merit list to enable seat selections by the candidates in a transparent manner.

- Disposal of files in the Chief Minister's office.

  Every grievance or appeal which was addressed to the Chief Minister, was given a computer number and date and watched on computer for its disposal. Needless to mention the impact of such objective watch had an impact on the efficiency of the CM's secretariat in the matter of prompt disposal of files, redressal and are elaborated in this Report.

Information Technology presents many avenues for improving governance. It has opened up new opportunities for governments to manage things differently and in a more efficient manner by utilizing information effectively and re-engineering processes. ICT tools are emerging as important instruments towards the goal of "good governance". Many countries have launched specific initiatives for open government. Freedom of information is being redefined and supported by ICT. India's Right to Information Act, 2005 is a prime example in this regard. ICT has facilitated a conscious attempt to bring the citizen to the centre-stage. Citizens are being perceived as customers and clients rather than beneficiaries. The internet revolution coupled with rapid advances in communication have proved to be a powerful tool for citizen-centric governance. An important dimension of the Internet potential is the possibility of providing public services anytime, anywhere.

My hope is that the ARC's Eleventh Report on e-Governance, can help transform governance in India to a transparent, responsive, citizen friendly and efficient regime that we can all be proud of.

New Delhi

December 20, 2008

(M. Veerappa Moily)

Chairman

Resolution

New Delhi, the 31st August, 2005

No. K-11022/9/2004-RC. — The President is pleased to set up a Commission of Inquiry to be called the Second Administrative Reforms Commission (ARC) to prepare a detailed blueprint for revamping the public administration system.

2.   The Commission will consist of the following :
(i)   Shri Veerappa Moily - Chairperson
(ii)   Shri V. Ramachandran - Member
(iii)   Dr. A.P. Mukherjee - Member
(iv)   Dr. A.H. Kalro - Member
(v)   Dr. Jayaprakash Narayan - Member*
(vi)   Smt. Vineeta Rai - Member-Secretary

3.   The Commission will suggest measures to achieve a proactive, responsive, accountable, sustainable and efficient administration for the country at all levels of the government.

The Commission will, inter alia, consider the following :
(i)   Organisational structure of the Government of India
(ii)   Ethics in governance
(iii)   Refurbishing of Personnel Administration
(iv)   Strengthening of Financial Management Systems
(v)   Steps to ensure effective administration at the State level
(vi)   Steps to ensure effective District Administration
(vii)   Local Self-Government/Panchayati Raj Institutions
(viii)   Social Capital, Trust and Participative public service delivery
(ix)   Citizen-centric administration
(x)   Promoting e-governance
(xi)   Issues of Federal Polity
(xii)   Crisis Management
(xiii)   Public Order

Some of the issues to be examined under each head are given in the Terms of Reference attached as a Schedule to this Resolution.

4. The Commission may exclude from its purview the detailed examination of administration of Defence, Railways, External Affairs, Security and Intelligence, as also subjects such as Centre-State relations, judicial reforms etc. which are already being examined by other bodies. The Commission will, however, be free to take the problems of these sectors into account in recommending re-organisation of the machinery of the Government or of any of its service agencies.

5. The Commission will give due consideration to the need for consultation with the State Governments.

6. The Commission will devise its own procedures (including for consultations with the State Government as may be considered appropriate by the Commission), and may appoint committees, consultants/advisers to assist it. The Commission may take into account the existing material and reports available on the subject and consider building upon the same rather than attempting to address all the issues ab initio.

7. The Ministries and Departments of the Government of India will furnish such information and documents and provide other assistance as may be required by the Commission. The Government of India trusts that the State Governments and all others concerned will extend their fullest cooperation and assistance to the Commission.

8. The Commission will furnish its report(s) to the Ministry of Personnel, Public Grievances & Pensions, Government of India, within one year of its constitution.

Sd/-
(P.I. Suvrathan)
Additional Secretary to Government of India

*Dr. Jayaprakash Narayan – Member, resigned with effect from 1st September, 2007
(Resolution No. K.11022/26/207-AR, dated 17th August, 2007).

Government of India
Ministry of Personnel, Public Grievances & Pensions
Department of Administrative Reforms and Public Grievances

RESOLUTION

New Delhi, the 24th July, 2006

No. K-11022/9/2004-RC (Vol.II) – The President is pleased to extend the term of the second Administrative Reforms Commission by one year upto 31.8.2007 for submission of its Reports to the Government.

Sd/-
(Rahul Sarin)
Additional Secretary to the Government of India

Government of India
Ministry of Personnel, Public Grievances & Pensions
Department of Administrative Reforms and Public Grievances

RESOLUTION

New Delhi, the 17th July, 2007

No.K-11022/26/2007-AR – The President is pleased to extend the term of the second Administrative Reforms Commission (ARC) by seven months upto 31.3.2008 for submission of its Reports to the Government.

Sd/-
(Shashi Kant Sharma)
Additional Secretary to the Government of India

Government of India
Ministry of Personnel, Public Grievances & Pensions
Department of Administrative Reforms and Public Grievances

RESOLUTION

New Delhi, the 14th February, 2008

No.K-11022/26/2007-AR – The President is pleased to extend the term of the second Administrative Reforms Commission (ARC) by six months upto 30.9.2008 for submission of its Reports to the Government.

Sd/-
(Dhruv Vijai Singh)
Additional Secretary to the Government of India

Government of India
Ministry of Personnel, Public Grievances & Pensions
Department of Administrative Reforms and Public Grievances

RESOLUTION

New Delhi, the 5th September, 2008

No.K-11022/26/2007-AR – The President is pleased to extend the term of the second Administrative Reforms Commission (ARC) by six months upto 31.3.2009 for submission of its Reports to the Government.

Sd/-
(P.K. Jha)
Joint Secretary to the Government of India

ORGANISATION

Second Administrative Reforms Commission

1. Dr. M. Veerappa Moily, Chairman
2. Shri V. Ramachandran, Member
3. Dr. A.P. Mukherjee, Member
4. Dr. A.H. Kalro, Member
5. Smt. Vineeta Rai, Member-Secretary

Officers of the Commission

1. Shri A.B. Prasad, Additional Secretary
2. Shri P.S. Kharola, Joint Secretary
3. Shri R.K. Singh, PS to Chairman
4. Shri Sanjeev Kumar, Director
6. Shri Shahi Sanjay Kumar, Deputy Secretary

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LIST OF ABBREVIATIONS

Abbreviation   Full Form

AOA   Articles of Association
APL   Above Poverty Line
APR   Annual Performance Appraisal Report
ARC   Administrative Reforms Commission
ATIs   Administrative Training Institutes
BIS   Bureau of Indian Standards
BOD   Bulk Operations Division
BPL   Below Poverty Line
BPR   Business Process Reengineering
BSEB   Bihar State Electricity Board
CBDT   Central Board of Direct Taxes
CBRMs   Capacity Building Roadmaps
CCTNS   Crime and Criminal Tracking Network and System
C-DAC   Centre for Development of Advance Computing
CDB   Core Database
CET   Common Entrance Test
CIO   Chief Information Officer (USA)

CIOC	Chief Information Officer Council (USA)
CIPA	Common Integrated Police Application
CITU	Central IT Unit (UK)
CLR	Computerisation of Land Records
COD	Compliance Operations Division
CSC	Common Service Centre
CSS	Centrally Sponsored Scheme
DAR&PG	Department of Administrative Reforms and Public Grievances
DDA	Delhi Development Authority
DGFT	Directorate General of Foreign Trade
DHS	Department of Homeland Security (USA)
DIN	Director Identification Number
DISNIC	District Information System of the National Informatics Centre
DIT	Department of Information Technology
DMA	Disaster Management Act, 2005
DoLR	Department of Land Resources
DPR	Detailed Project Report
EA	Enterprise Architecture
EC	Empowered Committee
EDI	Electronic Data Interchange
EFC	Expenditure Finance Committee
EGOM	Empowered Group of Ministers
EOI	Expression of Interest
ERNET	Education and Research Network
ETS	Electronic Total Station
EXIM	Export Import
FAR	Federal Acquisition Regulation (USA)
FEA	Federal Enterprise Architecture (USA)
FIFO	First in First out
FIU-IND	Financial Intelligence Unit - India
G2B	Government to Business

G2C	Government to Citizen
G2G	Government to Government
GIS	Geographic Information System
GPS	Global Positioning System
GSA	General Services Administration (USA)
HRSI	High Resolution Satellite Imagery
ICT	Information & Communications Technology
IEC	Information Education and Communication
IEE	Internal Efficiency and Effectiveness
IRM	Institute of Risk Management (USA)
ISRO	Indian Space Research Organization
IT	Information Technology
ITES	Information Technology Enabled Services
ITIN	Individual Tax Identification Number
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
KISS	Keep it Small and Simple
KM	Knowledge Management
LAN	Local Area Network
MCA	Ministry of Corporate Affairs
MEA	Ministry of External Affairs
MHA	Ministry of Home Affairs
MIS	Management Information System
MMPs	Mission Mode Projects
MNIC	Multi-purpose National Identity Card
MOA	Memorandum of Association
MoUD	Ministry of Urban Development
MPLADS	Member of Parliament Local Area Development Scheme
MSA	Measurement System Analysis
NARA	National Archives & Records Administration (USA)
NASSCOM	National Association of Software and Services Companies

NeGP	National e-Governance Plan
NIC	National Informatics Centre
NICNET	National Informatics Centre Network
NISG	National Institute of Smart Governance
NLRMP	National Land Records Modernisation Programme
NLSA	National Level Service Agency
NMMP	National Mission Mode Project
NPR	National Population Register
NREGA	National Rural Employment Guarantee Act, 2005
NSDG	National e-Governance Service Delivery Gateway
OECD	Organisation for Economic Co-operation and Development
OFPP	Office of Federal Procurement Policy (USA)
OMB	Office of Management and Budget (USA)
OPM	Office of Personnel Management (USA)
PAN	Permanent Account Number
PDS	Public Distribution System
PeMT	Project e-Governance Mission Teams
PESU	Patna Electric Supply Undertaking
PFO	Physical Front Office
PIAs	Privacy Impact Assessments
PPP	Public-Private Partnership
PSUs	Public Sector Undertakings
RACE	Revenue Administration through Computerised Energy
REGS	Rural Employment Guarantee Scheme
RDs	Regional Directors
RFP	Request for Proposal/Participation
RGI	Registrar General of India
ROC	Registrar of Companies
RoR	Records of Rights
RPO	Regional Passport Office

RTC	Records of Right, Tenancy and Cultivation
RTI	Right to Information
SCA	Service Centre Agency
SDA	State Designated Agency
SDCs	State Data Centres
SeMT	State e-Governance Mission Teams
SMART	Simple, Moral, Accountable, Responsive and Transparent
SRA	Strengthening of Revenue Administration
SROs	Sub-Registrars' Offices
SSC	State Services Commission (New Zealand)
STQC	Standardization Testing and Quality Certification
SWAN	State Wide Area Network
TIN	Tax Identification Number
UID	Unique Identity
ULBs	Urban Local Bodies
ULR	Updating of Land Records
URL	Uniform Resource Locator
UTs	Union Territories
VFO	Virtual Front Office
VLE	Village Level Entrepreneur
WAN	Wide Area Network

INTRODUCTION

1.1 One of the terms of reference of the Second Administrative Reforms Commission pertains to promoting e-Governance and in particular, to the following aspects of this subject:

    i.   To reduce red-tape, delay and inconveniences through technology interventions including the use of modern tools, techniques and instruments of e-Governance.

    ii.   Promote knowledge sharing to realize continuous improvement in the quality of governance.

1.2 The "e" in e-Governance stands for 'electronic'. Thus, e-Governance is basically associated with carrying out the functions and achieving the results of governance through the utilization of what has today come to be known as ICT (Information and Communications Technology). The reason why countries around the world are increasingly opting for 'e-Governance' is that governance per se has become more complex and varied in the last few decades and more importantly, citizens' expectations from government have increased manifold. ICT facilitates efficient storing and retrieval of data, instantaneous transmission of information, processing information and data faster than the earlier manual systems, speeding up governmental processes, taking decisions expeditiously and judiciously, increasing transparency and enforcing accountability. It also helps in increasing the reach of government – both geographically and demographically.

1.3 The primary purpose of governance is the welfare of citizens. While one aspect of governance relates to safeguarding the legal rights of all citizens, an equally important aspect is concerned with ensuring equitable access to public services and the benefits of economic growth to all. It is expected that e-Governance would enable the government to discharge its functions more effectively. However, this would require the government to change itself – its processes, its outlook, laws, rules and regulations and also its way of interacting with the citizens. It would also require capacity building within the government and creation of general awareness about e-Governance among the citizens.

1.4 During the initial stages of introduction of ICT in governance there was resistance from some quarters. Some felt that computerization cannot work in the complex government system and that introduction of computers would lead to un-employment. There were also serious doubts whether government employees at all levels would be able to handle computers. Fortunately all these misgivings have proved wrong. Today, new software tools have enough flexibility, to accommodate the most complex situations. The new technology makes the machine human interface very user-friendly. The Information Technology (IT) and Information Technology Enbled Services (ITES) sectors have created millions of jobs besides improving vastly on the services provided by government undertakings like Banks, Airlines, Railways etc. Thus e-Governance is no longer a far-fetched dream.

1.5 The Commission in its various Reports has advocated the need for introducing e-Governance tools for reforming governmental processes and bringing elements of accountability and transparency along with citizen-centricity. In its First Report, entitled 'Right to Information: Master Key to Good Governance', while discussing suo motu disclosures, the Commission recommended that *"In respect to electronic disclosures, NIC should provide a single portal through which disclosures of all public authorities under appropriate governments could be accessed, to facilitate easy availability of information"* (paragraph 5.4.11.d). However, while making this recommendation, the Commission was not unaware of the ground realities prevalent in the country, especially in the rural areas, which called for a thrust towards capacity building and creating adequate infrastructure for taking e-Governance to the people. Thus, the Commission cautioned that *"…there are inherent limitations in electronic communication. The vast majority of people will not have access to computers in the foreseeable future. Also a large number of small public offices and village panchayats are unlikely to be able to use this mode of communication"* (paragraph 5.4.2).

1.6 The Commission's Second Report entitled 'Unlocking Human Capital: Entitlements and Governance – A Case Study', contained a complete module on 'Use of Information Technology' in implementation of the National Rural Employment Guarantee Act, 2005. Some of the important recommendations made by the Commission are quite illustrative in the context of 'e-Governance' which is the focus of the present Report:

- *Blocks must be the nodal levels of government at which all information is electronic. Any information collected in non-electronic form at this or a lower level of government must be digitized at block level (paragraph 5.4.8.1.6).*

- *Data from the blocks should be aggregated in central repositories in each of the states. A single data centre may be adequate for each state, and transmission to this centre from each of the blocks should be enabled. The Union Government should maintain its own data centre, aggregating data from each of the state repositories (paragraph 5.4.8.3.3).*

- *The identification of participants in the REGS should be developed nationally, in preparation for wider use of a national citizen identification number. The potential for such identity to be developed congruently with other systems of nationwide participation – e.g. elections – should be explored along with appropriate representatives from such other arenas as well (paragraph 5.4.8.5.3).*

- *A Geographic Information System (GIS) for the REGS should be developed and information that is developed through aggregation should be presented through this system as well. A zoom-able and pan-able interface should allow performance to be understood at different levels of administration from the same base data. Wherever possible, suo motu disclosures should be in GIS format also, in addition to their other means of dissemination (paragraph 5.4.8.7.5).*

- *A few pilot projects in different regions may be taken up in a cluster of villages using SMART cards. Such SMART cards should store information about the person's identity (including biometrics) and should have the capacity of recording transactions under NREGA and even authorize payments (paragraph 5.4.8.9.5).*

1.7 In its Report on 'Crisis Management', the Commission had once again put emphasis on the use of 'Geographical Information System' tools in order to *"integrate spatial data such as topography, hydrology, land use, land cover, settlement pattern and built structure as well as non-spatial data such as demography, socio-economic conditions and infrastructure in a common platform. This should be integrated with satellite and aerospace data as well as data from Geographical Positioning Systems for real time monitoring of crisis situations and for scientific assessment of damages"* (paragraph 5.3.8c).

1.8 The Commission's Fourth Report entitled 'Ethics in Governance' also emphasized the use of Information Technology and highlighted the need for concomitant process re-engineering in the government. Its specific recommendations were as follows:

- *Each Ministry/Department/Organisation of Government should draw up a plan for use of IT to improve governance. In any government process, use of Information Technology should be made only after the existing procedures have been thoroughly re-engineered (paragraph 6.4.7a).*

- *The Ministry of Information Technology needs to identify certain governmental processes and then take up a project of their computerization on a nationwide scale (paragraph 6.4.7b).*

- *For computerization to be successful, computer knowledge of departmental officers needs to be upgraded. Similarly, the NIC needs to be trained in department specific activities, so that they could appreciate each other's view point and also ensure that technology providers understand the anatomy of each department (paragraph 6.4.7c).*

- *All offices having large public interface should have an online complaint tracking system. If possible, this task of complaint tracking should be outsourced (paragraph 6.10.2a).*

- *A national database containing the details of all corruption cases at all levels should be created. This database should be in the public domain. Identified authorities should be made responsible for updating the database regularly (paragraph 6.16.2).*

1.9 In its Fifth Report entitled 'Public Order', the Commission had emphasized the use of technology in making the registration of FIRs hassle free. It also suggested that technology should be used to improve the accessibility of Police Stations to the public.

1.10 The Commission had further occasion to discuss the use of Information and Communications Technology (ICT) in its Sixth Report on 'Local Governance' with a view to strengthening the institutional structures and service delivery mechanisms with reference to the third tier of government. It was of the view that *'Information and Communication Technology provides tools which could be utilized by the local governments for simplifying cumbersome processes, reducing contact between the cutting edge functionaries and the citizens, enhancing accountability and transparency and providing single window service delivery for a variety of services. The Commission would discuss such issues in detail in its Report on e-Governance'* (paragraph 3.10.1.1). Having said this, however, the Commission did look into some specific uses of e-Governance tools in matters related to panchayats and urban local bodies. Some of the recommendations made in this Report are as follows:

- *Information and Communication Technology should be utilized by the local governments in process simplification, enhancing transparency and accountability and providing service delivery of services through single window (paragraph 3.10.1.2 a).*

- *Local governments should become one point service centres for providing various web based and satellite based services. This would however require capacity building in the local governments (paragraph 3.10.2.8 b).*

- *State Governments should make use of the software on "fund transfer to Panchayats" prepared by the Union Ministry of Panchayati Raj for speedy transfer of funds (paragraph 4.3.7.5d).*

- *Steps should be taken to set up Information and Communication Technology (ICT) and Space Technology enabled Resource Centres at the Village and Intermediate Panchayat levels for local resource mapping and generation of local information base. These Resource Centres should also be used for documenting local traditional knowledge and heritage (paragraphs 4.5.5.6 a&b).*

- *Municipal bodies should have a periodically updated database of its properties. IT tools like GIS should be used for this purpose. This database should be in the public domain (paragraph 5.3.8.7a).*

- *Payment of water charges in urban areas should be made hassle-free through use of Information Technology (5.4.3.2.8e).*

- *An exhaustive survey to identify the urban poor should be carried out within one year. The urban poor so identified may be issued multi-utility identity cards for availing of benefits under all poverty alleviation progammes (paragraph 5.6.2.3).*

1.11 While dealing with illegal immigration into the North East in its Seventh Report entitled 'Capacity Building for Conflict Resolution', the Commission drew attention towards having a multi-purpose national identity card for citizens. It was of the view that *"The Multi-purpose National Identity Card (MNIC) will also function as a necessary instrument for e-Governance. It will provide a user-friendly interface between the citizen and the government and will function as a deterrent for future illegal immigration"* (paragraph 12.6.6.1). However, the Commission noted that there were several Union and State Government agencies which issue similar identity cards. Accordingly, it recommended that *"the MNIC project needs to be taken up on a priority basis. Since there are several Union Government and State Government agencies which issue similar identity cards, it would be necessary to achieve convergence amongst all such systems so that the MNIC becomes the basic document for identification of a person and lends itself to be used as a multi-purpose individual card. Priority should be given to areas having international borders, for implementation of this Project"* (paragraph 12.6.6.3).

1.12 In its earlier Reports, the Commission has examined some aspects of e-Governance while dealing with specific issues of governance. In the present Report, e-Governance is examined as the core issue in improving governance as a whole. The Report discusses the conceptual framework of e-Governance in Chapter 2 and then looks into some international

practices in Chapter 3. Chapter 4 examines some of the e-Governance initiatives undertaken in India prior to the formal launch of the National e-Governance Plan (NeGP) in 2006. In Chapter 5, the 'Core Principles' of e-Governance have been outlined in the Indian context and Chapter 6 elaborates upon the issues involved in implementation of e-Governance reforms on the basis of these 'core principles'. The basic components of NeGP are discussed in Chapter 7. This Chapter also contains a discussion on some of the issues involved in the implementation of the mammoth National e-Governance Plan. Chapter 8 deals with the legal framework required for e-Governance in the country. Chapter 9 includes a brief discussion on Knowledge Management.

1.13 The Commission has visited several States and UTs to elicit the views of State Government officials and the public. During these visits, the presentations made by the State Governments generally included a presentation on the e-Governance initiatives undertaken by them. The Commission has also benefited from additional inputs on e-Governance initiatives provided by several State Governments. The Commission is grateful to Shri Dayanidhi Maran, the then Union Minister for Communications and Information Technology, and officers of the Ministry for discussing the initiatives undertaken in relation to e-Governance. The Commission is also grateful to Dr. Sam Pitroda, Chairman, the National Knowledge Commission and its members with whom it had a very useful interaction. The Commission would also like to thank Shri Rajiv Chawla, Commissioner, Survey and Settlement, Land Records, Government of Karnataka, Shri Ajay Seth, Secretary (Finance), Government of Karnataka; Shri S.G. Hegde, Executive Director, KEA; and Shri Amod Kumar, Special Secretary (I&T), Government of Uttar Pradesh for their valuable inputs on the '*Bhoomi*', '*Khajane*', 'Computerised Counselling' and '*Lokvani*' projects respectively. The Commission acknowledges the contribution of Shri Harish Gowda, Commissioner of Commercial Taxes, Karnataka. The Commission would like to place on record its gratitude to Dr. N. Sheshagiri, former Director General, National Informatics Centre; Shri Vivek Kulkarni, Chairman and CEO, Brickwork India; and Shri Nazeer Hussain, former Director, Planning Department, Government of Karnataka for their valuable suggestions. To assist in the preparation of this Report, the Commission had entrusted the task of preparing a concept paper on the Commission's Terms of Reference on e-Governance to the National Institute of Smart Governance, Hyderabad. The inputs provided by them in their concept paper were invaluable. The Commission also acknowledges the contribution of Shri R. Chandrasekhar, Special Secretary (IT), Department of Information Technology; Shri J. Satyanarayana, CEO, NISG and Shri B.B. Nanawati, Principal Consultant, NeGP Project Monitoring Unit.

e-GOVERNANCE : CONCEPTUAL FRAMEWORK

2.1 Enabling Good Governance through Use of ICT

2.1.1 The emergence of Information and Communications Technology (ICT) has provided means for faster and better communication, efficient storage, retrieval and processing of data and exchange and utilization of information to its users, be they individuals, groups, businesses, organizations or governments. What had begun as a faster, more accurate and simpler means of word-processing quickly lent itself to being used as a tool for processing and tabulating data as an aid in decision making. With growing computerization and increasing internet connectivity, this process has presently reached a stage where more and more users are motivated to modifying their ways of doing things in order to leverage the advantages provided by ICT. In other words, this has led to 'business process re-engineering'. So far as governments are concerned, the coming together of computerization and internet connectivity/web-enablement in association with process re-engineering, promises faster and better processing of information leading to speedier and qualitatively better decision making, greater reach and accountability, better utilization of resources and overall good governance. In the case of citizens, it holds the promise of enhanced access to information and government agencies, efficient service delivery and transparency in dealings and interactions with government.

2.1.2 With the increasing awareness among citizens about their rights and the resultant increase in expectations from the government to perform and deliver, the whole paradigm of governance has changed. Government, today, is expected to be transparent in its dealings, accountable for its activities and faster in its responses. This has made the use of ICT imperative in any agenda drawn towards achieving good governance. It has also led to the realization that such technologies could be used to achieve a wide range of objectives and lead to faster and more equitable development with a wider reach. In its Fourth Report entitled 'Ethics in Governance', the Commission had clearly stated that the tools of modern technology such as Information and Communications Technology (ICT) should be used to transform the relationship of the government with its constituents, citizens and businesses, and also between its own agencies. While recognizing the potential of ICT in transforming and redefining processes and systems of governance, the Commission had suggested that

e-Governance is the logical next step in the use of ICT in systems of governance in order to ensure wider participation and deeper involvement of citizens, institutions, civil society groups and the private sector in the decision making process of governance.[2]

2.1.3 e-Governance or 'electronic governance' is basically the application of Information and Communications Technology to the processes of Government functioning in order to bring about 'Simple, Moral, Accountable, Responsive and Transparent' (SMART) governance.[3] This would generally involve the use of ICTs by government agencies for any or all of the following reasons: (a) Exchange of information with citizens, businesses or other government departments (b) Speedier and more efficient delivery of public services (c) Improving internal efficiency (d) Reducing costs / increasing revenue (e) Re-structuring of administrative processes and (f) Improving quality of services.

2.2 Defining e-Governance

2.2.1 Although the term 'e-Governance' has gained currency in recent years, there is no standard definition of this term. Different governments and organizations define this term to suit their own aims and objectives. Sometimes, the term 'e-government' is also used instead of 'e-Governance'. Some widely used definitions are listed below:

    i.   According to the World Bank,[4]

        "E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/ or cost reductions."

        Thus, the stress here is on use of information technologies in improving citizen-government interactions, cost-cutting and generation of revenue and transparency.

    ii.   UNESCO defines e-Governance as:[5]

        "Governance refers to the exercise of political, economic and administrative authority in the management of a country's affairs, including citizens'

[2] paragraph 6.4.1 of the Report
[3] paragraph 83, Report of the Working Group on Convergence and E-Governance for The Tenth Five Year Plan (2002-2007), Planning Commission, November, 2001
[4] Source: http://go.worldbank.org/M1JHE0Z280 (extracted on 18.08.2008)
[5] Source: (http://portal.unesco.org/ci/en/ev.php-URL_ID=4404&URL_DO=DO_TOPIC&URL_SECTION=201.html)

articulation of their interests and exercise of their legal rights and obligations. E-Governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities."

This definition visualizes the use of the electronic medium in the exercise of authority in the management of a country's affairs along with articulation of citizens' interests leading to greater transparency and efficiency.

iii.   The Council of Europe has taken e-Governance to mean:[6]

"the use of electronic technologies in three areas of public action:

-   *relations between the public authorities and civil society*

-   *functioning of the public authorities at all stages of the democratic process (electronic democracy)*

-   *the provision of public services (electronic public services)"*

In this case, the focus is on making use of electronic technologies with a view to encourage better interaction between government and citizens, promote democracy and provide public services.

iv.   The US E-Government Act of 2002 defines "electronic Government" to mean (Section 3601):[7]

"the use by the Government of web-based Internet applications and other information technologies, combined with processes that implement these technologies, to-

(A) enhance the access to and delivery of Government information and services to the public, other agencies, and other Government entities; or

(B) bring about improvements in Government operations that may include effectiveness, efficiency, service quality, or transformation".

This definition reflects the strategy of the US Government regarding the use of ICT in improving Government operations on the one hand and enhancing the access and delivery of information and services to citizens and government entities on the other.

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2.2.2 Basically, e-Governance is generally understood as the use of Information and Communications Technology (ICT) at all levels of the Government in order to provide services to the citizens, interaction with business enterprises and communication and exchange of information between different agencies of the Government in a speedy, convenient efficient and transparent manner.[8] Dr. APJ Abdul Kalam, former President of India, has visualized e-Governance in the Indian context to mean:

> *"A transparent smart e-Governance with seamless access, secure and authentic flow of information crossing the interdepartmental barrier and providing a fair and unbiased service to the citizen."* [9]

2.3 Stages of e-Governance

2.3.1 It is evident that e-Governance is intrinsically linked with the development of computer technology, networking of computers and communication systems. In developing countries, such technologies and systems became available with a perceptible time lag as compared to developed nations. However, in the case of India, with the liberalization of the economy from the early 1990s onwards, there has been a convergence in the availability of cutting edge technologies and opportunities in the field of e-Governance. Generally speaking, the Indian experience demonstrates that the onset of e-Governance proceeded through the following phases:

(a) *Computerisation:* In the first phase, with the availability of personal computers, a large number of Government offices got equipped with computers. The use of computers began with word processing, quickly followed by data processing.

(b) *Networking:* In this phase, some units of a few government organizations got connected through a hub leading to sharing of information and flow of data between different government entities.

(c) *On-line presence:* With increasing internet connectivity, a need was felt for maintaining a presence on the web. This resulted in maintenance of websites by government departments and other entities. Generally, these web-pages/ web-sites contained information about the organizational structure, contact details, reports and publications, objectives and vision statements of the respective government entities.

[8]"e-Government: From Vision to Implementation" by Subash Bhatnagar; Sage Publications; 2004.
[9]Inaugural address at IIT Delhi during International Conference on e-Governance.

(d)   *On-line interactivity:* A natural consequence of on-line presence was opening up of communication channels between government entities and the citizens, civil society organizations etc. The main aim at this stage was to minimize the scope of personal interface with government entities by providing downloadable Forms, Instructions, Acts, Rules etc. In some cases, this has already led to on-line submission of Forms. Most citizen-government transactions have the potential of being put on e-Governance mode.

2.4 Types of Interactions in e-Governance

2.4.1 e-Governance facilitates interaction between different stake holders in governance. These interactions may be described as follows:

G2G (Government to Government) – In this case, Information and Communications Technology is used not only to restructure the governmental processes involved in the functioning of government entities but also to increase the flow of information and services within and between different entities. This kind of interaction is only within the sphere of government and can be both horizontal i.e. between different government agencies as well as between different functional areas within an organisation, or vertical i.e. between national, provincial and local government agencies as well as between different levels within an organisation. The primary objective is to increase efficiency, performance and output.

G2C (Government to Citizens) – In this case, an interface is created between the government and citizens which enables the citizens to benefit from efficient delivery of a large range of public services. This expands the availability and accessibility of public services on the one hand and improves the quality of services on the other. It gives citizens the choice of when to interact with the government (e.g. 24 hours a day, 7 days a week), from where to interact with the government (e.g. service centre, unattended kiosk or from one's home/workplace) and how to interact with the government (e.g. through internet, fax, telephone, email, face-to-face, etc). The primary purpose is to make government, citizen-friendly.

G2B (Government to Business) – Here, e-Governance tools are used to aid the business community – providers of goods and services – to seamlessly interact with the government. The objective is to cut red tape, save time, reduce operational

costs and to create a more transparent business environment when dealing with the government. The G2B initiatives can be transactional, such as in licensing, permits, procurement and revenue collection. They can also be promotional and facilitative, such as in trade, tourism and investment. These measures help to provide a congenial environment to businesses to enable them to perform more efficiently.

G2E (Government to Employees) – Government is by far the biggest employer and like any organisation, it has to interact with its employees on a regular basis. This interaction is a two-way process between the organisation and the employee. Use of ICT tools helps in making these interactions fast and efficient on the one hand and increase satisfaction levels of employees on the other.

2.5 Benefits of e-Governance

2.5.1 In the end, e-Governance is about reform in governance, facilitated by the creative use of Information and Communications Technology. It is expected that this would lead to:

i. *Better access to information and quality services for citizens:* ICT would make available timely and reliable information on various aspects of governance. In the initial phase, information would be made available with respect to simple aspects of governance such as forms, laws, rules, procedures etc later extending to detailed information including reports (including performance reports), public database, decision making processes etc. As regards services, there would be an immediate impact in terms of savings in time, effort and money, resulting from online and one-point accessibility of public services backed up by automation of back end processes. The ultimate objective of e-Governance is to reach out to citizens by adopting a life-cycle approach i.e. providing public services to citizens which would be required right from birth to death.

ii. *Simplicity, efficiency and accountability in the government:* Application of ICT to governance combined with detailed business process reengineering would lead to simplification of complicated processes, weeding out of redundant processes, simplification in structures and changes in statutes and regulations. The end result would be simplification of the functioning of government, enhanced decision making abilities and increased efficiency across government – all contributing to an overall environment of a more accountable government machinery. This, in turn, would result in enhanced productivity and efficiency in all sectors.

iii.   *Expanded reach of governance:* Rapid growth of communications technology and its adoption in governance would help in bringing government machinery to the doorsteps of the citizens. Expansion of telephone network, rapid strides in mobile telephony, spread of internet and strengthening of other communications infrastructure would facilitate delivery of a large number of services provided by the government. This enhancement of the reach of government – both spatial and demographic – would also enable better participation of citizens in the process of governance.

3 e-GOVERNANCE : INTERNATIONAL SCENARIO

3.1 Many countries have initiated e-Governance programmes in order to make government and its agencies efficient, more responsive and transparent. Some of these initiatives are described in this chapter.

3.2 Recent Steps in the USA[10]

3.2.1 In July, 2001 an initiative known as 'Expanding Electronic Government' was initiated as a part of the President's Management Agenda. The objective was to make use of information technology to eliminate wasteful federal spending, reduce governmental paperwork and improve government response time to citizens. This expansion of e-government had three guiding principles:

    i.   It should be citizen-centered and not bureaucracy or agency-centered.

    ii.   It should produce measurable improvements for citizens.

    iii.   It should be market-based, aimed at promoting innovation.

3.2.2 The approach of the Federal Government was aimed first at modernizing the use of information technology within its agencies through using the principles of e-business; secondly, it aimed at integrating information technology applications across different agencies with a focus on different groups of citizens including individuals, businesses, Federal Government employees, etc. The first strategy envisaged adoption of certain e-Governance practices within government agencies and departments. The second strategy involved achieving the following performance objectives in case of specified 'Portfolios':

- *Government to Citizen (G to C):* To provide one-stop, on-line access to information and services to individuals.

- *Government to Business (G to B):* The Federal Government should not continue to make businesses report the same data multiple times to multiple agencies. Government should re-use the data appropriately and take advantage of commercial electronic transaction protocols.

- *Government to Government (G to G):* Federal, State and Local Governments should work together to improve services to citizens within key lines of business.

- *Internal Efficiency and Effectiveness (IEE):* The Federal Government should modernize internal processes to reduce costs.

3.2.3 The initial e-government accomplishments can be gauged from the activation of the following programmes:

- *FirstGov.gov:* This is the citizens gateway to millions of pages of information contained in more than 22000 Federal and State Websites.

- *Volunteer.gov:* Allows citizens' to volunteer for more than hundred thousand openings at National Parks, Veteran Hospitals and other federal facilities.

- *Recreation.gov:* Provides citizens one-stop online access to National Parks and Public recreation areas.

- *GovBenefits.gov:* Provides one-stop access to information and services of over four hundred government programmes for the benefit of citizens.

- *IRS Free Filing:* Allows citizens to file their taxes on-line for free.

- *BusinessLaw.gov:* Provides on-line resource guide to small businesses enabling access to legal and regulatory information, compliance assistance etc.

- *Regulations.gov:* Provides a single system supporting the rule making process.

- *GoLearn.gov.:* Provides e-training courses, e-books and career development resources.

- *E-Payroll:* Consolidates government payroll processing centres.

- *E-Clearance:* Provides an integrated data base to enable reductions in the security clearance backlog.

3.2.4 These initial efforts also led to the realization that a 'Federal Enterprise Architecture' (FEA) was needed for implementing such initiatives. Basically, an 'enterprise architecture' is the comprehensive view of what an organization does, how it does it and how it is

supported by information technology. This led to the establishment of the FEA in the Office of Management and Budget (OMB).

3.2.5 The importance of e-Governance was also recognized by the US Congress which resulted in the passage of the E-Government Act of 2002 which was signed by the President on December 17, 2002. This legislation :

- Codifies and expands the E-Government leadership role of OMB through the establishment of an Office of E-Government and IT headed by a Presidentially-appointed Administrator;

- Authorizes several initiatives (E-Rulemaking, Geospatial One-Stop, E-Records Management, E-Authentication and Disaster Management), and endorses the FirstGov.gov portal;

- Sponsors ongoing dialogue with state, local and tribal governments, as well as the general public, the private, and non-profit sectors to find innovative ways to use IT to improve the delivery of government information and services; and

- Establishes an E-Government Fund, administered by GSA, to support IT projects approved by OMB, that enable the Government to conduct activities electronically. The Act authorizes funding through FY07.

3.2.6 Thus, the Office of Management and Budget's (OMB) E-Government and Information Technology Office, has, with the support of the General Services Administration (GSA) and the Federal Chief Information Officers (CIO) Council, established the Federal Enterprise Architecture (FEA) Program which builds a comprehensive business-driven blueprint of the entire Federal Government. The development of this framework aims to enable the Federal Government to identify opportunities to leverage technology to :[11]

- Reduce redundancy;

- Facilitate horizontal (cross-federal) and vertical (federal, state and local) information sharing;

- Establish a direct relationship between IT and mission/program performance to support citizen-centered, customer-focused government; and

- Maximize IT investments to better achieve mission outcomes.

[11]Source: 'Expanding E-Government: Partnering for a Results-Oriented Government', December 2004; Executive Office of the President, Office of Management and Budget

3.3 Recent Steps in the UK

3.3.1 In April 2000, the Cabinet Office in the UK came out with the document 'E-Government: A Strategic Framework for Public Services in the Information Age'.[12] This document did not propose any technical solutions to a set of business needs. Instead, by recognizing that the business of Government is too varied and complex for adopting such an approach, it provided a strategic direction to the public sector for transforming itself by exploiting the possibilities of new technology. This strategy focuses on using e-business methods as a means of meeting the government's targets for electronic service delivery, electronic procurement and e-commerce. The strategy has four guiding principles:

- Building services around citizens' choices

- Making Government and its services more accessible over the internet and through mobile phones, digital TV, call centres and personal computers

- Social inclusion

- Using information better.

3.3.2 This strategy is centered around certain framework policies which are geared towards providing standardization and building confidence. Thus, the 'Security Framework Policy' provides a framework against which service providers will need to assess their services. However, service providers are free to propose implementations within the framework. The 'Authentication Framework Policy' and guidelines establish a common approach to authentication for government departments, agencies and the wider public sector. This framework policy does not assume the establishment of a single, national system of identification. It looks to the establishment of a range of authentication services by central and local government and private and public sector bodies. Further, the 'Smart Card Framework Policy' provides a mandatory set of standards to facilitate interoperability. This is intended to allow the holder of a smart card issued by any private or public sector body to access the broadest possible range of public services. The strategy also proposes the development of a 'Privacy Framework' to secure the system. The overall common policy and standards are set out in the 'interoperability framework policy'.

3.3.3 The institutional mechanism for implementing the strategy is described below:

    A.   The e-Envoy, supported by the Information Age Government Champions, will

- articulate a detailed change programme

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[12]http://archive.cabinetoffice.gov.uk/e-envoy/resources-pdfs/$file/Strategy.pdf

- lead its implementation

- identify new opportunities for cross-cutting initiatives

- report regularly on progress to Ministers.

B.   The Central IT Unit (CITU) in the Cabinet Office, in collaboration with counterparts in the devolved administrations and lead agencies, will

- support citizen-focused service integration

- lead implementation of framework policies, standards and guidelines

- promote shared infrastructure and applications

- establish a government portal

- promote common policies on the management of information.

C.   Public sector organizations will

- establish new ways of doing business

- implement common standards and framework policies

- develop e-business strategies

- provide services which are accessible via the government and other portals.

3.3.4 In November 2005, the Cabinet Office came out with the document 'Transformational Government: enabled by technology'. This document recognizes that many systems and processes are still paper based and staff-intensive. They are structured around the 'product' or the underlying legislation rather than the customer. Further, most government agencies are designed as islands, having their own databases, infrastructure and security and identity procedures. This makes it difficult to work with other parts of government as also with the voluntary and community sector. The document also recognizes that the number, scale and sheer difficulty of public sector projects puts a stress on the capacity of the public and the private sectors to deliver efficiently. Accordingly, the document stresses on three key transformations. These are:

- Services enabled by IT must be designed around the citizen or business, not the provider, and provided through modern, co-ordinated delivery channels. This will improve the customer experience, achieve better policy outcomes, reduce paperwork and improve efficiency by reducing duplication and routine processing, leveraging delivery capacity and streamlining processes.

- Government must move to a shared service culture – in the front-office, in the back-office, in information and in infrastructure – and release efficiencies by standardization, simplification and sharing.

- There must be broadening and deepening of government's professionalism in terms of the planning, delivery management, skills and governance of IT enabled change. This will result in more successful outcomes; fewer costly delivery failures; and increased confidence by citizens and politicians in the delivery of change by the public services.

3.4 Recent Steps in New Zealand

3.4.1 Realising the importance of opportunities offered by ICT, the New Zealand Government came out with its e-government vision document in May 2000 and an 'E-Government Unit' was established by the State Services Commission (SSC) in July 2000. In April 2001, the government came out with its 'E-Government Strategy'.[13] This strategy had a simple operational vision: 'New Zealand will be a world leader in e-government'. This vision was supported by a time-bound mission: *"By 2004, the Internet will be the dominant means of enabling ready access to government information, services and processes."* Basically, this strategy was in the nature of a programme for action for the State Services Commission's E-government Unit (EGU) and government agencies working alongside the Unit, aimed at making the most of e-technology in government. The overall objective was to create *"a public sector (including the public service, Crown entities, State Owned Enterprises and local government) that is: structured, resourced and managed to perform in a manner which meets the needs of New Zealanders in the information age and which increasingly delivers information and services using online capabilities."* As per this strategy, e-government was expected to provide:

- **Better services** – more convenient and reliable, with lower compliance costs, higher quality and value;

- **Cost effectiveness and efficiency** – cheaper, better information and services for customers and better value for taxpayers;

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[13]Source: http://www.e.govt.nz/about-egovt/programme/e-gov-strategy-apr-01/

- **Improved reputation** – building an image of New Zealand as a modern nation, an attractive location for people and business;

- **Greater participation by people in government** – making it easier for those who wish to contribute; and

- **Leadership** – supporting the knowledge society through public sector innovation.

3.4.2 In the Report entitled 'Achieving e-government 2004',[14] the progress in implementing the strategy was examined by assessing agency websites, appraising the quality of agency metadata records used on the government portal, consulting with agencies, reviewing the EGU's contribution and analysing recent e-government surveys to measure the demand for e-government. The Report showed that the target for 2004 had been achieved. The strategy has been revised regularly and the last revision (fourth revision) was in 2006. Its goals[15] are as follows:

- By 2007, information and communication technologies will be integral to the delivery of government information, services and processes.

- By 2010, the operations of government will be transformed as government agencies and their partners will use technology to provide user-centred information and services and achieve joint outcomes.

- By 2020, people's engagement with the government will have been transformed, as increasing and innovative use is made of the opportunities offered by network technologies.

3.4.3 The new strategy envisions that *"The E-government Strategy is the all-of-government approach to transforming how agencies use technology to deliver services, provide information, and interact with people, as they work to achieve the outcomes sought by government."* The new strategy combines efforts in different areas to provide an integrated front. These area specific strategies are:

- New Zealand Digital Content Strategy

- Public Broadcasting Programme of Action

- Geospatial Information Strategy

- Justice Sector Information Strategy

[14]http://www.e.govt.nz/resources/research/ready-access-2004/ready-access-2004.pdf
[15]Source: http://www.e.govt.nz/ (extracted on 20.08.2008)

- Health Information Strategy for New Zealand

- ICT Strategic Framework for Education.

3.5 UN e-Government Survey

3.5.1 Based on the e-Governance preparedness levels internationally, the United Nations brings out an annual survey report - The United Nations E-Government Survey. The UN Survey (2008) has used a comprehensive 'e-government readiness index' to assess the preparedness of various countries for e-Governance. The components of this composite index include the web measure index, the telecommunication infrastructure index and the human capital index. These components of the index are described below:

> **Box 3.1: Evaluation of e-Governance Initiatives in New Zealand**
>
> To help understand what transformation can mean, and how we can gauge the extent to which it has been successful, the evaluation will look at questions like:
> 1. Are New Zealanders able to achieve the results they need, without searching across many agencies?
> 2. Can New Zealanders get consistent service whichever combination of channels they use to engage with government?
> 3. Can New Zealanders provide information to government just once, or do they have to provide the same information many times to different agencies?
> 4. Do workers in State agencies work with colleagues across the sector to put results for New Zealanders ahead of individual agency interests?
> 5. Are they drawing on the best examples of learning and development and tools from across the government sector?
> 6. Are mechanisms being developed for agencies to work together and share information and research?
> 7. Are infrastructure and systems supporting collaboration and partnership?
> 8. Are New Zealanders using the services provided by agencies, and are barriers to access being reduced?
> 9. Are New Zealanders finding the government services intended for them?
> 10. How much do agencies know about the experience of service users and do they use this knowledge to improve service delivery?
> 11. Do New Zealanders have confidence in the integrity of government agencies and workers?
>
> *Source: 'Enabling Transformation: A strategy for e-government 2006'*

(a) *The Web Measure Index:* It is based on a five-stage model, which builds upon the previous levels of sophistication of a country's online presence.

(b) *The Telecommunication Infrastructure Index:* This is a composite index of five primary indices relating to a country's infrastructure capacity as they relate to the delivery of e-government services. These are:

    i.   Internet Users /100 persons

    ii.   PCs /100 persons

    iii.   Main Telephones Lines /100 persons

iv.   Cellular telephones /100 persons

v.   Broad banding /100 persons

(c)   *The Human Capital Index:* This is a composite of the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio, with two thirds weight given to the adult literacy rate and one third to the gross enrolment ratio.

It is evident that improving e-Governance readiness would require addressing issues related to not only infrastructure development but also human capital.

3.5.2 The Survey has laid stress on the march from *'e-government to connected government'*. It states that many governments are moving towards *'e-government-as-a-whole concept'* which focuses on the provision of services at the front-end, supported by integration, consolidation and innovation in back-end processes and systems to achieve maximum cost savings and improved service delivery. Here, the term 'back office' refers to the internal operations of an organization that support core processes and are not accessible or visible to the general public. These are government functions that normally do not interact with outside entities. The term 'front office' refers to government as its constituents see it, meaning the information and services provided and the interaction between government and both the citizens and business. In this context, the UN document mentions that 'connected or networked governance' involves the 'governmental promotion of collective action to advance the public good, by engaging the creative efforts of all of

> **Box 3.2: UN Five-stage Evolution Model**
>
> Stage I-Emerging: A government's online presence is mainly comprised a web page and/or an official website; links to service providing ministries or departments may/may not exist. Much of the information is static and there is little interaction with citizens.
>
> Stage II-Enhanced: Governments provide more information on public policy and governance. They have created links to archived information that is easily accessible to citizens, as for instance, documents, forms, reports, laws and regulations, and newsletters.
>
> Stage III-Interactive: Governments deliver online services such as downloadable forms for tax payments and applications for license renewals. In addition, the beginnings of an interactive portal or website with services are evident.
>
> Stage IV-Transactional: Governments begin to transform themselves by introducing two-way interactions between 'citizen and government'. It includes options for paying taxes, applying for ID cards, birth certificates, passports and license renewals, as well as other similar G to C interactions, and allows the citizen to access these services online 24/7. All transactions are conducted online.
>
> Stage V - Connected: Governments transform themselves into a connected entity that responds to the needs of its citizens by developing an integrated back office infrastructure. This is characterized by:
> 1. Horizontal connections (among government agencies)
> 2. Vertical connections (central and local government agencies)
> 3. Infrastructure connections (interoperability issues)
> 4. Connections between governments and citizens
> 5. Connections among stakeholders (government, private sector, academic institutions, NGOs and civil society)
> *(Source: United Nations e-Government Survey 2008)*

society'. Thus, in this case, ICT-based connected governance efforts are aimed at improved cooperation between governmental agencies, allowing for an enhanced, active and effective consultation and engagement with citizens, and greater involvement with multi-stakeholders regionally and internationally. It concludes that *"An effective connected government is about a 'bigger and better' front-end with a 'smaller and smarter' back-end."* The benefits of such governance are indicated in the Fig.3.1:[16]

Fig. 3.1 Benefits of e-Governance

Internally
- Avoidance of duplication
- Reducing transaction costs
- Simplifying bureaucratic procedures
- Greater efficiency
- Greater coordination and communication
- Enhanced transparency
- Information sharing between agencies
- Security of information management

ICT-enabled connected governance contributes to:

Externally
- Faster service delivery
- Greater efficacy
- Increased flexibility of service use
- Innovation in service delivery
- Greater participation
- Greater citizen empowerment
- Citizen participation

3.5.3 Some of the key lessons identified in the Survey are as follows:

A key lesson for developing countries in this regard is the necessity of following through the trajectory sketched out above (as either three phases of e-government or the closely related five-stage framework adopted in previous surveys) with a sustained focus on both internal change within the public sector and external connectivity for the jurisdiction as a whole.

A key lesson for developing countries is the importance of a realistic and incremental approach to both upgrading and aligning the frontline interface with the public as service recipients and back office capacities for processing information and conducting transactions. Any notion of an available e-government solution for holistic integration is now widely viewed as unrealistic, and governments in the developing world are increasingly cognizant of the need for a genuine partnership with industry (where 123

partnership implies the existence of sufficient knowledge and skills in order to avoid the pitfalls of unrealistic expectations, supplier dependence and escalating costs).

3.6 e-Governance is not about Technology but Governance

3.6.1 Focusing on technology without realizing that e-Governance is basically about ushering reforms in governance has led to failures in many projects across the world. In a 'Special Report on Technology and Government' published in 'The Economist', it has been highlighted that *"So far, though, the story of e-government has been one of quantity, not quality. It has provided plenty of reasons for skepticism and not much cause for enthusiasm. … Indeed, its most conspicuous feature has been colossal waste of taxpayers' money on big computer systems, poorly thought out and overpriced. … More often, though, big government projects stagger into operation but work badly… Only rarely do promised benefits materialize. Some of those who have studied e-government call it a "dangerous enthusiasm": a technological quick fix that distracts from the real tasks – hard and slow – of reforming government and running public services properly."* [17] The pitfalls of laying too much emphasis on technology and leaving governance reform out of e-Governance (which is an arduous task) are thus obvious. In fact, a large number of e-Governance initiatives are failures, particularly in developing countries for this very reason. On the basis of a poll, in September 2002, of members of the eGovernment for Development Information Exchange and analysis of more than 40 reports on e-Government cases from developing and transitional countries (which were submitted for academic assessment at the University of Manchester), the following working estimates were arrived at in respect of e-Government projects in developing/transitional countries[18]:

    i.   35% - total failures

    ii.   50% - partial failures, and

    iii.   15% - successes

3.6.2 The main factors behind such failures were identified as follows:[19]

    i.   The technological interface of the project did not match with the IT-preparedness of the organization owning and implementing the project.

    ii.   The organizational processes did not match with the application platform provided by the technological solution.

    iii.   The management structures were not conducive to implementation and

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[17] February 16th, 2008; page 8
[18] 'Most eGovernment-for-Development Projects fail: How can Risks be Reduced?'; Richard Heeks, 2003
[19] Based on Richard Heeks, 2003

sustenance of e-Governance projects.

iv.   Adequate resources (time, money etc.) were not allocated to e-Government projects.

3.6.3 Thus, e-Governance projects cannot be planted from outside. A holistic approach has to be adopted in order to understand the needs of the citizens, the capabilities of government organizations, their processes and structures and based on these, the technology-based solution would have to be devised.

4 e-GOVERNANCE : INITIATIVES IN INDIA

4.1 Introduction

4.1.1 Recognising the increasing importance of electronics, the Government of India established the Department of Electronics in 1970. The subsequent establishment of the National Informatics Centre (NIC) in 1977 was the first major step towards e-Governance in India as it brought 'information' and its communication in focus. In the early 1980s, use of computers was confined to very few organizations. The advent of personal computers brought the storage, retrieval and processing capacities of computers to Government offices. By the late 1980s, a large number of government officers had computers but they were mostly used for 'word processing'. Gradually, with the introduction of better softwares, computers were put to other uses like managing databases and processing information. Advances in communications technology further improved the versatility and reach of computers, and many Government departments started using ICT for a number of applications like tracking movement of papers and files, monitoring of development programmes, processing of employees' pay rolls, generation of reports etc.

4.1.2 However, the main thrust for e-Governance was provided by the launching of NICNET in 1987 – the national satellite-based computer network. This was followed by the launch of the District Information System of the National Informatics Centre (DISNIC) programme to computerize all district offices in the country for which free hardware and software was offered to the State Governments. NICNET was extended via the State capitals to all district headquarters by 1990.

4.1.3 In the ensuing years, with ongoing computerization, teleconnectivity and internet connectivity, came a large number of e-Governance initiatives, both at the Union and State levels. A National Task Force on Information Technology and Software Development was constituted in May 1998.[20] While recognising Information Technology as a frontier area of knowledge per se, it focused on utilizing it as an enabling tool for assimilating and processing all other spheres of knowledge. It recommended the launching of an 'Operation Knowledge' aimed at universalizing computer literacy and spreading the use of computers and IT in education. In 1999, the Union Ministry of Information Technology was created. By 2000, a 12-point minimum agenda for e-Governance was identified by Government

[20]Source: http://it-taskforce.nic.in/prem.htm

of India for implementation in all the Union Government Ministries/Departments. The agenda undertaken included the following action points:[21]

i. Each Ministry/Department must provide PCs with necessary software up to the Section Officer level. In addition, Local Area Network (LAN) must also be set up.

ii. It should be ensured that all staff who have access to and need to use computer for their office work are provided with adequate training. To facilitate this, inter alia, Ministries/Departments should set up their own or share other's Learning Centres for decentralized training in computers as per the guidelines issued by the MIT.

iii. Each Ministry/Department should start using the Office Procedure Automation software developed by NIC with a view to keeping a record of receipt of *dak*, issue of letters, as well as movement of files in the department.

iv. Pay roll accounting and other house-keeping software should be put to use in day-to-day operations.

v. Notices for internal meetings should be sent by e-mail. Similarly, submission of applications for leave and for going on tour should also be done electronically. Ministries/Departments should also set up online notice board to display orders, circulars etc. as and when issued.

vi. Ministries/Departments should use the web-enabled Grievance Redressal Software developed by the Department of Administrative Reforms and Public Grievances.

vii. Each Ministry/Department should have its own website.

viii. All Acts, Rules, Circulars must be converted into electronic form and, along with other published material of interest or relevance to the public, should be made available on the internet and be accessible from the Information and Facilitation Counter.

ix. The websites of Ministries/Departments/Organisations should specifically contain a section in which various forms to be used by citizens/customers are

[21]Adapted from 'Minimum Agenda for e-Governance in the Central Government'; http://darpg.nic.in/arpg-website/ReformInitiatives/eGovernance/ IndianExperience/EgovExp73.doc

available. The forms should be available for being printed 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.

x.   The Hindi version of the content of the websites should as far as possible be developed simultaneously.

xi.   Each Ministry/Department would also make efforts to develop packages so as to begin electronic delivery of services to the public.

xii.   Each Ministry/Department should have an overall IT vision or strategy for a five year period, within which it could dovetail specific action plans and targets (including the minimum agenda) to be implemented within one year.

4.1.4 Tax administration departments both at the Union and State levels were among the first to use ICT to improve their internal working. ICT was used to have better reporting systems, preventing leakages and faster processing of returns. The Tax Reforms Commission of Karnataka (2001) had the following to say:

Complexity and diversity are the defining characteristics of government at the level of the State as well as the Centre. The State would serve itself best by developing a unified e-Governance plan and assigning priorities inter-ministerially, inter-departmentally and intra-departmentally to achieve and maintain minimum break-evenness during a defined plan period. This makes it easier to provide adequate funds for optimum computerization. It also brings in the essential discipline of managing to projected costs and returns.

A unified plan and prioritization at the State level allows government to maintain the right balance between its interests and those of the citizen. Frequently the focus appears to settle on citizen satisfaction through citizen visible e-Governance initiatives, such as kiosks and citizens charters. While this is not, by itself, objectionable it is not clear whether computerization within the department should not focus also on attaining higher internal productivities and efficiencies. While popular appeal was essential in the early days to give a fillip to e-Governance initiatives, it is time now to adopt a more tough-minded approach.

4.1.5 Prior to 2006 when the Government of India formally launched its National e-Governance Plan (NeGP), which is discussed in Chapter 7 of this Report, some Departments of Government of India as well as State Governments had initiated steps to

adopt e-Governance. In this context it would be useful to highlight some of the important e-Governance initiatives implemented by the Union and State Governments in the last 10 to 15 years, assess their strengths and weaknesses and identify the lessons learnt from them. These initiatives are discussed under the following categories:

i.   Government to Citizen (G2C) initiatives

ii.   Government to Business (G2B) initiatives

iii.   Government to Government (G2G) initiatives

4.2 Government to Citizen (G2C) Initiatives

The e-Governance scenario in India has come a long way since computers were first introduced. The focus now is on extending the reach of governance to have a major impact on the people at large. As stated earlier, e-Governance is an important tool to enhance the quality of government services to citizens, to bring in more transparency, to reduce corruption and subjectivity, to reduce costs for citizens and to make government more accessible. A large number of initiatives have been taken in this category by the Union and the State Governments. Some of these are described in the following paragraphs.

4.2.1 Computerisation of Land Records (Department of Land Resources, Government of India)

4.2.1.1 A Conference of the Revenue Ministers of States/UTs had advocated such computerization as early as in 1985.[22] Based on the recommendation, the Union Ministry of Rural Development selected 8 districts in 8 States for a pilot project on Computerization of Land Records, which was 100% centrally-sponsored. From 1994-95 onwards, it was implemented in collaboration with the NIC.

The main objectives of the scheme were:[23]

i.   Ensuring that landowners get computerized copies of ownership, crop and tenancy and updated copies of Records of Rights (RoRs) on demand.

ii.   Realizing low-cost and easily-reproducible basic land record data through reliable and durable preservation of old records.

iii.   Ensuring accuracy, transparency and speedy dispute resolution.

iv.   Facilitating fast and efficient retrieval of information for decision making.

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v.   According legal sanctity to computer-generated certificates of land records after authentication by the authorized revenue official.

vi.   Setting up a comprehensive land information system for better land-based planning and utilization of land resources.

vii.   Focusing on citizen-centric services related to land and revenue administration.

4.2.1.2 The phased coverage of this scheme is given below:[24]

i.   During the Seventh Plan, funds were sanctioned for taking up the programme in 24 districts;

ii.   During the Eighth Plan, funds were sanctioned for taking up the programme in additional 299 districts;

iii.   During the Ninth Plan, funds were sanctioned for taking up the programme in additional 259 districts;

iv.   In 1997-98, it was decided that the scheme be extended to the taluk or tehsil or block level to facilitate distribution on demand, of computerized copies of RoRs from the tehsil or taluk computer centre. Accordingly, in the Ninth Plan period, funds were sanctioned for setting up computer centres at 2787 tehsils or taluks; and

v.   During the Tenth Plan period, the scheme was extended to cover 1615 more tehsils/taluks / blocks / anchals / circles, setting up of computer centres in 1019 sub-divisions, land records data centres in 365 districts and monitoring cells at 16 State Headquarters.

4.2.1.3 The status of implementation of this scheme is as follows:[25]

A.   *States which have completed RoR data entry:* Andhra Pradesh, Chhattisgarh, Goa, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Sikkim, Uttar Pradesh, Uttarakhand and West Bengal.

B.   *States which have stopped manual issue of RoRs:* Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal.

[24]ibid
[25]ibid

C. *States which have placed RoR data on websites:* Andhra Pradesh (Adangal Pani), Chhattisgarh, Gujarat, Madhya Pradesh, Rajasthan, Orissa and Uttarakhand.

4.2.1.4 Due to the unsatisfactory implementation of the scheme, the Union Ministry for Rural Development constituted a Committee to suggest practical steps to implement the scheme. The Committee on Computerisation of Land Records submitted its Report in April 2005. This Report suggested that:

i. In addition to computerizing Records of Rights, all States must computerize the details of crops, cultivation, soil classification, irrigation, etc. Scanning of basic land records and digitization of cadastral maps/village maps may also be taken up under the Scheme of CLR.

ii. Village /cadastral maps/tippan should be digitized under the scheme of CLR for integration, updation and preservation of maps, which will enable a land owner to get a computerized copy of the Records of Rights along with plot boundaries. Due to variations in the system of maintenance of cadastral map, States may adopt the strategy suitable to their requirements. However, priority for digitization should be given to those districts, which have successfully completed computerisation of textual land records.

iii. Integration of computerisation of land records and computerisation of land registration should be initiated at the earliest on pilot basis in some States without waiting for amendments suggested in the provisions of the Registration Act, 1908. Funds for setting up of computer centre in the office of the Sub-Registrar may be given under the scheme of CLR equivalent to funds provided to sub-divisions. (The Committee also suggested making amendments to the Registration Act, 1908 to simplify registration and its integration with the land records).

iv. There should be a time frame for the implementation of this scheme.

4.2.1.5 However, the process continued as earlier and so far, 582 districts, 4423 taluks / tehsils /circles and 1021 sub-divisions have been covered under the scheme. In 3356 tehsils, computer centres have been set up and in 2902 tehsils / taluks / circles computerized copies of RoRs are being issued to landowners on demand. Thus, even in twenty years, this scheme has not been able to cover the entire country.[26]

[26]ibid

4.2.1.6 Lessons:

i. *The scheme failed to address the main problem in case of land records in India, i.e. the land records do not reflect the factual ground reality. Computerisation of existing land records without corroborating it with the actual field position only led to perpetuation of existing loopholes and errors.*

ii. *Complex e-Governance projects have various components all of which need to be implemented for which a holistic approach is needed during implementation.*

4.2.2 *Bhoomi* Project in Karnataka : Online Delivery of Land Records[27]

4.2.2.1 *Bhoomi* is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka. It was felt that rural land records are central conduits to delivering better IT-enabled services to citizens because they contain multiple data elements: ownership, tenancy, loans, nature of title, irrigation details, crops grown etc. In addition to providing the proof of title to the land, this land record is used by the farmer for a variety of purposes: from documenting crop loans and legal actions, to securing scholarships for school-children. These records were hitherto maintained manually by 9,000 village officials. Through this project, computerised kiosks are currently offering farmers two critical services - procurement of land records and requests for changes to land title. About 20 million records are now being legally maintained in the digital format. To ensure authenticity of data management, a biometric finger authentication system has been used for the first time in an e-Governance project in India. To make the project self-sustaining and expandable, *Bhoomi* levies user charges. The need for a project such as *Bhoomi* was felt for the following reasons:

i. In the traditional system, land records were not open for public scrutiny resulting in manipulation and favouritism.

ii. The process for applying for transfer of title was cumbersome, time consuming and prone to harassment.

iii. There were instances of Government land being illegally transferred in the name of influential persons.

iv. It was not possible for the administrators to procure, collate and analyse data from the manually maintained records.

[27]Source: Based on information furnished by Government of Karnataka and their web-site.

v.   Land records offered a unique opportunity to make people in the rural areas aware of the benefits of e-Governance. A number of benefits were attached with successful implementation of such projects: for example, the sanction of crop loans, since banks would insist on production of land records; reducing delay in the disposal of court litigation due to non-availability of records etc.

4.2.2.2 To achieve its objectives, certain IT innovations had to be carried out. These included:

i.   Due to limited exposure of the officials in the use of IT and the critical nature of the data, the project relies on fingerprint biometrics for not only authentication of identity but also at each stage of any transaction relating to updation of data. This multi layered security access looks beyond the obvious danger of hacking of passwords and ensures accountability at all levels with no scope for repudiation.

ii.   To ensure that the officials are responsible for the decisions they take on *Bhoomi*, the original papers connected with the decisions are scanned. To contain frivolous litigation by people claiming that notices seeking possible objections to change of titles were not served on them, the notices are also scanned on to the system.

iii.   To convince a farmer of the genuineness of a computer interaction, a second computer screen facing him has been provided at the kiosk. Separate touch screen kiosks linked to the database are also available for farmers to independently verify the records in question.

iv.   In order to protect the data from physical threats like fire or calamities, backing up of data was done by way of online replication.

v.   *Bhoomi* software runs on a First in First Out process.

4.2.2.3 During project implementation, all the officials involved were assigned well-defined roles and responsibilities, down to the grass roots level. However, in the initial stages, in spite of elaborate and detailed guidelines, these were not percolating down. This was finally achieved through State level workshops and intensive trainings for bringing about changes in the attitude among departmental staff.

4.2.2.4 The *Bhoomi* project is a noteworthy effort and sets an example for other projects in its approach towards piloting a project, as well as its rolling out and sustenance. It may be mentioned here that manually written Records of Right, Tenancy and Cultivation (RTC) have been declared illegal. Based on the success story of this project and its innovations, the Union Ministry of Communications and Information Technology has announced that *Bhoomi* would be a national model for computerisation of land records and replicated throughout the country. In fact, *Bhoomi* now envisages offering some additional services in the future:

i.   Issue of land records with digital signature

ii.   Providing connectivity with *Bhoomi* to courts and banks

iii.   Scanning of survey sketches/maps and linking them with *Bhoomi*

iv.   Decentralisation the issue of land records to *Hobli* (sub taluk) level on a PPP model along with RDS project.

4.2.2.5 Lessons:

i.   *A well conceptualized and executed BPR is a pre-requisite for success of e-Governance projects.*

ii.   *There should be end-to-end computerization.*

iii.   *Large e-Governance projects, having large scale impact require total support at the political level.*

iv.   *Continuity in the Project Management team helps in proper implementation of e-Governance projects.*

v.   *If benefits to citizens are real and substantial, projects become sustainable.*

vi.   *A holistic approach is necessary for e-Governance. Adequate time and resources need to be devoted in conceptualization, implementation and maintenance of projects.*

vii.   *Systems should have a strong back-up mechanism.*

4.2.3 *Gyandoot* (Madhya Pradesh)[28]

4.2.3.1 *Gyandoot* is an Intranet-based Government to Citizen (G2C) service delivery initiative. It was initiated in the Dhar district of Madhya Pradesh in January 2000 with the twin objective of providing relevant information to the rural population and acting as an interface between the district administration and the people. The basic idea behind this project was to establish and foster a technologically innovative initiative which is owned and operated by the community itself. Initially, computers were installed in twenty village Panchayat centres and connected to the District Rural Development Authority in Dhar town. These were called *Soochanalayas* which were operated by local rural youth selected for this purpose (called *Soochaks*). No fixed salary or stipend was paid to them. Later, 15 more *Soochanalayas* were opened as private enterprise. The *Soochanalayas* are connected to the Intranet through dial-up lines. The services offered through the *Gyandoot* network include

    i.   Daily agricultural commodity rates (*mandi bhav*)

    ii.   Income certificate

    iii.   Domicile certificate

    iv.   Caste certificate

    v.   Public grievance redressal

    vi.   Rural Hindi email

    vii.   BPL family list

    viii.   Rural Hindi newspaper.

4.2.3.2 There is a prescribed service charge for each service which is displayed at each kiosk along with the information about the expected delivery time. The citizen generally submits his application online (with the help of the *Soochak*) and has to go back to the *Soochanalaya* to collect the response. If the service is related to obtaining some certificates or documents, the citizen will have to collect them by visiting the government department. Alternatively, they are mailed to the citizen.[29]

4.2.3.3 The implementation of this project assumes significance as it throws light on the issues involved in taking e-Governance to rural areas. For example, the 'India: e-Readiness Assessment Report 2003' mentions issues of connectivity and electricity supply as major

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[28]Source: based on information posted on http://www.gyandoot.nic.in and 'India: e-Readiness Assessment Report 2003'
[29]Source: http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan015131.pdf

bottlenecks. It also mentions that *"Since the cost of Gyandoot E-commerce transactions for most villagers is high, it is important for basic services (e-mail, government databases) rather than high-end applications."*[30] The Centre for Electronic Governance, Indian Institute of Management, Ahmedabad also made an evaluation of this project for the World Bank in 2002. It concluded that power supply, connectivity, and backend support are the essential pre-requisites for such projects and significant re-engineering of backend processes and introduction of services that directly contribute to poverty alleviation are needed to make such initiatives sustainable.[31]

4.2.3.4 Lessons:

    1)   *Supporting infrastructure is a pre-requisite for e-Governance projects*

    2)   *User charges may act as a deterrent, especially in rural areas*

    3)   *The interface with the users should be simple and citizen-friendly*

    4)   *Technology should be tailored to the environment.*

4.2.4 *Lokvani* Project in Uttar Pradesh[32]

4.2.4.1 *Lokvani* is a public-private partnership project at Sitapur District in Uttar Pradesh which was initiated in November, 2004. Its objective is to provide a single window, self sustainable e-Governance solution with regard to handling of grievances, land record maintenance and providing a mixture of essential services. As 88 per cent of the District population resides in villages and the literacy rate is only 38 per cent, the programme had to be designed in a way which was user-friendly and within the reach of the people both geographically as well as socially. To achieve this, the programme format uses the local language, Hindi, and is spread throughout the district to a chain of 109 *Lokvani* Kiosk Centres. These Kiosks have been established by licensing the already existing cyber cafes. The services offered by *Lokvani* are:[33]

    a.   Availability of land records (*khataunis*) on the internet

    b.   Online registration, disposal and monitoring of public grievances

    c.   Information of various Government schemes

    d.   Online availability of prescribed Government forms

    e.   Online status of Arms License applications

[30]India: e-Readiness Assessment Report 2003; chapter 3, page 42
[31]http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan015131.pdf
[32]Source: Based on information furnished by the State Government of Uttar Pradesh
[33]Source: http://sitapur.nic.in/lokvani/rojgar/tt.htm (27.08.08)

f.   GPF Account details of Basic Education teachers

g.   Details of work done under MPLAD/*Vidhayak Nidhi*

h.   Details of allotment of funds to Gram Sabhas under different development schemes

i.   Details of allotment of food grains to *Kotedars* (fair price shops)

j.   Other useful information of public interest.

4.2.4.2 As was the case in the *Gyandoot* project in Madhya Pradesh, no loan or government subsidies were involved in this project. Since existing cyber cafes are being used to run the project, capital outlays are not involved. The system is expected to generate its own funds from the citizens and also contribute to the earnings of the Kiosk operators. However, like *Gyandoot* in Madhya Pradesh, low literacy rate combined with minimal computer literacy, poor internet connectivity and only 5 to 6 hours availability of power in rural areas constitute major bottlenecks. Despite these bottlenecks, the response to this project has been overwhelming. The main attraction for the citizens is the online grievance redressal system. The *Lokvani* Centre enters the complaint on behalf of the complainant. The user need not be literate or computer expert to lodge his / her grievance. A copy of the complaint is given to the complainant along with the complaint number (like the PNR No. of the railway ticket) and the database keeps track of all the complaints filed by a particular *Lokvani* Centre. All complaints lodged through this site are monitored and sorted at the District Magistrate's Office. The complaints are then marked to the concerned officers. A time frame is determined for the redressal, depending on the nature of the complaint. It varies from 15 to 40 days. The name of the officer, to whom the complaint has been marked, along with the deadline, is uploaded on the server the next day. The complainant can access these details within 2 to 3 days of lodging the complaint. In case, the complainant is dissatisfied with the decision, he/she can lodge a new complaint enclosing the previous complaint number and other details. The new complaint lodged will carry a history sheet containing all the details about the previous complaint and its resolution.[34]

4.2.4.3 Due to the unprecedented and positive response to the grievance redressal mechanism mentioned above, the project is considered a success.

4.2.4.4 Lessons:

1)   *e-Governnance projects should be broken into components for the purpose of implementation. Those components which lend themselves to ICT should be taken up first.*

[34]http://sitapur.nic.in/lokvani/rojgar/iima-nov2005.pdf

2)   *Reach of e-Governance projects can be enhanced through PPP models which would also be cost effective.*

4.2.5 Project FRIENDS in Kerala

4.2.5.1 FRIENDS (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services) is a Single Window Facility providing citizens the means to pay taxes and other financial dues to the State Government. It was launched in Thiruvananthapuram in June 2000 and replicated in other district headquarters during 2001-02. The services are provided through FRIENDS *Janasevana Kendrams* located in the district headquarters.

4.2.5.2 This project is a classic case of achieving front end computerized service delivery to citizens without waiting for completion of back end computerization in various government departments. This project thus tries to avoid the complex issues involved in business process re-engineering in the participating departments. In fact, the FRIENDS counters are not even networked with the participating departments/entities. Print-outs of payments made through the counters are physically distributed to participating entities for processing. To remove bottlenecks at the time of processing, a government order was issued to treat a receipt from a FRIENDS counter as equivalent to a receipt from the concerned government entity.[35]

4.2.5.3 Owing to the success of the project, efforts have been initiated to develop FREES (FRIENDS Re-engineered and Enterprises Enabled Software) which would incorporate the 'Any Centre Any Payment Mode'.[36]

4.2.6 e-Mitra Project in Rajasthan[37]

4.2.6.1 This e-Governance initiative builds upon the experiences gained through the *LokMitra* and *JanMitra* pilot projects launched in 2002. While *LokMitra* was centred in the city of Jaipur, *JanMitra* was piloted in Jhalawar district to provide information and services under one roof to urban and rural populations. e-*Mitra* is an integration of these two projects in all the 32 districts using PPP model. There are two major components – 'back office processing' and 'service counters'. Back office processing includes computerization of participating departments and establishing an IT enabled hub in form of a mini data centre at the district level (e-*Mitra* data centre). All participating departments and the service centres hook up to this data centre. It is managed by the Facility Management Service Provider on behalf of the district e-Governance Society (under Chairmanship of the district collector). Private partners (Local Service Providers) run the kiosks/centres. In case of collection on account of payment of utility bills and government levies, the Local

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[35]Source: India: e-Readiness Assessment Report 2003
[36]Source: 'Fast Reliable Instant Efficient Network for Disbursement of Services'; by Krishnan B. Nair; Compendium of e-Governance Initiatives in India
[37]Source: 'e-Mitra'; by Aparna Arora, A.M. Deshpandey, R.K./ Sharma; Compendium of e-Governance Initiatives in India

Service Provider does not charge the citizen, but gets reimbursement from the concerned organization through the e-*Mitra* Society. In case of other services, the transaction fees is prescribed by the Society.

4.2.6.2 Thus, this project is an improvement on earlier schemes as it also involves back office computerization. Further, the citizen is not required to pay any fees for availing of the facility for making payment for government utilities.

4.2.6.3 The e-*Mitra* project has been chosen by the Government of Rajasthan to roll out the Community Service Centre project under NeGP.

4.2.7 e*Seva* (Andhra Pradesh)

4.2.7.1 This project is designed to provide 'Government to Citizen' and 'e-Business to Citizen' services. Originally, it was implemented in the form of the TWINS (Twin Cities Integrated Network Services) project in 1999 in the twin cities of Hyderabad and Secunderabad. The highlight of the e*Seva* project is that all the services are delivered online to consumers / citizens by connecting them to the respective government departments and providing online information at the point of service delivery. The network architecture is designed as an Intranet on a Wide Area Network (WAN). The network is designed in three tiers,[38] each tier being physically located in different places. The first tier for the client-end is located at the e*Seva* centres. The second tier consists of the data servers and the application servers. The third tier comprises Departmental servers as the backend in the concerned departments (Electricity, Municipality, Passport Office, Transport Department, Registration, Commercial Tax, etc). These servers keep consolidated databases. Presently, e*Seva* is providing 'One-stop-shop' for over 66 G2C and B2C services in 46 e*Seva* centres in the twin cities and Ranga Reddy district. Centres have also been opened in 20 other districts. The services include online payment of utility bills, issuing certificates, issuing licenses & permits, e-forms etc. Payments can be made by cash/cheque/DD/credit card/Internet.[39]

4.2.7.2 The project has become very popular among the citizens especially for payment of utility bills. In fact, it has been asserted that the success of this project is largely based on payment of electricity bills.[40] This project exemplifies the potential for integration of delivery of Union, State and Local Government services at one point. However, it also shows that the model based on payment of utility bills could not be rolled out in the rural hinterland.

4.2.7.3 Lessons:

    a.   *Support from the highest political level helps in overcoming problems in implementation.*

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[38]http://www.apdip.net/resources/case/in07/view
[39]http://esevaonline.com/
[40]Subhash Bhatnagar: One Stop Shop for Electronic Delivery of Services: Role of Public-Private Partnership (http://www.iimahd.ernet.in/~subhash/pdfs/OneStopShopForElectronicDeliveryJun2005.pdf)

b.   *Convergence and coordination between the activities of different departments/ organizations leads to better services under e-Governance.*

c.   *Long-term sustainability of e-Governance projects depends on financial viability, especially if they are to be implemented in the PPP mode.*

d.   *Front end e-services are possible without back end computerization. E-Governance projects could be broken into various components and their computerization could then be phased according to the ease of implementation.*

e.   *Government servants need to be motivated to adapt and work in an ICT environment.*

4.2.8 Revenue Administration through Computerized Energy (RACE) Billing Project, Bihar[41]

4.2.8.1 The Patna Electric Supply Undertaking (PESU), which is one of the seven area boards of the Bihar State Electricity Board (BSEB), caters to the energy requirements of the Patna Urban Area. The entire billing and payment process was manual and anomalies in the system were resulting in harassment to the consumers and loss of revenue to the Board. The major problems which had cropped up in the system were irregular billing cycle, ineffective data management, lack of transparency and delayed accounting. To address these problems, it was decided by the BSEB to take the assistance of ICT in providing value added and consumer-friendly service to the clients. A separate department of IT was created in BSEB to implement the project and the software was designed by NIC.

4.2.8.2 To begin with, a pilot was executed in one of the divisions for implementing the RACE software in 2001. Different modules were implemented incrementally and by July 2007, payment of bills of any division at any one of the 31 collection counters as per convenience was facilitated. Bills are now being generated with a barcode and consumers can download the bills using the internet and also see the details of payments made by them.

4.2.8.3 A number of problems were faced during implementation of the project:

i.   Adequate stress was not laid on capacity building and generating interest among the staff members. Thus, in the initial phase, the project was not owned up by the staff members.

ii.   There was lack of planning. Working manuals and documentation were lacking resulting in delayed use.

[41]Source: Article by Shri S.N. Behera; Compendium of e-Governance Initiatives in India

4.2.8.4 Once these problems were resolved, the project could be taken forward and the system is now moving towards online payment of bills.

4.2.8.5 Lessons:

    i.   *Active involvement of staff and capacity building is necessary for success of e-Governance projects.*

    ii.   *E-preparedness of the organization must be kept in mind while planning for projects and fixing time frames.*

4.2.9 Admission to Professional Colleges – Common Entrance Test (CET)

4.2.9.1 With the rapid growth in the demand as well as supply of professional education, the process of admission to these institutions became a major challenge in the early 1990s. Recourse was then taken to ICT to make the process of admission transparent and objective. One of the pioneering efforts was made by Karnataka. The State Government decided to conduct a common entrance test based on which admission to different colleges and disciplines was made. The allocation of seats in different colleges/disciplines is done through a process of 'computerized counseling' where the student can choose the discipline he/she wants – based, of course, on merit. Use of ICT in the admission process has helped in making the admission process totally transparent, fair and objective. Many institutions have now switched over to similar ICT based admission process.

4.2.9.2 Lesson:

    i.   *ICT initiatives which bring tangible benefits to citizens are always sustainable.*

4.3 Government to Business (G2B) Initiatives

G2B initiatives encompass all activities of government which impinge upon business organizations. These include registrations under different statutes, licenses under different laws and exchange of information between government and business. The objective of bringing these activities under e-Governance is to provide a congenial legal environment to business, expedite various processes and provide relevant information to business.

4.3.1 e-Procurement Project in Andhra Pradesh[42]

4.3.1.1 Prior to the introduction of an e-Procurement system in Andhra Pradesh, procurement in Government departments was done through a manual tendering process.

[42]Based on: http://siteresources.worldbank.org/INTEGOVERNMENT/Resources/APeProcurement.doc

The process consisted of a long chain of internal authorizations and scrutiny which necessitated several visits by the suppliers to government departments. The manual tender system suffered from various deficiencies, including discrimination, cartel formation, delays, lack of transparency etc.

4.3.1.2 The Government of Andhra Pradesh introduced the e-Procurement project in 2003 with the following objectives:

     i.   To reduce the time and cost of doing business for both vendors and government;

     ii.   To realize better value for money spent through increased competition and the prevention of cartel formation;

     iii.   To standardize procurement processes across government departments/agencies;

     iv.   To increase buying power through demand aggregation;

     v.   To provide a single-stop shop for all procurements; and

     vi.   To allow equal opportunity to all vendors.

4.3.1.3 In order to achieve these objectives, the entire e-Procurement process was designed to avoid human interface i.e., supplier and buyer interaction during the pre-bidding and post-bidding stages. The system now ensures total anonymity of the participating suppliers, even to the buyers, until the bids are opened on the platform. The e-Procurement application provides automatic bid evaluation based on the evaluation parameters given to the system. These improved processes have eliminated subjectivity in receipt and evaluation of bids and has reduced corruption to a significant extent.

4.3.1.4 Further, to bring transparency in e-Procurement, tender documents containing all details are hosted on the website. The documents can be downloaded by the interested suppliers free of cost, from the day of publication of a tender. At any time in the procurement cycle, any person associated with the transaction can check and know the status of the transaction. This saves time and effort involved in finding out the status of a purchase order, besides enabling better planning of inventory.

4.3.1.5 At the outset, an effort was made to standardize the procurement processes and forms followed by various departments especially for public works tenders. Today, all the

departments are following a common tendering process and forms for works tenders. These processes have been re-engineered to further improve the efficiency and curtail subjectivity in tender evaluation by the department users.

4.3.1.6 The benefits of the new system are as follows:

- *Reduction in tender cycle time:* In the pre e-Procurement era, the departments would take 90-135 days for finalization of high value tenders. The tender cycle time gradually came down to an average of 42 days over a period of one year and further reduced to 35 days at the end of the second year.

- *Reduction in opportunities for corrupt practices:* The e-Procurement system allows 'any where' and 'any time' access for bidders and suppliers from the Internet. The entire e-Procurement process has been designed to eliminate the human interface i.e., supplier and department interaction during pre-bid and post-bid processes. The automatic tender evaluation mechanism inherent in the system has reduced subjectivity in tender evaluation and helped to curb opportunities for corrupt practices to a significant extent and increased the accountability of procurement officials. In terms of transparency, any supplier or citizen can get information about tenders through a search engine on the home page. A supplier participating in a tender knows the list of other participating suppliers, the documents furnished by his competitors, price quotations and the evaluation result, as soon as a stage is completed by the departments in the system.

- *Cost Savings:* The cost savings could be visualised in the following manner:

  ➢ Supplier participation has increased from an average of 3 per tender in the conventional mode to 4.5 in the e-Procurement mode. Cartels have been eliminated and even small and medium suppliers are now able to bid, as the platform facilitates 'anywhere anytime' bidding. The departments have made significant cost savings by an average reduction of 20% in costs for procurement transactions done through the exchange during 2003-04 and 12% in 2004-05 due to a competitive environment.

  ➢ There is also substantial reduction in the advertisement costs in the press media, as e-Procurement tender notices were shortened to contain only basic information on the name of work, estimated costs and the URL of the e-Procurement site. There has been a 25% saving in the column space used, resulting in savings of approximately $0.56 million in a year.

> ➢ Transparency in the bidding process and in the system of automated tender evaluation through smart forms with parameterized qualification criteria has reduced subjectivity in the tender award process and consequently reduced corruption. The MIS feature in the system reveals data on government procurements instantaneously to bureaucrats and ministers. Besides, it has made a visible social impact, as citizens are assured that government procurement is conducted in a transparent manner, saving taxpayers' money.

4.3.1.7 The current trends from the portal (http://www.eprocurement.gov.in) are shown below in Fig.4.1 and provide an indication of the stability, growth and success of the project.

Figure 4.1 : e-Procurement Trends
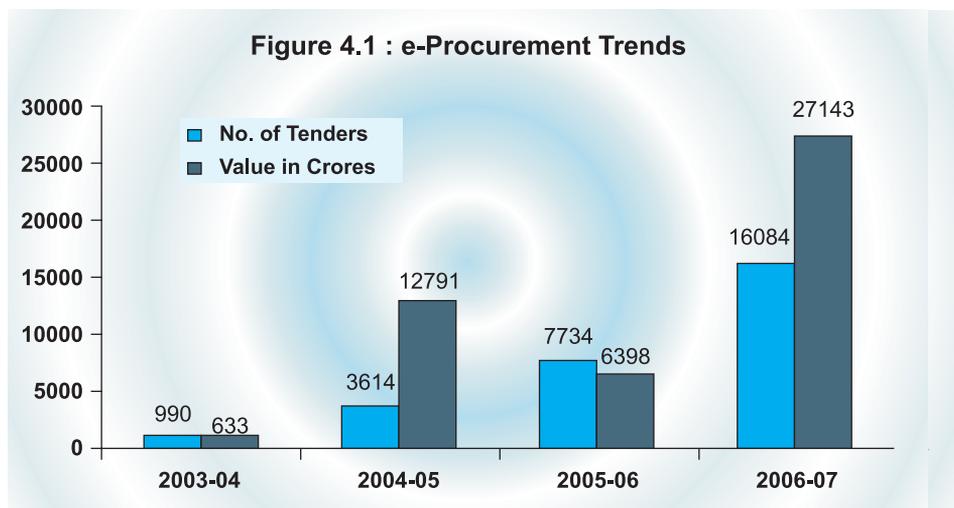
4.3.2 e-Procurement in Gujarat[43]

4.3.2.1 The system of e-procurement was introduced in the State of Gujarat from October 2004 onwards. Roll out of the system was carried out in a phased manner starting from few works/items for limited departments and was made compulsory for all government departments in 2007. The project was funded by the State Government with the objective of deriving the benefits of increased efficiency from e-enablement of business processes.

4.3.2.2 It aims to establish transparency in procurement process, shortening of procurement cycle, availing of competitive price, enhancing confidence of suppliers and establishing

[43]Source: 'e-Procurement'; by Rajkumar; Compendium of e-Governance Initiatives in India

flexible and economical bidding process for suppliers. It has been introduced to cover the following transactions:

- purchases and procurement of goods, plants, equipments, machinery, medicines, medical and surgical supplies and stores items, food and civil supplies stores items and purchases, printing and stationery items and purchase, all types of vehicle purchases, furniture and fixtures etc.

- All types of civil construction and related work

- Outsourcing of required services

- Auctioning of old plants, equipments, machinery, buildings, vehicles, furniture and fixtures, lands, properties, etc

- All other purchases and work orders.

4.3.2.3 As the project followed defined procurement guidelines of the State Government, no changes were required in the legal framework. However, the process of submission of bids underwent a major change as physical submission of bids got converted into online data submission. Assessment of the bids and comparative data is presented by the system itself. Initially, the project was launched on a pilot basis and after successful handling of tenders, the roll out was extended to all departments. One to one training was given to all core team members. The project has resulted in reduction in cycle time to 6.6 days from the earlier 30 days.

4.3.2.4 The project highlighted the importance of training of the stakeholders involved – departmental employees and bidders/suppliers/vendors. This project became a success story because of sustained capacity building and awareness generation.

4.3.2.5 Lessons:

- a.   *All stakeholders must build capabilities in order to enable them to participate in and take advantage of e-Governance initiatives, especially in G2B projects.*

- b.   *Some of G2B processes like e-procurement do not require extensive back end computerization and hence can be taken up easily.*

4.3.3 MCA 21[44]

4.3.3.1 The Ministry of Corporate Affairs has implemented the MCA 21 Mission Mode Project under the NeGP in September 2006 and presently the project is in the post-implementation phase. The project aims at providing easy and secure online access to all registry related services provided by the Union Ministry of Corporate Affairs to corporates and other stakeholders at any time and in a manner that best suits them. The goals of this project were formulated keeping in mind different stakeholders. These were:

a. *Business:* to enable registration of a company and file statutory documents quickly and easily.

b. *Public:* to get easy access to relevant records and effective grievances redressal.

c. *Professionals:* to enable them to offer efficient services to their client companies.

d. *Financial Institutions:* to easily find charges for registration and verification.

e. *Employees:* to enable them to ensure proactive and effective compliance of relevant laws and corporate governance.

4.3.3.2 The technical aspects of MCA 21 cover the following areas:

i. Design and development of application system

ii. Setting up of IT infrastructure

iii. Setting up the Digital Signature/PKI delivery mechanisms and associated security requirements

iv. Setting up of Physical Front Offices (PFOs)

v. Setting up of temporary FOs for the peak periods to meet with the requirements and subsequent shutdown of temporary FOs at the end of such peak periods

vi. Migrating legacy data and digitization of paper documents to the new system

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[44]Discussion is based on the Annual Report, 2007-08; Ministry of Corporate Affairs

vii.   Providing MCA services to all MCA 21 stakeholders in accordance with the Service Oriented Approach

viii.   Providing user training at all levels and all offices (Front and Back Offices).

4.3.3.3 The MCA 21 is designed to automate processes related to the proactive enforcement and compliance of the legal requirements under the Companies Act, 1956.

4.3.3.4 The implementation of Front Offices (FO) is done in two ways. These can be called as Virtual Front Office (VFO) and Physical Front Office (PFO). The VFO is what the citizen has in front while accessing the MCA21 portal. The PFO is a replacement to the existing RoC counters. Although the PFO accepts paper documents, these are converted into electronic documents by customer service agents manning PFO. The authorised person(s) are required to sign these documents digitally. The back office is what an MCA employee has in front while accessing the back office portal. The back office processes relate to:

i.   Dynamic routing of documents that have been electronically filed to the concerned official within MCA, based on the type of service request

ii.   Electronic workflow systems to support speed and certainty in service delivery

iii.   Storing of all approved documents of companies as part of electronic records, including provision of access to electronic records for the stakeholders

iv.   Enhancing identification of defaulters

v.   Increasing efficiency of Technical Scrutiny

vi.   Ensuring close follow-up on matters related to compliance management including prosecutions

vii.   Enabling quicker responses to investor grievances

viii.   Providing alerts when the tasks are not carried out within the stipulated period.

4.3.3.5 Accomplishments of MCA 21: The accomplishments of the MCA 21 can be presented under the following heads:

a.   *Providing access to citizens/stakeholders (G2C services):* Section 610 of the Companies Act, 1956 allows inspection of documents kept by the Registrars

of Companies by the various stakeholders on payment of statutory fees. After the implementation of MCA 21, this has become history. Presently, nearly 5 crore pages of legacy records consisting of permanent documents of companies (MOA, AOA, subsisting charge documents etc.) and Annual Returns and Balance Sheets for a period of two years preceding have been scanned, digitized and made a part of the MCA 21 electronic Registry. The electronic Registry has been further enriched with the e-filing of all the documents in various Registries with effect from the dates of roll-out of the programme and further mandated for the entire country with effect from September 16, 2006. Accordingly, the facility of inspection of documents granted under Section 610 of the Companies Act, 1956 has been converted into the facility of 'View Public Documents' under the MCA 21. Further, keeping in view that not all legacy records were scanned and digitized, a facility of 'on-demand scanning' has been provided. Under this facility, a stakeholder can request for certain documents (subject to availability) to be scanned and made available online.

b.   *G2B services:* Companies are required to interface with the Registrar of Companies (ROCs), the Regional Directors (RDs) and the Union Government in accordance with various provisions of the Companies Act. Prior to the implementation of MCA 21, all filings by the companies were in physical paper mode requiring a stakeholder or his representative to physically visit these offices or send the same by post. Handling large volumes of paper was a major problem and there were complaints on account of all sorts of undesirable practices such as loss of paper documents, ante-dated filings, replacement of statutory documents etc. A check on the quality of filings (correct and complete information) had virtually become impossible. Under MCA 21, various Forms have been re-engineered and converted into electronic Forms (e-Forms) to make them compatible with the e-Governance processes. The e-Forms have been designed with the in-built "pre-fill" feature whereby the data in the required fields is captured from the database available in the electronic registry in an automated manner. Requirements of repetitive data entry have been significantly reduced. The process of electronic filing also incorporates the facility of "pre-scrutiny" of the e-Form. This is a completely electronic process where the system verifies if the Form is complete in respect of mandatory fields. This is, however, limited to such checks as can be performed by the computerized system. Secondly, the system of payment of statutory

fees has been re-engineered as a part of the overall process. In addition to the conventional challan-based off-line payment system in the pre-MCA 21 system, online payment systems have been introduced, including use of digital signatures based on a Director Identification Number (DIN) database. Third, services are now available on a 24 X 7 X 365 time frame. The outcome is that record management is automatic, digital records have largely replaced paper records and there is no question of ante-date filings or loss or substitution of documents. Elements of speed, certainty and integrity in filing of documents are in place.

c.   *G2G services and linkages:* The architecture of MCA 21 has been designed to meet future challenges and scalability. It is capable of sharing information with other Government Departments/ Ministries/ Regulators in the Corporate Sector and introduction of joined-up services in due course. Presently, free access to company documents having been allowed to the following organisations:

i.   Reserve Bank of India;

ii.   Financial Intelligence Unit (FIU-IND);

iii.   Department of Economic Affairs;

iv.   Intelligence Bureau; and

v.   Central Statistical Organisation.

Access has been permitted to designated officers in these offices through a secure DSC based login. Once the other Departments implement their e-Governance programmes, and the NSDG develops the national Gateway, the MCA 21 system can be linked with more organizations.

4.3.3.6 The implementation of MCA 21 has provided an enabling environment for stakeholders to approach Government for seeking a complete basket of services in an easy and transparent manner. The implementation of e-Governance has also enabled plugging the leakages. Further, the stakeholder is now in a position to track the transaction status at every stage; from making payment to the processing and ultimately the approval status. The time taken in delivery of services has shown remarkable improvement. These improvements are shown in Table 4.1:[45]

Table 4.1 Efficiency in Delivery under MCA 21		
Service Metrics		
Type of Service	**Prior to MCA 21**	**After MCA 21**
Name Approval	7 days	1-2 days
Company Incorporation	15 days	1-3 days
Change of Name	15 days	3 days
Charge Creation/Modification	10-15 days	2 days
Certified Copy	10 days	2 days
Registration of Other Documents		
Type of Service	**Prior to MCA 21**	**After MCA 21**
Annaul Return	60 days	Instantaneous
Balance-sheet	60 days	Instantaneous
Change in Directors	60 days	1-3 days
Change in Registered Office Address	60 days	1-3 days
Increase in Authorised Capital	60 days	1-3 days
Inspection of Public Documents	Physical appearance	on-line

4.3.3.7 Lessons:[46]

1. *installation and stabilization of the system takes time.*

2. *acceptability by staff and efficient usage takes much more time.*

3. *extensive staff participation is essential, despite best vendors and cutting-edge technology.*

4. *involvement of domain specialists is a key pre-requisite.*

5. *digitization and validation of data is a slow and error-prone process, especially when migrating from a paper-based system.*

[46]Source: 'G2B Services: Key Learnings from MCA 21'; Ministry of Corporate Affairs; http://www.eindia.net.in/egov/presentation/Day_3/Session_2/YS_Malik.pdf

6. *stakeholders should be allowed to identify errors in the data through a fool-proof system.*

7. *flexibility in the system is a must (e.g. validation of digital signatures required creation of the Director Identification Number database and creation of linkages with the professionals' database of ICAI).*

8. *in the transition period, certain processes from the old system may be allowed to continue.*

9. *initiatives aimed at making the new system acceptable to the users need more focus and resources.*

10. *benchmarks for service delivery need to be created and communicated to the users.*

11. *A focused approach towards implementation of e-Governance projects is needed. For this, a separate team needs to be created within the organization. Implementation of e-Governance projects should not be in the form of an additional responsibility.*

12. *Assessment of changes to be made in the legal framework needs to be done in advance.*

4.4 Government to Government (G2G) Initiatives

Within the government system there is large scale processing of information and decision making. G2G initiatives help in making the internal government processes more efficient. Many a time G2C and G2B processes necessitate the improvements in G2G processes.

4.4.1 *Khajane* Project in Karnataka

4.4.1.1 It is a comprehensive online treasury computerization project of the Government of Karnataka. The project has resulted in the computerization of the entire treasury related activities of the State Government and the system has the ability to track every activity right from the approval of the State Budget to the point of rendering accounts to the government. The project was implemented to eliminate systemic deficiencies in the manual treasury system. The aspects of the project which require highlighting are:[47]

[47]Source: Based on 'Khajane: The Comprehensive Online Treasury Computerisation Project'; http://www.csi-sigegov.org/casestudies/06_khajane.pdf

- A prior study of deficiencies of the system was conducted. The best practices of the treasury system of some other States (Andhra Pradesh, Maharashtra, Tamil Nadu and West Bengal) were studied.

- To eliminate redundant processes, systematic re-engineering was done. Processes were adopted to suit computer applications. A procedure manual was brought out.

- Staff feedback was obtained. Motivation of staff was accorded high priority. User-friendliness of the software, simplification of processes and reduction of drudgery was highlighted.

- Software development was supervised by treasury teams. Software was tested in representative treasury environments. Feedback was utilized in modifying the software.

- Training was provided before software roll-out.

4.4.1.2 The system includes features such as budget control, online funds transfer etc. This project manages to minimize efforts devoted earlier to reconcile the entries in the accounts and provides accurate information on a timely basis. Thus it has contributed in bringing efficiency in the government and aids the decision making process. This project has turned out to be success story.

4.4.1.3 Lessons:

a.   *Important lessons can be drawn from the experience of other organizations in similar projects. There is no need to re-invent the wheel in every e-Governance project.*

b.   *Close monitoring and continuous feedback are necessary to ensure proper functioning of e-Governance projects.*

c.   *Close cooperation between the technology solution provider and the in-house domain experts is crucial for success of e-Governance projects.*

4.4.2 SmartGov (Andhra Pradesh)[48]

4.4.2.1 The Andhra Pradesh Secretariat comprises a number of departments. The processing of information in the Government is predominantly workflow intensive. Information moves in the form of paper files from one officer to another for seeking opinions, comments,

approvals etc. SmartGov has been developed to streamline operations, enhance efficiency through workflow automation and knowledge management for implementation in the Andhra Pradesh Secretariat. The solution automates the functioning of all levels of Government entities and provides a well defined mechanism for transforming the "hard copy environment" to a "digital environment". It enhances productivity through use of IT as a tool. SmartGov replaces the paper file with an e-file. SmartGov provides the features of creation, movement, tracking and closure of e-files, automation of repetitive tasks, decision support system through knowledge management, prioritization of work, easy access to files through an efficient document management system and collaboration between departments. This project is being extended to more departments.

4.4.2.2 Lessons:

    a.   *Political support from the highest level coupled with wholehearted involvement of the staff substantially increase the chances of success*

    b.   *Capacity building of staff is essential for success of any e-Governance project.*

4.5 The potential of such initiatives becomes evident from Table 4.2:[49]

Table 4.2: Benefits of e-Governance			
Country	**Type of Government Application**	**Time to process before application**	**Time to process after application**
Brazil	Registration of 29 documents	Several days	20-30 minutes per document, one day for business licenses
Chile	Taxes online	25 days	12 hours
India, Andhra Pradesh (AP)	Valuation of property	Few days	10 minutes
India, (AP)	Land registration	7-15 days	5 minutes
India, Gujarat	Interstate Check Posts for Trucks	30 minutes	2 minutes
Jamaica	Customs Online	2-3 day for brokers to process entry	3-4 hours
Philippines	Customs Online	8 days to release cargo	4 hours-2 days to release cargo

[49]Source: Based on Subhash Bhatnagar and Arsala Deane (World Bank, 2003); retrieved from www.infodev.org/en/Document.63.aspx

4.6 The broad lessons from these independent initiatives undertaken at various levels are as follows:

i.   Political support at the highest level is a sine qua non for successful implementation of e-Governance initiatives;

ii.   Major e-Governance projects bear fruit only when application of IT is preceded by process re-engineering;

iii. Successful projects require an empowered leader with a dedicated team who can conceptualise and implement e-Governance projects with the help of officials at all levels and technological solution providers;

iv.   Initiatives which save the citizens' time, money and effort are able to succeed even when back-end computerization is not done. However, these successes are generally limited to cases where payment of bills for public/private utilities is involved but for complete transformation of governance there has to be an end-to-end ICT enablement coupled with process re-engineering;

v.   Scaling up should be attempted only after the success of pilot projects. Systems should have the flexibility to incorporate changes mid-way;

vi.   In rural areas, issues of connectivity and electricity supply are of paramount importance; and

vii. In case of complex projects, all components need to be identified and analysed at the outset, followed by meticulous planning and project implementation.

The objectives, salient features and limitations of some of the e-Governance initiatives are presented in Table 4.3.

Table 4.3: Evaluation of Select e-Governance Projects

Parameters	Projects				
	FRIENDS (Kerala)[50]	Gyandoot (Madhya Pradesh)[51]	Bhoomi (Karnataka)[52]	eSeva (Andhra Pradesh)[53]	Lokvani (Uttar Pradesh)[54]
Objectives	To provide one-stop, front-end, IT enabled payment counter facility for citizens for making payments for bills originating from government entities.	To provide useful information and services to people in rural areas and act as an interface between the district administration and rural people.	Computerisation of land records; allowing access to land records, updation of land records etc.	To provide G2C and B2C services to citizens including online payments, issue of certificates, permits etc.	To provide information and services to citizens of the district, especially those related to land records and grievance redressal.
Reason for Choosing	Citizens were required to go to various offices for making different kinds of payments.	Rural population was not having access to information on government projects and agriculture; specifically, they were ignorant about market rates for agricultural produce. In the case of BPL families, the problem was more acute.	Although land records are the single most important record in rural areas, citizens were not able to access their own records.	Citizens were required to go to various offices for making different kinds of payments and for issue of certificates etc.	Lack of transparency in the land record system; opaqueness in the grievance redressal mechanism in the districts.
Reach	14 districts/seven days a week/12 hours a day. Citizens had to access a number of centres.	Initially computers installed and networked through intranet in 20 gram panchayats in 5 blocks of Dhar district. Later, 15 more centres were opened through private enterprise. Presently functioning in 34 centres.[55]	Rolled out in all 177 talukas (Sub-district centres) of the State.	46 eSeva centres (400 counters) in twin cities of Hyderabad and Secunderabad and Ranga Reddy district.[56] Centres in 20 other districts also opened.	As on June 2008, 115 centres in Sitapur district (tehsil/block/town based). Orders have been issued to replicate the project in all districts.[57]

[50]Based on : India: e-Readiness Assessment Report 2003
[51]ibid
[52]ibid and also, India: e-Readiness Assessment Report 2004
[53]Based on : India: e-Readiness Assessment Report 2004
[54]Based on : India: e-Readiness Assessment Report 2005
[55]http://www.gyandoot.nic.in/gyandoot/intranet.html (extracted on 22.08.08)
[56]Source: http://esevaonline.com (extracted on 22.08.08)
[57]http://sitapur.nic.in/lokvani/intro_eng.doc

Table 4.3: Evaluation of Select e-Governance Projects Contd.

Parameters	Projects				
	FRIENDS (Kerala)	Gyandoot (Madhya Pradesh)	Bhoomi (Karnataka)	eSeva (Andhra Pradesh)	Lokvani (Uttar Pradesh)
Whether scaling up done	Extended to 14 districts; can also be used for making payments to BSNL – a GOI enterprise.	No	Yes. First piloted in four sub-districts; later implemented on pilot basis in one sub-district centre in each of the 27 districts; finally rolled out to all 177 sub-districts in the State.	Not fully. Although the project was launched on a pilot basis in 1999 itself (TWINS project), eSeva centres have been opened in only 21 districts so far.[58]	Orders have been issued to replicate the project in all districts.
Whether preceded by process re-engineering	No. Even back office computerization not done in the participating departments/agencies. Further, the FRIENDS counters are also not networked with the participating entities; print-outs of payments made through counters are physically distributed to participating entities for processing.	No	Yes	No	No
If yes, then whether changes made in (1) laws, (2) Institutions (3) processes only	N.A. (However, it required a governmental order treating a receipt from a FRIENDS counter as equivalent to a receipt from a participating entity).	N.A.	Manually written Record of Right, Tenancy and Cultivation (RTC) declared illegal.	N.A.	N.A.

[58]http://esevaonline.com

Table 4.3: Evaluation of Select e-Governance Projects *Contd.*

Parameters	Projects				
	FRIENDS (Kerala)	Gyandoot (Madhya Pradesh)	Bhoomi (Karnataka)	eSeva (Andhra Pradesh)	Lokvani (Uttar Pradesh)
Business Model adopted	Completely Government funded. Cost of Counter Personnel borne by participating entities. However, in case of payments related to non-State Government entities (e.g. BSNL), transaction charge of roughly 12% is charged.	Project financed by the panchayats, the village community or private entrepreneurs. In the case of panchayat centres, local youth selected to operate centres without any salary or stipend. User charges are levied for specific services.	Centres/kiosks have been established in Sub-district offices. User fees are charged.	Public-Private Partnership	Public Private-Partnership. Existing cyber cafes/computer training institutes given license to function as Lokvani centres.[59] A society was formed in the name of Lokvani to implement the project. Hardware and software provided by NIC free of cost.
Impact/evaluation				Limited formal evaluation – by ASCII - based on 200 responses[60]	
Individual driven or institutionalised		Individual driven	Institutionalised from top to bottom.	Individual driven: Chief Minister's idea implemented by hand-picked civil servants[61]	Individual driven: Initiative of a particular District Magistrate. Depends on initiative taken and interest shown by the DM.
Nature of benefits	Transaction time and traveling time reduced. Demonstrates the advantages of ICT.	Agriculture related information to rural people.	Records computerized, transparent dealing with requests for records, scope for use in planning.	One point integration of services. Transaction time and travel time substantially reduced.	Main benefit is seen in the disposal of grievance petitions.
Funding	Dependent on Union Government funding.	Panchayat/community funding.[62]	Sponsored by Union Ministry of Rural Development and implemented by the State Government.	P-P-P model.	Existing private kiosks were used.

[59] http://sitapur.nic.in/lokvani/intro_eng.doc
[60] Source: Subhash Bhatnagar: One Stop Shop for Electronic Delivery of Services: Role of Public-Private Partnership (http://www.iimahd.ernet.in/~subhash/pdfs/OneStopShopForElectronicDeliveryJun2005.pdf)
[61] Subhash Bhatnagar; op cit
[62] http://dhar.nic.in/GYANDOOT.htm

Table 4.3: Evaluation of Select e-Governance Projects *Contd.*

Parameters	Projects				
	FRIENDS (Kerala)	Gyandoot (Madhya Pradesh)	Bhoomi (Karnataka)	eSeva (Andhra Pradesh)	Lokvani (Uttar Pradesh)
Specific limitations, if any		Very low connectivity; irregular supply of electricity; user charges; limited use to illiterates; e-payments could not be made in rural areas.		Success based largely on payment of electricity bills.[63]	It is dependent on existing cyber cafes/computer training institutes – it is difficult to roll out in the rural areas in a significant way. Apart from issues of rural entrepreneurship, infrastructural bottlenecks hinder the spread: rural internet connectivity, rural electrification, poverty. Revenue generation is still not much (success of eSeva project in Andhra Pradesh depends largely on payment facility for electricity bills).
Specific lessons, if any	Even front-end computerization without back-end computerization and governmental process re-engineering could succeed if tangible benefits arise to the citizens.	In rural areas, there has to be a congruence of various technologies and communication media to achieve desired results and to make such innovations accessible to all sections of rural population. Poor infrastructure increases the cost of operations, specially where private participation is involved. User charges act as a deterrent in rural areas. The interface with the citizens should be simple and user-friendly. The technological solution should be tailored to the environment.	• Exemplary approach in piloting the project, rolling out and sustenance of the project. • Business process reengineering is a pre-requisite in case of complex projects. • Large-scale projects require political support at the highest level. • Continuity in project management team helps in better implementation. • A holistic approach is necessary.	• Offers potential for integration of Union, State and Local Government services at one point. However, also shows that model based on payment of utility bills could not be rolled in the rural hinterland. • Support at the highest political level is a sine qua non. • Front-end e-services are possible without back-end computerization. E-Governance projects can be broken into components and implemented in a phased manner.	• Most popular service is 'online public grievance redressal' facility.[64] Highlights the need for spread to rural areas. • E-Governance projects can be broken into components and implemented in a phased manner. • Reach of e-Governance projects can be enhanced through P-P-P models, which could also be cost effective.

[63]Subhash Bhatnagar; op cit
[64]http://sitapur.nic.in/lokvani/intro_eng.doc

CORE PRINCIPLES OF e-GOVERNANCE

In the previous chapter the experience regarding e-Governance initiatives in India prior to the formal launch of the National e-Governance Plan has been recounted and the reasons for the successes and failures of these initiatives have also been analyzed. Based on this experience as well as those in other countries, it would be useful to formulate the core principles essential for the success of e-Governance initiatives. This would be particularly relevant and appropriate at a time when government has undertaken the mammoth NeGP programme throughout the country.

5.1 Clarity of Purpose

5.1.1 There needs to be a clear understanding and appreciation of the purpose and objectives to be achieved through e-Governance. In the past, a large number of projects appear to be based on what technology can achieve rather than what the citizens need. A corollary to this would be a precise definition of the parameters against which any future evaluation would be done. e-Governance should not be taken up merely to demonstrate the capability of an existing technology, but the technology should be adopted to solve an existing problem. Citizen-centricity should be at the heart of all e-Governance initiatives.

5.2 Environment Building

5.2.1 There is need to change the mind-set of all the stakeholders involved, i.e. politicians, government officials and civil society at large. This would require a strong will to change among various stakeholders in the governance system. As the task involves redesigning of governmental processes at various levels, implementing e-Governance would require political support at all levels. On the other hand, government personnel would have to be incentivised to change old habits and acquire new skills. In the public, awareness needs to be created so that there is a constant demand for reforms in governance through implementation of e-Governance. In the end, the environment should be such that the perceived threat to entrenched interests is removed and resistance to change is addressed by dealing with actual grievances. Thus, the positive approach of government personnel towards the needs of citizens would be the necessary elements for creating a conducive environment. Raising public awareness, forming partnerships with academic institutions – public and private,

Public-Private Partnerships (PPPs), exchange of best practices including with the private sector and involvement of citizen-groups should all form part of this process.

5.3 e-Governance as an Integral Part of Reform in Governance

5.3.1 e-Governance cannot be separate from governance as a whole. Further, it cannot be taken as an adjunct of governance. It has to be an integral part of the governance structure and processes. Thus, every government organization or entity, every government programme or policy and every law and regulation would have to integrate e-Governance modules within itself rather than brought-in as an afterthought or introduced as an adjunct. The Commission has all along adopted this approach as has been highlighted in the introductory chapter. This is because under e-Governance, the focus is always on 'governance' and the range of technological tools provided by Information and Communications Technology is utilized to bring about changes keeping in mind the needs of the citizens and the organization itself. As governance covers a very wide range of activities in each area, the structures and processes which need to be changed or modified through use of technology would have to be identified separately. This task cannot be performed satisfactorily if e-Governance is not made an integral part of the organization which is undertaking to reform itself.

5.4 E-preparedness and Step-wise Approach

5.4.1 e-Governance cannot be introduced in the whole country across government organizations at one go. As mentioned above, e-Governance is an integral part of reforms in governance and each organization needs to embed e-Governance systems within the organization in a seamless way. However, different organizations are not, presently, at the same level of e-preparedness. There has to be a step-wise approach to e-Governance so that outcomes are maximized and citizens reap early benefits from e-Governance. These steps are mentioned below:

i. *E-preparedness:* A certain level of preparedness is essential for any e-Governance project, in the form of existence of basic infrastructure and human resource capabilities of the organizations. A clear assessment of actual e-preparedness of an organization should be first carried out while conceptualizing any project. Efforts should be made to enhance the e-preparedness to the desired levels.

ii. *Identification of e-Governance projects by each organization/entity:* Each organization would have to identify areas/activities falling under its functional domain which could benefit from e-Governance. This identification has to be based on the needs of the citizens.

iii. *Prioritization:* Once the e-Governance projects to be undertaken by an organization have been identified, they would require to be prioritized. This should be based on simplicity of the project, ease in implementation and benefits to the citizens. However, capacity building for the more complex projects should remain in focus. Simple projects serve to bring out the potential benefits of e-Governance. These create a demand for more such initiatives. However, the more complex initiatives have the potential of bringing the larger benefits of good governance to citizens.

iv. *Business process re-engineering:* Whether it be for providing information and services to the citizens or for streamlining the internal functioning of government organisations, each e-Governance initiative would have to be accompanied by a step-by-step analysis of the governmental processes involved and tested on the anvil of simplicity and desirability. This would lead to redesign of processes using technology. The process would result in, if required, changes in forms, processes, structures and laws and regulations. The exercise should centre around the needs of the citizens. Business process re-engineering in government organizations is a complex task because, as opposed to private organizations, governmental processes and structures are designed or regulated by various statutes, rules, regulations, instructions etc. Changing them would require a complete understanding of the functioning of individual government organizations and laws and regulations associated with them on the one hand and technological applications and the needs of the citizens on the other. Thus, this exercise would form the backbone of e-Governance initiatives.

v. *Developing technological solutions:* Every e-Governance initiative would require its own technological solution. However, there would be commonalities across Union, State and local government levels. Further, there would be need for sharing of information and establishing connectivity across organizations at different levels. This would require standardization of basic requirements, adoption of interoperable platforms and creation of data storage and retrieval systems. In the end, the technological solution would have to be modified according to the specific needs of the organization with the help of field experts. However, care has to be taken to ensure that the country does not follow the beaten path in adopting technological solutions. Due to rapid strides in the development of Information and Communications Technology, there is a strong case for 'leap-frogging' in the selection of technology and applications to achieve better results. Applications mounted on mobile telephone sets and other hand-

held devices are examples of such advancements. The technological solution should be able to provide a simple interface to the citizens, be cost-effective, promote efficiency, be sustainable and reliable and lend itself to scalability.

vi.   *Implementation of e-Governance projects:* Only when the above-mentioned steps have been undertaken should e-Governance projects be implemented. This may be in the form of a pilot project initially, testing the technological solution and the procedural and functional inputs. However, the business process re-engineering should be such that once the e-Governance project has been successfully tested on a pilot basis, the scaled up system should be able to make e-Governance irreversible, i.e. it should not relapse into the pre-e-Governance mode. In the past, there have been numerous instances of successful projects not being scaled up and also of lessons not being learnt from failed projects. Thus, each pilot project should invariably be evaluated and the lessons learnt including why it did not lead to scaling up. Failed projects should be redesigned to remove shortcomings. This would ensure that organizations do not become a graveyard of pilot projects.

5.4.2 As e-Governance is expected to touch all aspects of governance – economic, social and administrative, identification and prioritisation of e-Governance projects assumes great significance. E-preparedness and a step-wise approach is a recipe for starting small but building up on successes.

5.5 Disciplined Way of Working

5.5.1 e-Governance requires a disciplined and systematic way of working in organizations. Most technologies pre-suppose a set of rational behaviour on the part of users. This element needs to be emphasized during the capacity building as well as in the life cycle of the project.

5.6 Monitoring and Evaluation

5.6.1 Close monitoring of e-Governance projects is necessary in both the pilot phase as well as during the actual working of the up-scaled project. This helps in early detection of problems and hence facilitates prompt corrective action. However, apart from periodic monitoring of e-Governance initiatives in the post-implementation stage, there would also be need for evaluation of the impact of such initiatives through independent agencies against parameters which would determine whether the objectives have been achieved or not.

5.7 Developing Secure, Fail-safe Systems and Disaster Recovery Systems

5.7.1 Given the scale of potential e-Governance applications in the country and the prospective mammoth flow of data involved, the technological architecture on which such applications are mounted would need to be made not only secure but also fail-safe. Mechanisms would have to be incorporated which would put the systems in the 'safe mode' in times of crisis. Further, depositories and 'mirrors' would need to be created with sound disaster recovery modules with adequate security features to prevent loss of data and collapse of the system.

5.7.2 Unless security features are properly implemented, electronic transactions are more prone to fraud and abuse than traditional paper-based transactions. As governments move toward providing the full range of government services online with the capability to conduct sensitive transactions, it needs to be ensured that these transactions are secure and the privacy of citizens is not compromised. Over and above, these systems would also need to be insulated from the possibility of cyber-attacks, hacking etc.

5.8 Sustainability

5.8.1 In the end, e-Governance initiatives need to be sustainable. Once it has been established that any particular initiative is the better way of providing services or information to the people or conducting the business of government, it should not be allowed to relapse on grounds of expediency. Reforms are always harder to implement and sustain, but once they take root, they deliver the best results. Sustainability could be addressed in many ways – some initiatives may require designing in a way that they are financially sustainable. Others may be driven by administrative objectives or simplicity of use. Saving of time and money may be the driving force in case of some projects. All these are objectives, which on their own merit, justify the continuance of any particular initiative. If projects have been able to achieve any of these objectives, their sustainability should not be allowed to be jeopardized on some other grounds.

5.9 Allowing for Horizontal Applicability

5.9.1 A coordinating mechanism is needed to prevent cases of re-inventing the wheel. Different States across India face similar types of challenges. Past experience has shown that a number of States have undertaken e-Governance projects to address similar concerns. To make e-Governance more cost effective and successful, successes need to be adopted across States and organizations thereby minimizing costly repetitions and in many cases, failures.

5.10 Development of Local Language Interfaces

5.10.1 As India is a multilingual society, e-Governance initiatives need to provide citizen interfaces in the respective local language. Thus, displays and keys should be based on localized interfaces and multi-media instructions should be commonly used to make the interface accessible in rural areas, where low literacy rates can be an obstacle.

5.11 e-Governance – a Continuing Process

5.11.1 e-Governance represents a paradigm shift in the field of governance reforms. Bringing it about would have to be a continuing process which would require many adjustments. It has been well said that e-Governance is a journey and not a destination.

IMPLEMENTING e-GOVERNANCE REFORMS

6.1 The Challenge

6.1.1 e-Governance has to be implemented across different departments and organizations with a wide spectrum of activities and with varying levels of readiness for e-Governance. Achieving the desired results would, therefore, require the fullest political backing, a determined and resolute approach by all organizations and departments of Government as well as active and constructive participation by the public. It would require providing institutional and physical infrastructure for taking e-Governance initiatives across our cultural and regional diversities; more importantly it would require the creation of an environment that would encourage the adoption of ICT. Thus, apart from the technical requirement, success of e-Governance initiatives would depend on capacity building and creating awareness within government and outside it.

6.1.2 Dr. APJ Abdul Kalam, former President of India and a visionary in the field of e-Governance has aptly summarized the basic challenge lying before the country in this regard:

> *"e-Governance, has to be citizen-friendly. Delivery of services to citizens is considered a primary function of the government. In a democratic nation of over one billion people like India, e-Governance should enable seamless access to information and seamless flow of information across the state and central government in the federal set up.* **No country has so far implemented an e-Governance system for one billion people. It is a big challenge before us."**[65] *(emphasis added)*

Based on the core principles enumerated in the earlier Chapter, the implementation of e-Governance would require the administrative measures mentioned below.

6.2 Building a Congenial Environment

6.2.1 As government organizations function at varying degrees of IT-preparedness, there is first of all a need for building an environment within government organizations at various levels which is conducive to e-Governance. This would require computerization of the

[65]Inaugural address at IIT Delhi during International Conference on e-Governance, 18th December, 2003; (reproduced in 'Compendium of eGovernance Initiatives in India', ed. Piyush Gupta & R.K. Bagga; https://www.csi-sigegov.org/publications.htm)

lowest possible unit, as well as building capacity at the individual level which recognizes the need for reforms in processes using modern technology. The essential elements in this phase are as follows:

i.   *The will to change:* Decades of following a particular mode of governance procedure tends to develop inertia and resistance to change. Further, old skills and habits will require to be replaced with new skills and new processes if e-Governance is to sustain. There has to be a strong will from within the government itself to crossover from the present system to e-Governance.

ii.   *Political support at the highest level:* The vast scope of e-Governance combined with the enormous task of process re-engineering which will be necessary at various levels and the infrastructural and financial requirement necessarily call for commitment to the vision of e-Governance at the highest political level. A bottom-up approach will not suffice.

iii. *Incentives:* Weaning government entities from the mechanical application of technology to adoption of e-Governance tools will require incentivising e-Governance among different entities and individuals. These incentives need to be reflected in the budgetary allocations.

iv.   *Awareness:* Apart from building capabilities within the government, there is need for generating widespread awareness among the public at large. The success of e-Governance lies in increasing the number of electronic interactions between citizens and the government and not merely in building the infrastructure of e-Governance. In addition to governmental measures, a proactive approach from civil society groups would also generate greater demand and acceptance for e-Governance initiatives. Further, this would also require the adoption of 'quality' as a mission of governance, as was done in Japan.

v.   *Overcoming resistance to change:* e-Governance has to be a collective effort. However, in every organization, there are people who would not be convinced about its benefits or who would perceive it as a challenge to certain entrenched interests. Such resistance would need to be overcome by demonstrating the potential benefits of e-Governance; how it strengthens the organization internally, creates goodwill externally and above all, enhances citizens' satisfaction.

vi. *Training and capacity building:* Training would have to be imparted to government officials starting right from the cutting edge level so that any apprehensions of intrusive technology is removed and e-Governance is accepted as an achievable and desirable target.

6.2.2 Recommendations

a. **Building a congenial environment is a sine qua non for successful implementation of e-Governance initiatives. This should be achieved by:**

   i. **Creating and displaying a will to change within the government**

   ii. **Providing political support at the highest level**

   iii. **Incentivising e-Governance and overcoming the resistance to change within government**

   iv. **Creating awareness in the public with a view to generating a demand for change.**

6.3 Identification of e-Governance Projects and Prioritisation

6.3.1 Within the overall framework of governance reform, e-Governance initiatives are undertaken to serve some basic needs:

   i. to provide information and services to the citizen which are qualitatively superior to those currently available and are provided in a less cumbersome manner.

   ii. to re-engineer governmental processes to achieve the above and also to make the system more efficient, transparent, accountable and cost-effective.

   iii. to strengthen the decision-making process through connectivity and transmission and analysis of large amounts of data.

The National Knowledge Commission has recommended:

"To make an immediate impact on citizens it is critical to identify and simplify important processes and services, say 10 to 20 to begin with, which are currently cumbersome, bureaucratic and prone to unnecessary delays and even corruption. These

processes can be simplified and made available as web-based services. Initially, these services could include birth certificate, death certificate, proof of residence, ration/ ID cards, etc. Other processes can be added over a period of time. This approach will require each state to implement these processes in concert and learn from each other."

6.3.2 The Organisation for Economic Co-operation and Development (OECD) has defined four stages of e-government, each one more demanding than the next.[66] These are:

i.   *Information:* putting information on web-sites

ii. *Interaction:* allowing citizens to enquire about services, procedures etc. and filling up forms and submitting them online

iii. *Transaction:* allowing payments online

iv. *Transformation:* a mix of all the above and allowing the citizen to participate in governance through ICT.

6.3.3 The basic approach in case of e-Governance projects should be to focus on 'KISS': 'Keep it Small and Simple' principle. Thus, first of all, government entities should identify projects which would lead to providing useful and timely information to citizens. There is need to go beyond the requirements of Section 4(1) of the Right to Information Act, 2005 and provide accessible information to citizens on the basis of an analysis of their perceived needs. Many of the websites of government agencies do not go beyond rudimentary information and information to be provided under the RTI Act. Further, the websites also suffer from non-updation of information. However, many agencies have taken pro-active steps and are providing a wide range of information on their websites. For example, the website of the Delhi Development Authority (DDA) provides information, inter alia, about the following: (i) organizational details and Annual Reports, (ii) planning, (iii) housing, (iv) lands, (v) urban heritage, (vi) procedures, (vii) notices, (viii) sports and greens, (ix) vigilance and (x) information under the RTI Act, 2005. A similar approach has to be adopted by other agencies regarding dissemination of information.

6.3.4 Secondly, those e-Governance projects should be identified which do not require the immediate creation of a historical database for providing services. Such initiatives could include services such as registration of births and deaths, albeit, prospectively. Such services do not require prior creation of a database. However, the design of the interface should be

[66]Source: 'The Electronic Bureaucrat'; A special report on technology and government; The Economist, February 16th, 2008; pages 6-7

such that it should enable the activity to cater to future needs. Thus, in the case of registration of births and deaths, the activity should lead to building up of a database prospectively from such registrations. Gradually, the past registrations could also be included in the database.

6.3.5 Thirdly, those projects could be identified which allow for making elementary online transactions including payment for services. Payment of electricity bills etc. come under this category. Such initiatives are easier to implement and provide perceptible improvements in the quality of services delivered to citizens.

6.3.6 Fourth, are initiatives which require verification of information/data submitted online. A higher level of technological and process re-engineering required is represented by initiatives which cater to provision of services such as issuing of licences, registration for PDS (Public Distribution System), etc. These initiatives require verification of the data submitted online. Such initiatives should form the next level of implementation.

Fig. 6.1: Benefits from e-government Projects at Different Levels of Sophistication (million Euros)
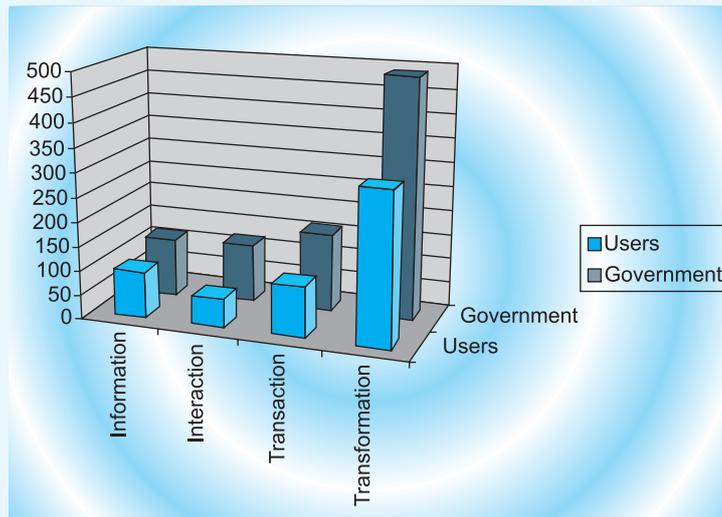
(Source: Based on The Economist, February 16th, 2008)

6.3.7 Finally, those projects should be identified which require creation of and integration into complex databases. These would be represented by initiatives which would involve creation of complex databases such as the National Citizen ID, which would then be linked to other databases and services. It would also include initiatives such as computerization of land records, which would further require integration of various databases including land surveys, manual records, satellite data etc. and involve many agencies.

6.3.8 If all these initiatives are undertaken at one go, then there is every possibility of costly and frustrating delays and creation of ineffective systems which would lead to dissatisfaction. Thus, as mentioned in the chapter on core principles, prioritization is

required to provide early benefits to citizens. The five levels of projects mentioned above also represent the five levels of prioritization based on ease in implementation, time taken in implementation and impact on the citizens. Different organizations could follow the same principles in prioritizing projects. However, another criterion for working out the priority of e-Governance projects could be on the basis of the needs of citizens. In some cases, these may not suggest to adoption of the easy path. Although, it is advisable that projects easy to implement should be taken up first, but at the same time, it is necessary to ensure that the needs of the citizens are also given due importance while prioritizing e-Governance projects. It also needs to be recognized that different government organizations/departments, both at the Union and State Government levels, are best placed to identify the initiatives which would require prioritization on the twin basis of ease in implementation and the needs of the citizens. Thus, a broad framework of initiatives at different levels of complexity would have to be created by the organizations/departments themselves. It would be the role of the respective IT departments to coordinate the activities of various organizations/departments in this endeavour and provide them technical support if needed.

6.3.9 Recommendations

a. **Government organizations/departments at Union and State Government levels need to identify e-Governance initiatives which could be undertaken within their functional domain, keeping the needs of the citizens in mind. Such initiatives may be categorized as follows:**

   i. **Initiatives which would provide timely and useful information to the citizens.**

   ii. **Initiatives which would not require the creation of a database for providing useful services to the citizens. This may include initiatives where database may be created prospectively without waiting for the updation of historical data.**

   iii. **Initiatives which allow for making elementary online transactions including payment for services.**

   iv. **Initiatives which require verification of information/data submitted online.**

   v. **Initiatives which require creation and integration of complex databases.**

> **b.** **Instead of implementing all such initiatives at one go, these should be implemented after prioritizing them on the basis of ease of implementation, which would generally follow the categories mentioned above in that order. However, suitable modifications in their prioritization may be made by organizations/departments on the basis of the needs of and likely impact on citizens.**
>
> **c.** **Respective Departments of Information Technology at the Union and State Government levels should coordinate between organizations and provide technical support if needed, in the task of identification and prioritisation.**

6.4 Business Process Re-engineering (BPR)

6.4.1 As mentioned in the earlier chapter, the processes and structures in government organizations generally owe their existence to and are regulated by statutes, rules, regulations etc. In India, the way government institutions conduct their business has evolved over time and is codified in different Statutes, Rules, Regulations and procedural manuals enacted or formulated over a wide span of time (with many processes even continuing from the colonial period). On the other hand, the scope and complexities of governance along with the government machinery have expanded over time. The advent of ICT has led to the recognition that these technologies provide a unique opportunity to redesign government processes not only to provide better services and reliable information to citizens but also to improve efficiency and effectiveness within government institutions.

6.4.2 The basic idea behind such re-engineering is to avail of the opportunity provided by ICT in transforming governmental processes and not just in modifying them. Michael Hammer and James Champy, who in their landmark book 'Reengineering the Corporation – A Manifesto for Business Revolution' (1993) introduced the concept of business process re-engineering, have the following to say in this regard:

> *"Re-engineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed."* [67]

6.4.3 The business process re-engineering model has been further developed by James Champy (see Box 6.1). Thus, first, there has to be conviction within the organization that process re-engineering will lead to greater efficiency and efficacy. However, this conviction should lead to the realization that ICT offers the opportunity to accomplish it now and not later.

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[67]Michael Hammer & James Champy, Reengineering the Corporation – A Manifesto for Business Revolution, Harper Business Essentials, 2003

Second, the rationale for each step involved in a process - both for activities which lie totally within the organization and those which involve outside entities – needs to be examined with the express aim of identifying the steps which can be simplified or eliminated altogether. Once this has been accomplished, the need for redesigning the processes ab initio immediately arises. In the case of government organizations, the needs of the citizens assume centre-stage.

6.4.4 Presently, in India, different government organizations, both at the Union and State Government levels, are engaged in carrying out a study of their business processes with the objective of re-designing them using ICT. These efforts are at various stages of planning/ completion. One of the earliest organizations to undertake such a study is the Income Tax Department which

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Box 6.1: 'X-engineering'

James Champy, one of the co-authors of the book 'Re-engineering the Corporation – A Manifesto for Business Revolution', has now put forward the idea of 'X-engineering' which, briefly, involves the following steps:

i. Step one: To get others within the organization to understand how technology– and particularly the Internet – can really drive the organization to a whole new level of efficiency. In other words, to get others within the organization to understand the potential of technology.

ii. Step two: To actually start to redesign all the processes that govern the way the organization does business. In doing so, these processes are to be examined from beginning to end - and from both inside and outside the organization - and decide what can be simplified or eliminated. 'At the core of X-engineering, then, is the need to understand the rationale for every step in a process.'

iii. Step three: To redesign the processes jointly with the entities with which the organization deals with.

iv. Step four: Internal re-engineering should allow the organization to do things which are really important to it. To achieve this, there is need for creating standards. This would include standardization of technology being used.

Source: Adapted from: 'Expert Voice: James Champy on Re-Engineering', 2002; http://www.cioinsight.com/c/a/Expert-Voices/Expert-Voice-James-Champy-on-ReEngineering/; (extracted on 24.09.2008)

Box 6.2: National Knowledge Commission on Government Process Re-engineering

Government process re-engineering before any computerization – at present the e-governance efforts are primarily based on computerizing age-old processes left behind by British Raj and compounded by a plethora of new layers and silos by Indian bureaucracy, each working within departmental boundaries and pet-priorities. As a result, we are computerizing cumbersome processes and hence not commensurately benefiting from it. Simply digitizing the existing government processes merely adds an additional layer of expense, complexity, delay and confusion. In our judgment, now is a unique opportunity in the history of India to leave behind the British Raj and re-engineer and modernize Government processes to build a new India of the 21st century. Hence, it is essential that we first redesign the government processes keeping the citizen at the centre, providing hassle-free enablement of citizens, businesses, producers and consumers, replacing the old mistrust and control regime from the British Raj. This redesigning of government processes will drastically reduce the numbers and duration of successive steps required to obtain services. It will also provide traceable records; enable enforcement of individual performance, accountability, efficiency, productivity as well as transparency of policies and processes.

Source: http://www.knowledgecommission.gov.in/downloads/recommendations/ eGovernanceLetterPM.pdf

created a separate Directorate of Business Process Re-engineering (BPR) for the purpose in May 2006. An external consultant was appointed through a global tendering process for carrying out the BPR Project. The project commenced in May 2007 and was completed with the finalization of 18 reports within a time frame of eight months (see Box 6.3). To begin with, awareness was created about the need for such an exercise through meetings with employees as well as their associations/unions. This was aimed at developing a sense of ownership within the workforce. In the end, more than 800 departmental personnel from Chief Commissioners to Group 'C' employees participated in the exercise. Further, customer views were ascertained through specifically designed questionnaires administered to different categories of taxpayers and consultants. The study included an 'As-is' study phase aimed at mapping of existing processes followed by a 'gap analysis' to identify problem areas and bottlenecks. These, along with best global practices in the field of tax administration, were incorporated in re-designing the processes and suggesting 'To-be' models. Such 'To-be' models and recommendations have been prepared in respect of the following:[68]

- Bulk Operations Division including Regional Processing Centre

- Facilitation Centres and Receipt and Despatch Units

- Changes to PAN/TAN Issuance and Management

- Assessee Tax Credit Accounting System

Box 6.3: Business Process Re-engineering Project of Income Tax Department

The Union Finance Minister announced in his Budget Speech of 2006 about business process reengineering (BPR) in the Income Tax Department. A Directorate of BPR was created within the Department in May 2006 which launched this exercise with the following objectives:

- Re-evaluation of all current processes to remove redundant and obsolete processes and redesign/create new processes

- Identification of stakeholder's for information, convenience of filing tax returns & documents, payment of taxes and speedier issue of refunds and the ways in which the organization can meet them

- Increase alignment between people, processes and technology

- Enhance employee involvement, skills and organizational creativity

The study has been completed with finalization of 18 reports which focused on the key strategic areas of tax administration i.e. pre-assessment, assessment, post-assessment and appellate/dispute avoidance as well as key enabling processes such as information technology, human resources, infrastructure etc. This project was undertaken in two phases: an 'As-is' study phase and a 'To-be' Model stage. It was conducted at 15 locations which included metros (Delhi, Mumbai, Kolkata), mid-size cities (Hyderabad, Nagpur, Patna, Bhopal, Mysore, Lucknow, Guwahati, Ludhiana and Shillong) and moffusil areas (Hajipur, Mandya, Itarsi).

The BPR exercise has come up with, inter alia, a major recommendation of functionally segregating the working of the Department across two broad lines – a Bulk Operations Division (BOD), handling routine and repetitive activities not requiring the use of discretion and amenable to large scale automation and a Compliance Operations Division (COD) to carry out specialized activities. Currently, the same set of people is doing both these jobs. CBDT has accepted a majority of the recommendations.

Source: http://www.incometaxindia.gov.in/archive/NoteonBPR_ 26082008.pdf

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[68]Source: http://www.incometaxindia.gov.in/archive/NoteonBPR_ 26082008.pdf

- Core Processes Redesign – Assessment

- Core Processes Redesign – Post Assessment

- Core Processes Redesign – Appellate

- Risk Assessment System

- Knowledge Management System

- Record Management System

- Human Resources and Infrastructure

- Grievance Redressal Management

- Change Management

6.4.5 The lessons which emerge from this project are three-fold:

i.   the workforce has to believe in the benefits of business process re-engineering through ICT;

ii.   there is no shortcut to step-by-step examination of all business processes resulting in re-designing of these processes; and

iii.   each government organisation will have its own specific set of design outcomes which would require close interaction between technological solution providers and the domain experts.

6.4.6 As mentioned earlier, identifying changes in the legal and regulatory framework lies at the heart of business process re-engineering in government organizations, as many of the governmental processes, including the steps involved in them, arise out of the provisions contained in different legislations, rules, regulations and procedural manuals/codes. Process re-engineering in the sense mentioned above would require reformulation of such provisions. This was visualized by the Standing Committee on Information Technology (2005-06, Fourteenth Lok Sabha) in its 22nd Report entitled 'Implementation of e-Governance Projects'(December 2005). The Committee took note of the evidence given by a representative of the National Institute of Smart Governance (NISG):

> *"As regards 'process', in most of the departments, we are governed by more than hundred years' old acts and rules. These are driving inefficiency. If you put the same thing in the computers, a hundred-year-old process, it will get inefficiency in a very efficient way. We will be enlarging that inefficiency. We have to change the process behind this. A lot of legislative effort at the highest level is also needed in this process area…"* [69]

[69]Paragraph 106; "Implementation of e-Governance Projects"; Twenty-Second Report of the Standing Committee on Information Technology (2005-2006), Fourteenth Lok Sabha, dated December 2005.

6.4.7 The Committee engaged in further discussions with various IT Service and Solution providers and recommended the following:

> *"The Committee observe that the age-old statutes and regulations governing the manual process will not be suitable for governing the electronic processes which require altogether a different set of legal framework and guidelines to make the e-Governance successful. They are of the strong opinion that the legal and regulatory changes in the processes would be able to deliver the services more efficiently and effectively and remove a lot of other hurdles of manual regulatory mechanism. The Committee, therefore, recommend that a comprehensive review of all relevant statutes and regulations should urgently be done to bring about suitable changes therein so as to make them compatible with the cyber age technology enabling the citizens to obtain maximum advantage of e-Governance projects. They further recommend that possibility of bringing a new legislative mechanism may also be explored, if need be, to ensure that the implementation of e-Governance projects delivers the citizen-centric services in an effective and successful manner.[70]*

6.4.8 In response, the Union Department of Information Technology stated in their Action Taken Notes that they along with DAR&PG will jointly examine and review relevant statutes and regulations and the possibility of a new legislation in order that the citizens obtain maximum advantage from NeGP. However, the Committee felt that no concrete steps have been taken regarding a comprehensive review of all relevant statutes and regulations governing manual processes specifically when a different set of legal framework and guidelines may be required for the purpose of e-Governance. In their Thirty Seventh Report (December 2006), the Committee stated the following while expressing their concern:

> *"In the changing scenario, it calls for immediate attention of the Government. Keeping in view the urgency involved in reviewing the relevant statutes and regulations, the Committee desire that the matter be accorded top priority and pursued to its logical conclusion…" [71]*

6.4.9 The Commission agrees with the views of the Standing Committee. The task involving complete re-engineering of business processes in government is in itself stupendous. Without providing the legal structure and mandate, it would be difficult to achieve it within any realistic time-frame. In fact, in a later chapter, the Commission has recommended that the whole framework of e-Governance should be given a statutory backing. Even the US legislation has provided this framework to government entities. Thus, Section 202 of Title

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[70]Ibid; Recommendation 54.
[71]Paragraph 35; Thirty-Seventh Report on Action Taken by Government on the Recommendations/Observations of the Committee contained in their Twenty-Second Report on "Implementation of e-Governance Projects"; December 2006

II of the E-Government Act of 2002 prescribes 'Federal Agency Responsibilities' in the following manner:

"a) *The head of each agency shall be responsible for:*

1) *Complying with the requirements of this Act (including the amendments made by this Act), the related information resource management policies and guidance established by the Director of the Office of Management and Budget, and the related information technology standards promulgated by the Secretary of Commerce;*

2) *Ensuring that the information resource management policies and guidance established under this Act by the Director, and the related information technology standards promulgated by the Secretary of Commerce are communicated promptly and effectively to all relevant officials within their agency; and*

3) *Supporting the efforts of the Director and the Administration of the General Services Administration to develop, maintain, and promote an integrated Internet-based system of delivering Federal Government Information and services to the public under Section 204.*

b) *Performance Integration*

1) *Agencies shall develop performance measures that demonstrate how electronic government enables progress toward agency objectives, strategic goals, and statutory mandates.*

2) *In measuring performance under this section, agencies shall rely on existing data collections to the extent practicable.*

3) *Areas of performance measurement that agencies should consider include-*

   a. *Customer service;*

   b. *Agency productivity; and*

> c.   Adoption of innovative information technology, including the appropriate use of commercial best practices.
>
> 4)   Agencies shall link their performance goals, as appropriate to key groups, including citizens, businesses, and other governments, and to internal Federal Government operations.
>
> 5)   As appropriate, agencies shall work collectively in linking their performance goals to groups identified under paragraph (4) and shall use information technology in delivering Government information and services to those groups.
>
> c)   *Avoiding Diminished Access:* When promulgating policies and implementing programs regarding the provision of Government information and services over the Internet, agency heads shall consider the impact on persons without access to the Internet, and shall, to the extent practicable-
>
> 1)   Ensure that the availability of Government information and services has not been diminished for individuals who lack access to the Internet; and
>
> 2)   Pursue alternate modes of delivery that make Government information and services more accessible to individuals who do not own computers or lack access to the Internet.
>
> d)   *Accessibility to People with Disabilities:* All actions taken by Federal departments and agencies under this Act shall be in compliance with section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d).
>
> e)   *Sponsored Activities:* Agencies shall sponsor activities that use information technology to engage the public in the development and implementation of policies and programs.
>
> ..."

6.4.10 In effect, by providing a clear-cut mandate and prescribing the deliverables, the US law has ensured that business process re-engineering in government entities gets the attention it deserves.

6.4.11 Several experts have underlined the importance of government processes re-engineering:

> *"re-engineering administrative processes and re-organization of information ownership is the most important step for implementing an e-government application. Government entities would be required to implement substantive reforms in organizational structures, initiate a change in culture and mindsets, train and improve skills of its people and put in place appropriate supporting ICT infrastructure to enable online processes that are timely and efficient for both the government entity and the entities it interacts with. Thus, the business processes would in effect be changed fundamentally to allow the efficiency and transparency gains associated with e-government."*[72]

6.4.12 The Commission has considered the issues involved in re-engineering of business processes in government entities. It is of the view that for every function a government entity performs and every service or information it is required to provide, there should be a step-by-step analysis of each process involved on the anvil of rationality and simplicity. Such analysis should incorporate the viewpoints of all stakeholders. After identifying steps which are redundant or which require simplification, the provisions of the law, rule, regulation, instruction, code, manual etc. which form the basis of such steps should also be identified. This should be followed by prioritizing the functions of the government entity. Following this exercise, processes should be re-designed using the tools provided by Information and Communications Technology keeping in mind the objectives of speeding up decision making, maximizing outputs, minimizing costs, improving service delivery and quality of information to be provided etc. This should be accompanied by re-formulation of the legal/regulatory framework which underly governmental processes.

6.4.13 The wholehearted participation of government officials within an organization cannot be overemphasized while re-engineering business processes as in the end, the technological solutions would have to be put to effective use only by them. In fact, each government organization would be required to constitute a separate team drawing from expertise available within the organization at various levels of functioning.

6.4.14 Once the business processes have been re-engineered and the technological solutions developed, these should be tested in real life situations to assess their functioning. e-Governance projects should not be implemented on a large scale in the very first instance. The pilot project should be designed to work in the most difficult circumstances so that the bottlenecks and shortcomings are identified during the pilot stage ifself which could be redressed before any effort to upscale the project is taken. However, there should be flexibility

[72]Subhash Bhatnagar; 'e-Government – From Vision to Implementation'; Sage Publications, 2004

within the whole initiative to adjust to problems thrown up at the pilot stage and a two-way feedback process should be ensured between the BPR exercise and the pilot stage with the BPR leading to the pilot stage and pilot stage leading to further changes in the BPR. The whole exercise should focus on forms, processes, structures and laws regulations.

6.4.15 To sum up, the Commission feels that the entire gamut of activities under Business Process Re-engineering could be classified into the following four heads:

a.   Clear assessment of citizens needs.

b.   Analysis of the existing processes and identification of the weaknesses and redundancies.

c.   Redesigning of processes and the required changes to be made in the statues and regulations.

d.   Bringing about changes – in forms, processes, structures and statutes.

6.4.16 Recommendations

a.   For every function a government organisation performs and every service or information it is required to provide, there should be a step-by-step analysis of each process to ensure its rationality and simplicity.

b.   Such analysis should incorporate the viewpoints of all stakeholders, while maintaining the citizen-centricity of the exercise.

c.   After identifying steps which are redundant or which require simplification, and which are adaptable to e-Governance, the provisions of the law, rules, regulations, instructions, codes, manuals etc. which form their basis should also be identified.

d.   Following this exercise, governmental forms, processes and structures should be re-designed to make them adaptable to e-Governance, backed by procedural, institutional and legal changes.

6.5 Capacity Building and Creating Awareness

6.5.1 The success of an e-Governance project would depend on building human capacities in terms of necessary knowledge and skills to conceptualize, initiate, implement and sustain e-Governance initiatives across government as also on the ultimate use by citizens

of the facilities created. The 'India: e-Readiness Assessment Report 2006' has prepared an e-readiness status report for the States using the three major components of 'environment, readiness and usage'. In this Report, the general e-readiness of the Indian States along with their status after allowing for a weightage of 10% for size and population has been presented as follows (Table 6.1):

Table 6.1: Comparison of e-Readiness Index		
e-Readiness	e-Readiness_mod (with size friction points)	Levels
Chandigarh Delhi Haryana Karnataka Punjab Andhra Pradesh Kerala Tamil Nadu	Karnataka Andhra Pradesh Chandigarh Haryana Delhi Maharashtra Tamil Nadu Uttar Pradesh	L1
Maharashtra Gujarat Uttar Pradesh Goa	Punjab Kerala Rajasthan Gujarat	L2
Rajasthan West Bengal Himachal Pradesh Chhattisgarh Jharkhand	West Bengal Goa Chhattisgarh Himachal Pradesh Madhya Pradesh Jharkhand	L3
Mizoram Orissa Puducherry Madhya Pradesh Sikkim Meghalaya Uttarakhand	Orissa Mizoram Puducherry Sikkim Uttarakhand Meghalaya Assam	L4

Table 6.1: Comparison of e-Readiness Index *Contd.*		
e-Readiness	e-Readiness_mod (with size friction points)	Levels
Assam Nagaland Andaman & Nicobar Island Lakshadweep	Nagaland Bihar Andaman & Nicobar Island Lakshadweep	L5
Bihar Tripura Manipur Daman & Diu Jammu & Kashmir Dadra & Nagar Haveli Arunachal Pradesh	Jammu & Kashmir Tripura Manipur Daman & Diu Arunachal Pradesh Dadra & Nagar Haveli	L6

(L1 indicates higher state of e-readiness)

6.5.2 Clearly, the States that are lagging behind outnumber those that have achieved higher levels of readiness. This implies that the speed and success in implementation of various projects will vary significantly across States. An important element for improving the e-readiness of any State would be the capacity building of its employees in general and those dealing with e-Governance initiatives, in particular.

6.5.3 As stated earlier, e-Governance represents a paradigm shift in the manner of delivery of government services. This shift requires considerable enhancement in managerial and technical capabilities of government organizations as well as of government servants. Above all, it requires a basic change in the outlook and functioning of government, so that it becomes citizen-centric rather than process-centric. This would necessarily involve a comprehensive capacity building exercise.

6.5.4 The Commission in its Tenth Report has placed emphasis on capacity building of civil servants at all levels through compulsory induction and mid-career trainings. The Commission has earlier stated that a major part of e-Governance is 'governance reforms' and only a small part is 'ICT'. Therefore, capacity building efforts should also be proportionately allocated. e-Governance reforms require a wide range of capabilities – conceptualization of reforms, policy analysis, preparing road maps, alternatives analysis, prioritization, application of technology, project implementation etc. These capabilities can be classified into four broad categories:

    a)   Conceptual

    b)   Subject matter related

    c)   Technological

    d)   Project management.

6.5.5 Each one of these categories has a hierarchy of skills/competencies/capabilities – ranging from operational capabilities to managerial capabilities. The capabilities required can be presented in the form of a matrix, as shown in Table 6.2

Table 6.2: The Capabilities Required for e-Governance				
	Conceptual	**Subject Matter**	**Technological**	**Project Implementation**
Managerial ⬆ / Operational ⬇	• Vision of the organization • Understanding of external environment • Constraints • Appreciation of citizens' need • Assessment of internal strength	• Knowledge of laws • Knowledge of rules and regulations • Appreciation of processes • Understanding of forms	• Broad appreciation of technology • Strengths and weaknesses of a technology • Capability to modify technology • Operational details of technology	• Project formulation • Project management • Change management • Resource management • Control management • Monitoring and supervision

6.5.6 It may not generally be feasible to develop all the required competencies within an organization. The technological capabilities in the field of ICT advance rapidly often rendering existing technology obsolete. It is therefore advisable that these capabilities are outsourced. Very large organizations may develop some in-house technological capabilities, but even they would, on occasions, have to take recourse to outsourcing. However, conceptualisation and subject matter knowledge are best developed among the employees of an organization. Similarly, it is advisable to develop the project management capabilities within an organization as it leads to ownership of the project and hence better implementation.

6.5.7 Thus, with the matrix given in Table 6.2 as the background, each government organization must carry out a capacity assessment and on that basis the personnel of the organization should be trained. Each organization should prepare a roadmap for enhancing the capabilities of its individuals as well as to develop organizational capabilities.

6.5.8 It needs to be clarified that there is a popular but erroneous misconception that 'Capacity Building' relates only to training and imparting new skills to employees and improving their existing skills. In fact, 'Capacity Building' is much more than training, and has two major components, namely:

- Individual development

- Organizational development.

6.5.9 'Individual Development' involves the development of human resources including enhancement of an individual's knowledge, skills and access to information which enables him/her to improve performance and that of the organization. 'Organizational Development', on the other hand, is about enabling an organization to respond to two major challenges that it has to confront:

- External adaptation and survival

- Internal integration.

6.5.10 External adaptation and survival has to do with how the organization copes with its constantly changing external environment. This involves addressing the issues of

- mission, strategies and goals

- means to achieve the goals which includes selection of appropriate management structures, processes, procedures, systems of incentives and rewards etc.

- measurement, which involves establishing appropriate key result areas or criteria to determine how well individuals and teams are accomplishing their goals.

6.5.11 Internal integration is about establishing harmonious and effective working relationships in the organization, which involves identifying means of communication to develop shared values, power and status of groups and individuals, and rewards and punishment for encouraging desirable behaviour and discouraging undesirable behaviour.

6.5.12 The task of building organizational capacities is more complex and demanding than the requirement of skills upgradation of individuals partly on account of the hitherto complete neglect of this aspect and partly due to more complex initiatives required to achieve this goal. Organizational capacity building is, to a large extent, dependent on formulation of the appropriate recruitment and personnel policies and finding the right mix of 'in-house' provision of services and out-sourcing of functions. Organisational capacity building would include designing appropriate structures within the organisation, re-engineering internal processes, delegation of authority and responsibility, creation of enabling legal framework, developing management information systems, institutionalising reward and punishment systems and adopting sound human resource management practices.

6.5.13 Organisational capacity building should not be taken to mean that the organisation acquires all the skills and knowledge required to perform its tasks. With globalisation and liberalisation, a large number of agencies have developed certain specialised skills. Prudence demands that any organisation should have the option of tapping such skills rather than spending a large amount of resources in acquiring such skills themselves. Evolving partnerships, developing networks and outsourcing functions are all methods of enhancing the capability of an organisation.

6.5.14 The corporate sector has made efficient use of ICT tools in their internal management processes. Sharing experiences with them, having exchange programmes, seeking their expertise etc. could help in enhancing the capabilities of government organization. Apart from the institutional arrangements made at the State Government level for capacity building among Government officers, there is need to take advantage of competencies available with private institutions, and communication experts for augmenting the efforts towards capacity building of both institutions and individuals in the government. Further, government servants should be motivated to innovate and use creative methodology.

6.5.15 DIT has taken the initiative to prepare Capacity Building Roadmaps (CBRMs) for all the States which clearly identify the mechanisms/institutions, capacity building and training needs and the means of fulfilling them along with the financial requirements. The Capacity Building Guidelines for developing institutional mechanism was prepared by DIT in consultation with the Planning Commission and was issued to all the State Governments and UTs. These guidelines take cognizance of the fact that States are at different levels of readiness for e-Governance and have different levels of aspirations. Capacity gaps are therefore not viewed in an absolute context but relative to the goals set out by the respective State Government for itself. The capacity gaps that need to be addressed include engaging experts, developing skills and imparting training. The Capacity Building Scheme is aimed

at addressing the above challenges in a holistic manner including support for creation of State e-Governance Mission Teams (SeMT), and Project e-Governance Mission Teams (PeMT).[73] The guidelines identify three specific capacity gaps:[74]

a.   Lack of Personnel with appropriate background and aptitude

b.   Inadequate skills sets of personnel already deployed

c.   Lack of appropriate institutional framework to handle the programme.

6.5.16 In these guidelines, the approach towards capacity building at the State level is proposed as follows:[75]

- The State Government should designate a State Nodal Organisation, which would be responsible for initiating and implementing capacity building. This State Nodal Organisation would be providing services like selections, contracting of external agencies/persons/services and administrative support to SeMT.

- The State Government should release the funds to this designated State Nodal Organisation.

- The State Government should have the option of either designating an existing agency or setting up a new agency as a State Nodal Organisation. If the State Government so decides, it can directly undertake capacity building. However, this may entail operational bottlenecks and should, ordinarily, not be resorted to.

- If the State decides to form a new agency for the purpose, the same needs to be registered, either as a company or as a society. (In such a case, the State Government as an interim measure may transfer the funds to an appropriate body and ensure that this body would transfer the funds to the new/designated State Nodal Organisation after it gets registered as a Company/Society).

- If the State decides to designate an existing agency as a State Nodal Organisation, the following issues need to be kept in view:

    a.   It should be a State Government owned/controlled agency working in the area of Information Technology and registered as a company/society.

    b.   The company/society should be a "going" concern in a healthy financial condition and the net-worth of the company/society should be positive.

[73]http://www.mit.gov.in/default.aspx?id=851
[74]http://www.mit.gov.in/download/Capacity%20Building%20Guidelines-21st%20March,%2005.pdf (extracted on 07.08.2008)
[75]ibid

c.   e-Governance and the capacity building activity should find necessary prominence within the organization and not get relegated to insignificance by other activities.

d.   The agency should have its own infrastructure and logistics support.

e.   It is possible that the designated agency for capacity building is/would also be involved in the implementation of e-Governance projects. Therefore, there is a potential conflict of interest in the two roles. As a part of SeMT, the role would be to monitor and oversee the project implementation and as an implementation agency it would be involved in actual deliverables. In such a situation, due care would have to be taken to ensure that the SeMT members, though technically working for a designated agency, are not involved in e-Governance implementation work in any manner.

6.5.17 Accordingly, it has been proposed that capacity building by the State Governments should be undertaken through an appropriate combination of the following two options:

a.   From sources present within the Government or PSUs or any State agency or central agency, with the required background and experience. In such cases, where required, posts may be created in the concerned department or State Nodal Organisations identified as a vehicle for setting up the capacity and personnel to be taken on deputation. For domain expertise in PeMT, re-employment of retired personnel could also be considered.

b.   From outside the Government set-up - by engaging consulting agencies having requisite skill sets. While doing so, the State would follow an appropriate selection process. Alternatively, the State could avail of the advice and assistance of NISG to undertake this task on their behalf. However, such support would be under the overall direction of the State Government. Additionally, if considered necessary and with the concurrence of the Planning Commission & DIT, contracts could be entered into with individuals.

6.5.18 The Commission would like to re-emphasise the importance of building in-house capacity in government departments for the implementation of e-Governance projects. The first step in this regard would be to make an assessment of present capacity levels followed by preparation of a road map for enhancing these capabilities both in respect of employees and organizations. Most States have well-established Administrative Training Institutes (ATIs), with adequate infrastructure for conducting training programmes for Government officials.

However, adequate focus is not being given to e-Governance as an important subject in these institutions. Lack of experienced faculty in e-Governance is one of the main reasons. It is possible and necessary to strengthen these institutions in the area of e-Governance. This needs to be redressed by suitably strengthening ATIs in this area.

6.5.19 The Commission in its Tenth Report entitled 'Refurbishing of Personnel Administration' has recommended that there should be mandatory induction training for all government servants. The Commission would like to emphasise that all these training programmes should have an appropriately designed ICT module.

6.5.20 Such institutional approaches apart, there is also need for learning from the successful implementation of e-Governance programmes. For example, the *Bhoomi* project in Karnataka showed how a well-defined training plan made a major contribution to project success. Under a well-planned and well executed training programme, more than 10,000 government officials and over 700 village officials were trained on data preparation and validation process extending to a period of 60 weeks. Similarly, the experience of Andhra Pradesh shows that creation of adequate number of e-Champions by taking senior officers through a 10-week programme on e-Government is an important step in building a corpus of trained government officers who can implement the e-Governance vision embodied in the NeGP.

6.5.21 Along with capacity building efforts in Government, there is also a need to make the people aware about the benefits of e-Governance and to make them more conversant with technological interfaces introduced through e-Governance projects. This mobilization programme should be able to use resources like internet, television, radio including community radio and the local language press. The contents of the communications for generating such awareness should be tailored to suit local environments. This would take e-Governance to the interior parts of the country and will be able to provide public services to important sectors such as health, education, agriculture, environment and business related services. The Commission, in its earlier Reports, has also focused on generating awareness among the people, especially the rural population for successful implementation of programmes. Thus, in its Second Report entitled 'Unlocking Human Capital' (on the implementation of NREGA) it had recommended (paragraph 5.2.1.6):

    a.   *Awareness generation programmes should be taken up by all State Governments. The publicity and guidance material should be available in local languages. The effectiveness of these programmes should be measured through independent sample surveys.*

b.   *Intensive use of All India Radio and Doordarshan should be made in local languages as is done in the case of Sarva Shiksha Abhiyan and National Rural Health Mission.*

The Commission is of the view that a similar approach may be adopted in creating awareness among the people with regard to e-Governance initiatives.

6.5.22 Recommendations

a.   **Capacity building efforts must attend to both the organizational capacity building as also the professional and skills upgradation of individuals associated with the implementation of e-Governance projects.**

b.   **Each government organization must conduct a capacity assessment which should form the basis for training their personnel. Such capacity assessment may be carried out by the State Department of Information Technology in case of State Governments, and the Union Department of Information Technology in the Centre. Organisations should prepare a roadmap for enhancing the capabilities of both their employees and the organization.**

c.   **A network of training institutions needs to be created in the States with the Administrative Training Institutes at the apex. The Administrative Training Institutes in various States should take up capacity building programmes in e-Governance, by establishing strong e-Governance wings. ATIs need to be strengthened under the NeGP.**

d.   **State Governments should operationalise the Capacity Building Roadmap (CBRMs), under the overall guidance and support of the DIT, Government of India.**

e.   **Lessons learnt from previous successful e-Governance initiatives should be incorporated in training programmes.**

f.   **The recommendations made by the Commission in its Second Report entitled 'Unlocking Human Capital' in paragraph (5.2.1.6) should be adopted for creating awareness among people with regard to e-Governance initiatives.**

6.6 Developing Technological Solutions

6.6.1 Adopting/Developing the Right Technological Solution

6.6.1.1 Modern ICT helps in the governance process by providing a spectrum of technological solutions. The rapid strides which have been made in development of Information and Communications Technology in recent years have made a wide variety of technological options available. Some of these novel technologies are shown in Box 6.5.

6.6.1.2 However, it would not be possible to prescribe a definite technology for any specific government function as firstly, technology changes rapidly and secondly, different technologies may be required under different circumstances. Therefore, once the business process re-engineering has been decided, the next logical step would be to design the technological interface. In doing so, it would be advisable, that the organizations adopt the best possible technology, subject to the standards, resource limitation and needs of the project. In-house competencies would have to be developed which would be able to demand technological solutions to match the organisation's needs and not go for off-the-shelf solutions. It needs to be recognized that government organizations in most cases would need solutions which are substantially different from those needed by the private sector. Ideally the technological solution should ensure the following:

    i.   Accessibility (at the citizens' doorsteps)

    ii.   user-friendly interface

    iii.   cost-effectiveness (e.g. making use of open source software)

    iv.   Efficiency

    v.   Flexibility

    vi.   Scalability

    vii.   Sustainability

    viii. Reliability and security.

6.6.2 Standards and Inter-operability

6.6.2.1 As mentioned in an earlier chapter, different government organizations at Union and State levels have, in the past, implemented several e-Governance projects with varying

degrees of success. The main driving force behind such initiatives has been either providing better services to the common man or simplifying internal governmental processes to increase their efficiency. Different organizations have adopted different technological platforms and arrived at their own solutions. Although many of the initiatives address concerns which are common across States, or across different departments or organisations, solutions have generally been developed in isolation with very little commonality or coordination. This has led to duplication of efforts on the one hand and difficulty in networking among organizations on the other. There is need to address such divergences so that successes are replicated across States and failures are eliminated. This calls for formulation of norms for standardization and inter-operability at the national level.

6.6.2.2 Efforts are already underway to arrive at such standards at the national level. An institutional mechanism has been put in place by the Department of Information Technology (DIT) with representation from Government, BIS, subject matter experts in Industry, domain experts, academia, NASSCOM, etc. The National Informatics Centre (NIC), a constituent of DIT, is steering and managing the standardization activity.[76]

6.6.2.3 The first task in this regard is the creation of a set of standards and policies, which would describe the way in which different organizations would interact with each other. This is generally known as an Inter-operability Framework. The purpose of this Inter-operability Framework is to facilitate inter-operability with other systems as necessary, while at the same time, providing flexibility in the choice of hardware and systems and application software used to implement solutions. The Inter-operability Framework normally comprises a set of policies, standards and guidelines pertaining to maintenance and exchange of data technological protocols etc. Some of the domains which are being addressed presently are:

- Information Access, Presentation & Archival

- Data Integration

- Data Interchange

- Meta Data

- Network

- Security

6.6.2.4 The second task is to create an 'Enterprise Architecture Framework' which would identify opportunities to simplify processes and unify work across the agencies and within

[76]Source: The details of activities undertaken have been provided by NeGP PMU.

the lines of business of the Union and State Governments. The outcome of this effort will be a more citizen-centered, customer-focused government that maximizes technology investments to better achieve project outcomes.

6.6.2.4.1 *"Enterprise Architecture (EA) is the process of translating business vision and strategy into effective enterprise change by creating, communicating and improving the key principles and models that describe the enterprise's future state and enable its evolution. The scope of the enterprise architecture includes the people, processes, information and technology of the enterprise, and their relationships to one another and to the external environment. Enterprise architects compose holistic solutions that address the business challenges of the enterprise and support the governance needed to implement them."*[77]

6.6.2.4.2 EA is a management engineering discipline presenting a comprehensive view of the enterprise, including strategic planning, organizational development, relationship management, business process improvement, information and knowledge management, and operations. The Architecture of an organization consists of models, diagrams, tables, and narrative, which together translate the complexities of the agency into simplified yet meaningful representations of how the agency operates (and intends to operate). Such operations are described in logical terms (e.g., business processes, rules, information needs and flows, users, locations) and technical terms (e.g., hardware, software, data, communications, and security standards and protocols). EA provides these perspectives both for the enterprise's current or "as is" environment and for its target or "to be" environment, as well as a sequencing plan that charts the journey between the two.[78]

6.6.2.4.3 A well constructed Enterprise Architecture of an organization helps in understanding the linkage between vision, the mission and the functions of an organization. This exercise captures the inter-dependencies between the different parts of an organization. It helps in appreciation of the linkage between the objectives and activities of an organisation and the relationships between the organizational processes and the technology. In the end,

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Box 6.4: Common Standards

Common Standards–At present various State Governments are doing their own thing to selectively computerize their processes and provide e-Governance. Many of these programmes are vendor driven and not scalable. It is critical to develop and enforce citizen/business entitlement standards uniformly over all states and central ministries and functions, spanning from voting, taxes, certificates, financial products, law-enforcement and welfare for individuals, properties of land, institutions, businesses etc. These standards should not be hardware-centric and vendor dependent but should enable easy participation by any State, Panchayat Institution, business, NGO or citizen, whenever they decide. These standards, templates and data formats must be designed carefully by teams of experts drawn from government, IT companies, academia, R & D institutions and users/stakeholders who understand latest trends, technology, software, user interfaces and interoperability requirements. We recommend these new standards be followed by all state governments. At the same time, we are conscious of the need to incorporate some of the standards followed by State Governments.

Source: National Knowledge Commission

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[77]Gartner G00141795: Gartner Defines the Term "Enterprise Architecture", Anne Lapkin, July 2006, extracted from: http://www.e.govt.nz/standards/fea
[78]http://www.cms.hhs.gov/enterprisearchitecture/

it provides an overall view of the complexities involved in the organizational processes. Thus, EA is not an end in itself but a means to optimize the contribution of different parts of the organisation. It also serves as an ideal platform for initiating the business process re-engineering exercise. The overall objective of having such an architecture is to have better decision making.

6.6.2.4.4 For the past two decades, Enterprise Architecture (EA) has been implemented successfully, by several large private sector organizations. But, in recent times, many government organizations have sought to develop frameworks, models, and reference architectures, for implementing and managing e-government services, and information and technology resources, in the form of enterprise architectures. For example, The Clinger-Cohen Act (USA) requires that every Federal agency develop an Enterprise Architecture.

6.6.2.4.5 The challenges faced by the Union, State and local government agencies in aligning and organizing their processes and integrating their e-government services are numerous, especially in a scenario where there are no fixed, cross-organizational procedures. Enterprise architectures provide a vital means to a desired end – successful delivery of e-Governance applications, ensuring inter-operability and avoiding duplication of efforts.

6.6.2.4.6 In the Indian context, e-Governance applications have already been introduced in many government agencies. As these applications evolve and become more sophisticated, resulting in fundamental process transformation, and as they extend beyond a single government agency, their success will become more dependent on whether they are defined and introduced within the context of enterprise architectures. At present, reforms are not based on a systematic enterprise architecture. One reason for this state of affairs has been that top managers in government organisations have not traditionally understood the purpose and value of enterprise architectures, thus not giving them the priority attention they deserve and require.

6.6.2.4.7 DIT had constituted a Working Group which has already given its report and presently an agency is being identified which would be responsible for:

- Verification of the completeness of the EA Framework with respect to its applicability at various levels and for different stakeholders.

- Detailing of the EA Framework components with respect to models and other artifacts in each component.

- EA Framework implementation methodology with one pilot implementation at the Union and State levels.

6.6.2.5 The next task involves formulating the standards for 'Network and Security'. This task has been assigned to the Standardisation Testing and Quality Certification (STQC) Directorate under DIT. Under the institutional mechanism for Standardization, an Expert Committee on "Meta Data & Data Standard" has been created which has prepared the following two draft standards: (a) Person Identification Codification and (b) Land Region Codification. Apart from this, a "Standards Procedure Document" is also being prepared which would describe the scope of standards formulation process, principles of standards, roles & responsibilities of stakeholders in the institutional mechanism and various stages of standards formulation. The Working Groups, Task Forces, Expert Committees etc would follow this procedure for standards formulation.

6.6.2.6 Use of data by various stakeholders would require creation of identity and access protocols and standards which would be applicable across the country. A draft Policy document on Identity and Access Management has already been prepared in this regard.

6.6.2.7 In order to facilitate standards based inter-operability and integration to existing and new e-Governance applications, a National e-Governance Service Delivery Gateway (NSDG), a middleware infrastructure, has been created to act as a standards-based routing and a message switch for delinking the back-end departments from the front-end service access providers. The system has now been installed at the NIC Data Center, Hyderabad and is ready for integration with various e-Governance projects at the Union / State levels. Currently, the planning and procurement for the Disaster Recovery site is in progress.

6.6.2.8 At the centre of all e-Governance activities is the citizen. Therefore, on account of the diversity in languages across the country, e-Governance initiatives have to be built on a platform which supports interface in local languages in order to reach out to those living in rural areas. DIT is already preparing 'Localization and Language Technology Standards' which have the following deliverables:

- Draft Character Encoding Standard for Indian Languages

- Draft Best Practices/Guidelines for Indian Languages Font

- Draft Report on Keyboard Layout

- Browser support Best Practices/Guidelines

- Lexicon Building & Contents Creation Guidelines

6.6.2.9 The success of various citizen-centric initiatives, especially those focusing on rural areas would depend on the successful and effective formulation of these localization standards.

6.6.2.10 Recommendation

   a.   **There is a need to:**

      i.   **Develop a national e-Governance 'enterprise architecture' framework as has been done in some countries.**

      ii.   **Promote the use of 'enterprise architecture' in the successful implementation of e-Governance initiatives; this would require building capacity of top level managers in all government organizations.**

6.7 Implementation

e-Governance projects could be of a wide variety based on their objectives, technological requirements, dependence on databases, requirement of institutional support etc. They may range from simple projects aimed at providing access to information to complex ones which require extensive business process re-engineering and integration of databases across organizations.

6.7.1 Implementation of Simple e-Governance Projects

6.7.1.1 The first and perhaps the easiest activity which comes within the ambit of e-Governance is information dissemination using modern information communication technology. This is usually done by all organizations through a website on their own. This activity received a fillip with the passage of the Right to Information Act,

Box 6.5: Some Novel Technological Solutions

(1)GIS for e-Governance and Grass-root level Planning:

Planning for sustainable development requires grass-root level decision-making. To develop such capacities, there is need to integrate spatial data obtained through use of Geographic Information System (GIS) with other databases. In this regard, NIC has already set up a 'National GIS Framework' under the 'Spatial Data Infrastructure for Multi-Layer GIS for Planning' project, which is supported by the Planning Commission. The Department of Space and ISRO have a nodal role in creating the satellite systems required for widespread application of GIS.

(2) Hand-Held Devices in e-Governance Projects for Improving Accessibility:

Various development programmes such as the the National Rural Employment Guarantee Scheme, National Rural Health Mission, Sarva Siksha Abhiyan etc are oriented towards the rural areas. For proper management and monitoring of these programmes, mobile hand-held devices could prove handy to overcome the challenges thrown by poor or no connectivity and erratic power supply.

(3) Mobile-Based E-Governance:

The spectacular growth in use of mobile telephony in the rural areas has opened up the possibility of their use in introducing electronic transactions (including financial transaction) and internet facilities in rural areas thus opening up a new gateway to various citizen-friendly services provided by e-Governance initiatives.

2005 which mandates all governmental organizations to put certain types of information in the public domain. The information which is disseminated through the websites can be classified into three categories:

(a)   Static information

(b)   Dynamic information

(c)   Transactional information

Static information is that information which generally does not change in short time frames. These include information about the organization, rules regulations and various procedures. Dynamic information on the other hand changes quite often and this includes information like various notifications specifying time limits, tender notifications, notifications calling for applications etc. Websites having dynamic content have to be updated quite frequently. The third category of information – transactional information – is information about a particular transaction in which a citizen may be interested. This is usually in the form of the status of applications made by citizens.

6.7.1.2 A casual survey of all organizations having websites, reveals that the focus still is to provide static information and here also the information which is displayed is what the organization feels important rather that what the citizens want to know. It is, therefore, necessary to carry out an independent evaluation of the type of information being displayed so that the requirements of the citizens could be ascertained. This should be a periodic exercise.

6.7.1.3 Few sites have dynamic information. As far as transactional information is concerned, this is limited to extremely few organizations. In order to make the websites useful to citizens, it is necessary that organizations should gradually move from static information to transactional information.

6.7.1.4 Furnishing transactional information may not be possible without back-end computerization of processes, but ultimately computerisation of all back-end processes would result in generation of transactional information in which the citizens are interested. Therefore, to begin with, the transactional information may be off line which could be up-dated at very short intervals, but at the same time, the process for computerizing all processes should be taken up simultaneously and this should later on be linked to the information dissemination system.

6.7.2 Implementing Complex e-Governance Projects

6.7.2.1 Implementation of complex e-Governance projects, is as complicated as the execution of a major construction project. An e-Governance project has a large number of components and each one of these has to be executed properly. More importantly, there is a certain amount of sequencing and synchronizing involved in carrying out these components. As mentioned earlier, e-Governance projects involve re-designing and installation of new processes, building of capabilities of hardware and development of software. Each one of these, in turn, has several components which would have to be performed in a proper order. The general experience has been that comprehensive planning for execution for e-Governance projects is not done, and this leads to delays on the one hand and wastage of efforts and resources on the other. Often, the procurement of hardware is fast, but other components lag far behind. Further, it is also seen that technological solution providers do not fully grasp the functioning of government organisations while government functionaries have a poor grasp of technology. The ideal situation would be to find a government functionary who is equally conversant with technology and place him/her to manage implementation. Since this may not always be possible, domain specialists need to work in close coordination with the technology specialist.

6.7.2.2 Another important aspect of e-Governance projects is that any government function to be put in the e-Governance mode would normally have several parts. Some of these parts lend themselves to ICT easily whereas, others would require more effort. The grievance redressal system – *Lokvani* – is a good illustration. First of all, computerization of the central facility for receipt of petitions was done. The logical next step perhaps would be computerization of all processes in all the departments so that a petitioner can actually track his or her application. The ultimate stage, would be a paperless office, wherein, each movement of paper is on computer and kept in the public domain, so that all petitioners are able to actually see the movement of their request online.

6.7.2.3 The Commission is of the view that implementation of e-Governance projects would involve a detailed 'project management' exercise which should consist of the following activities:

1) *Breaking up the entire e-Governance projects into components/activities:* This would involve identification and segregation of activities into those which are sequential in nature and those which could be taken up in parallel.

2)   *Preparing an implementation plan:* This should include detailed plan and schedule for each activity. Standard project management tools should be used.

3)   *Allocating resources:* Once the framework has been finalized, the human and financial resources would require to be allocated.

4)   *Commencement and continuous tracking:* The activities would be required to commence as per the framework and continuous monitoring of different activities would have to be ensured as they progress.

5)   *Mid-course correction:* If need be and as determined through continuous monitoring of activities during implementation, mid-course correction may be resorted to in order to achieve the outcomes.

6.7.2.4 *Change management:* As e-Governance represents a paradigm shift in governance reform, government organizations and individuals would have to change their way of working to be able to adapt to and accommodate these changes. This would require conducting a change management exercise within organizations in order to adapt to perception of loss of power, authority and discretion, inculcate faith in digital documents and develop a sense of ownership in the projects.

6.7.2.5 A World Bank document[79] which analysed how personnel issues slowed down e-Governance projects in different countries identified five challenges which need to be addressed while bringing about change:

- *Threats of job losses increase resistance* – A real or perceived threat of job loss should be addressed adequately to mitigate the damage to employees' morale through inaccurate information and rumors. Employees need support and re-training for a new set of skills.

- *Government staff may resent external staff* – Intrusion by external consultants on to what is considered their privileged domain creates stiff resistance. It helps a great deal if external staff have the time and patience to talk to employees.

- *High-level support does not ensure staff buy-in* – Even when top political leaders support an e-government project, senior officials and their staff may remain uncommitted if they do not see benefits from moving to a new system.

[79]GStaff incentives and project implementation: Lessons from e-government; World Bank, October 2005

- *Staff are unenthusiastic when credit is not shared* – A common perception is that an e-government project is an IT department project and if the project is successful, the IT department will get all the credit. This results in non-cooperation. Turf wars between departments also results in one department being in the limelight and taking all the credit. This undermines project success unless addressed adequately.

- *Managers exaggerated risk aversion harms project credibility* – Fearing that new systems may not deliver, managers tend to continue manual systems in parallel, and thus there is no incentive for staff to switch over to the new system. It also sends the signal that the new system is unreliable. Prolonging the trial period also discourages users from changing old habits thus making the final switch over all the more difficult.

6.7.2.6 Change Management has an organisational as well as a human angle and it needs to be handled with utmost care. Change Management requirements vary widely across organisations and across employees within an organisation. A systematic and measured approach is needed for undertaking Change Management exercises as a necessary concomitant to process reforms, adoption of technology and capacity building. It may often be desirable to take the services of organisations with expertise in Change Management.

6.7.2.7 Recommendations

a.   **All organizations should carry out a periodic independent evaluation of the information available on their websites from the citizens perspective and then re-design their websites on the basis of the feedback obtained.**

b.   **Each government organization should prepare a time-bound plan for providing of transactional information through their websites. To begin with, this could be done by updating the websites at regular intervals, while at the same time, re-engineering the back-end processes and putting them on computer networks. Ultimately, all the back-end processes should be computerized.**

c.   **Complex e-Governance projects should be planned and implemented like any major project having several parts / components for which Project Management capability should be developed in-house.**

d. Implementation of e-Governance projects would involve a detailed 'project management' exercise which would consist of the following activities:

  i. Breaking up entire e-Governance projects into components/ activities

  ii. Planning each activity in detail

  iii. Allocating resources, both human and financial

  iv. Commencement of activities as per the plan and continuous tracking

  v. Need-based mid-course correction

e. While implementing transformational programmes like the NeGP, it is essential to recognise of the importance of a structured approach to Change Management – the people side of transformation. It is necessary for Government agencies, especially the nodal Ministries and the Administrative Reforms and IT Departments, to design appropriate Change Management Strategies and Plans to accompany the e-Governance implementation.

6.8 Monitoring and Evaluation

6.8.1 Even though e-Governance projects are generally rolled out after testing them at the pilot stage, owing to the scale and complexities of the roll-out, such projects need continuous monitoring. Such monitoring could be based on a variety of parameters – financial viability, ease of use, assessment of in-house capacity, volume of transactions, appropriateness of technological solutions, adequacy of business process re-engineering, ability to handle difficult situations etc. The basic objective would be to identify problems in a timely manner so that corrective measures could be taken. It would also involve finding out the implementation status at any given point of time vis-à-vis the planned framework, tracking the inputs against projected estimates and identifying the corrective measures in case of any variations. Thus, monitoring has to be done continuously by the implementing agencies.

6.8.2 The success or failure of e-Governance projects would depend on the achievement or otherwise of the objectives which were set out initially. Their evaluation could be based on different parameters – satisfaction level of citizens, ease of use by different stakeholders, cost effectiveness of the technology, actual acceptance or otherwise by the target population, financial sustainability, etc. However, the evaluation of success or failure of the project needs

to be done by independent agencies in order to present a holistic and objective picture. The parameters for such evaluation should be decided beforehand.

6.8.3 Recommendations

a.   **Monitoring of e-Governance projects should be done by the implementing organization during implementation in the manner in which project monitoring is done for large infrastructure projects. Even after the project has been implemented, constant monitoring would be required to ensure that each component is functioning as per the design.**

b.   **Evaluation of success or failure of e-Governance projects may be done by independent agencies on the basis of parameters fixed beforehand.**

6.9 Institutional Framework for Coordination and Sharing of Resources/Information

6.9.1 The Commission is of the view that the responsibility for effective and efficient development, procurement and use of information technology and resources as well as the management and planning of information technology and e-Governance programmes should vest with individual government agencies at the Union and State levels. In addition, there would be need to put in place an institutional mechanism in respect of those initiatives where integration of multiple databases and sharing of information between agencies is required because ad hoc collaboration and poor coordination could lead not only to inordinate delays in implementation of programmes but also their total failure. Also, since many e-Governance projects presently under implementation or being envisaged have commonalities both within and across States right down to the local self government levels, it would be very useful to create an institutional repository of best practices and innovation in all States/UTs. Sharing of such information could greatly encourage easy replication of such best practices and save valuable time and effort in avoiding those projects which have inherent defects and have failed.

6.9.2 Government of India and a majority of State Governments have created Departments of IT, however, there is need for clear distinction of the duties and responsibilities between the respective DIT and the other Ministries/Organisations. DITs should undertake those tasks that cannot be efficiently executed by other departments. It could also run or manage certain common services and common infrastructure. Development and implementation of solutions should however be left to the line departments. In order to bring clarity, the following tasks may be entrusted to the respective DITs:

1) Conducting an e-preparedness audit for each organisation

2) Enforcing standardization

3) Assisting in co-ordination when e-Governance projects transcend an organisation's functional domain

4) Facilitating capacity building by linking the user departments and the training institutes (including academic and private sector institutions)

5) Carring out evaluation of e-Governance projects

6) Acting as a repository of best practices and encourage horizontal replication in case of successful projects

7) Helping in selecting/developing the technological solution.

6.9.3 The Second Schedule to the Government of India Allocation of Business Rules, 1961 allocates inter alia the following business matters, in case of the Department of Information Technology:

"(3) Assistance to other departments in the promotion of e-Governance, E-Commerce, E-Medicine, E-Infrastructure etc."

The Commission is of the view that the business allocated to DIT may be made more elaborate in case of e-Governance so as to include the tasks mentioned above.

6.9.4 Thus, the IT Departments at the Union and State Government levels should function as coordinating agencies for providing technological support, linkages and networking and overall functioning of projects which have inter-agency involvement at different levels.

6.9.5 Recommendations

a. **The Departments of Information Technology at the Union and State Government levels should provide institutional support to other departments and organizations in implementation of e-Governance projects identified and conceptualized by them. The DIT should focus on the following:**

1. **Conducting an e-preparedness audit for each organization**

2. **Enforcing standardization**

3. **Assisting in co-ordination when e-Governance projects transcend an organisation's functional domain**

4. **Carrying out evaluation of e-Governance projects**

5. **Acting as a repository of best practices and encouraging horizontal replication of successful projects**

6. **Helping in selection of technological solutions.**

b. **The Second Schedule to the Government of India Allocation of Business Rules, 1961 may be suitably amended to incorporate these elements with regard to the subject matter of 'e-Governance'.**

6.10 Public-Private Partnership (PPP)

6.10.1 Financial and managerial resources are critically required for successful implementation and more so, the sustainability of e-Governance initiatives. While the normal preference for any reform initiative is through exclusive use of inhouse resources, the merits of inducting the private sector resources into the e-Governance sector have now been appreciated and accepted by policy-makers in Government. Public-Private Partnership has thus become one of the cornerstones of NeGP. PPP, as applied to the e-Governance sector is still in a stage of evolution. While early PPP projects like eSeva had attempted a simple version of PPP, more complex projects like MCA 21 required considerable innovation and experimentation in designing and adoption of an appropriate PPP model. The following is an attempt to examine PPP in the light of the requirements of the e-Governance sector.

6.10.2 New technologies demand new types of implementation models. In the conventional approach, the project ownership lies with the public sector itself along with the responsibility for funding it and bearing the entire risk. The concept of PPP has been in operation for more than a decade, primarily in relation to the construction and operation of public infrastructure projects like bridges, airports, highways, hospitals etc. PPP is a mechanism that attempts to capture the strengths of both – a government organization as well as a private enterprise.

6.10.3 There are many compelling reasons why governments should look at PPP in relation to their e-Governance plans. Some reasons are enumerated below:

a. *Combining accountability with efficiency:* The PPP model can combine the accountability mechanisms and domain expertise of the public sector with the efficiency, cost-effectiveness and customer-centric approach of the private sector. As compared to the public sector, the private sector is more efficient and innovative in adopting and applying new technologies. This is also true in the specific case of Information and Communications Technology. Therefore, the PPP approach in the field of e-Governance is well suited in combining the core strengths of the public and private sectors for delivery of efficient online services.

b. *Pace of implementation:* New innovations in the field of ICT are happening at a fast rate. This applies to all its segments – hardware, software and networks. Newer versions and releases of operating systems, database servers, application servers, and security software are continuously being released at regular intervals. The typical life cycle of a large e-Governance initiative is 18 to 24 months from initiation to completion. It has been observed that the private sector is generally faster than government in adopting and making use of the latest technology. This is a compelling reason to join hands with the private sector.

c. *Resources:* The combined effect of the huge size of e-Governance effort and the speed of implementation is that investments required in the e-Governance sector are very large over a continuous period of 5 years. It is estimated that India needs over Rs 45,000 crore of investment in e-Governance sector over a period of 3-5 years - excluding the cost of communication and access infrastructure. This is sixteen times higher than the current annual IT expenditure of about Rs 3000 crore in the government sector. In addition to this, high quality managerial and human resources are required. It is difficult to mobilize such large amounts of financial and human resources within the government. Tapping the financial, managerial and manpower resources of the private sector is a viable alternative in this regard.

6.10.4 The PPP model of implementation is more suitable for particular areas of e-Governance and not to all. The criteria for PPP include long-term nature of demand for a service, profitability and amenability to structuring a commercial framework and business model for PPP. The following is an illustrative list of areas suited for PPP.

a. Information Infrastructure Projects

- Data centres

- Communication backbone

- e-Governance gateway

b. Government-to-Citizen Projects

- Citizen service portals

- Integrated service centres

- Departmental service centres

- Networks of kiosks, like CSCs

c. Government-to-Business Projects

- e-procurement

- G2B portals

d. Government-to-Government Projects

- Online data-capturing and central consolidation (e.g. treasury computerization and networking)

6.10.5 Public-Private Partnership projects also pose several challenges which need to be understood and addressed carefully. There is often lack of congruence in the objectives of the two partners - government and the private sector. The success of PPP depends on the degree to which the public and private sector partners align their efforts in achieving these objectives. Clarity on objectives has to be achieved by both the parties at the outset. Also, the organizational cultures in the private and public sector differ widely. This may result in conflicting situations, since e-Governance involves substantial process reform needing interaction between the partner company and the government agency or agencies in charge of the 'domain'. It is necessary to create an appropriate coordination and review mechanism that develops mutual trust and confidence. Also the agreements defining the mutual role and responsibilities should be precisely drafted, following a transparent process of selection of the private partner.

6.10.6 Recommendations

a.   **Several components of e-Governance projects lend themselves to the Public-Private Partnership (PPP) mode. In all such cases (PPP) should be the preferred mode.**

b.   **The private partner should be selected through a transparent process. The roles and responsibilities of government as well as the private partner should be clearly laid down in the initial stage itself, leaving no room for any ambiguity.**

6.11 Protecting Critical Information Infrastructure Assets

6.11.1 The overall e-Governance infrastructure would in the end include national and state level network systems, national and state level data centres, electronic service delivery gateways and widespread service delivery centres across the country. Protecting the information systems that support these critical information infrastructure assets from potential cyber crimes is one of the serious challenges currently facing the government. In addition, as greater amounts of money get transferred through e-Governance systems, and more sensitive economic and commercial information is exchanged electronically, it increases the likelihood of information attacks threatening vital national interests. Therefore, there is need for development of defence mechanisms and a legal system that is capable of addressing these issues. This should be supplemented by institutionalizing early warning systems to enable timely counter measures.

6.11.2 Recommendation

a.   **There is need to develop a critical information infrastructure assets protection strategy. This should be supplemented with improved analysis and warning capabilities as well as improved information sharing on threats and vulnerabilities.**

7 NATIONAL e-GOVERNANCE PLAN

7.1 Background

7.1.1 During the 1980s and early 1990s, initial attempts towards e-Governance were made with a focus on networking government departments and developing in-house government applications in the areas of defence, economic monitoring, planning and the deployment of IT to manage data-intensive functions related to elections, census, tax administration etc.[80] These applications focused on automation of internal government functions rather than on improving service delivery to citizens.

7.1.2 As discussed in Chapter 4, over the past decade or so, there have been islands of e-Governance initiatives in the country at the national, state, district and even block-level. Some of them have been highly successful and are suitable for replication. A need was therefore felt for taking a holistic view of the several e-Governance initiatives implemented across the country. It was increasingly perceived that if e-Governance was to be speeded up across the various arms and levels of Government a programme approach would need to be adopted, which must be guided by a common vision, strategy and approach. This would have the added advantage of enabling huge savings in costs, in terms of sharing the core and support infrastructure, enable interoperability through standards etc, which would result in the citizen having a seamless view of Government. It was with this background, that the National e-Governance Plan (NeGP) was formulated for implementation across the country.

7.1.3 The National e-Governance Plan (NeGP) has been formulated by the Department of Information Technology (DIT) and Department of Administrative Reforms & Public Grievances (DAR&PG). The Union Government approved the National e-Governance Plan (NeGP), comprising of 27 Mission Mode Projects (MMPs) and 10 components on May 18, 2006. The NeGP aims at improving delivery of Government services to citizens and businesses with the following vision:

> *"Make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realise the basic needs of the common man."*

[80]"Seventh Five Year Plan 1985-1990", Government of India, Planning Commission, New Delhi, 1985.

7.2 Implementation Strategy, Approach & Methodology of NeGP

7.2.1 Implementation of e-Governance is a highly complex process requiring provisioning of hardware & software, networking, process re-engineering and change management. Based on lessons learnt from the past and the experience from successful e-Governance applications, the approach and methodology adopted for NeGP contains the following elements:

i. *Common Support Infrastructure:* NeGP implementation involves setting up of common and support IT infrastructure such as: State Wide Area Networks (SWANs), State Data Centres (SDCs), Common Services Centres (CSCs) and Electronic Service Delivery Gateways.

ii. *Governance:* Suitable arrangements for monitoring and coordinating the implementation of NeGP under the direction of the competent authorities have also been substantially put in place. The programme also involves evolving/ laying down standards and policy guidelines, providing technical support, undertaking capacity building, R&D, etc. DIT is required to adequately strengthen itself and various institutions like NIC, STQC, CDAC, NISG, etc., to play these roles effectively.

iii. *Centralized Initiative, Decentralized Implementation:* e-Governance is being promoted through a centralised initiative to the extent necessary to ensure citizen-centric orientation, to realise the objective of inter-operability of various e-Governance applications and to ensure optimal utilisation of ICT infrastructure and resources while allowing for a decentralised implementation model. It also aims at identifying successful projects and replicating them with required customisation wherever needed.

iv. Public-Private Partnerships (PPP) model is to be adopted wherever feasible to enlarge the resource pool without compromising on the security aspects.

v. *Integrative Elements:* Adoption of unique identification codes for citizens, businesses and property is to be promoted to facilitate integration and avoid ambiguity.

vi. *Programme Approach at the National and State levels:* For implementation of the NeGP, various Union Ministries/Departments and State Governments are involved. Considering the multiplicity of agencies involved and the need for overall aggregation and integration at the national level, NeGP is being implemented as a programme, with well defined roles and responsibilities of

each agency involved. For facilitating this, appropriate programme management structures have also been put in place.

vii. *Facilitatory role of DIT:* DIT is the facilitator and catalyst for the implementation of NeGP by various Ministries and State Governments and also provides technical assistance. It serves as a secretariat to the Apex Committee and assists it in managing the programme. In addition, DIT is also implementing pilot/ infrastructure/ technical/ special projects and support components including those indicated in Table-7.4. DAR&PG's responsibility is towards Government Process Re-engineering and Change Management, which are desired to be realised across all government departments. Planning Commission and Ministry of Finance allocate funds for NeGP through Plan and Non-plan budgetary provisions and lay down appropriate procedures in this regard.

viii. *Ownership of Ministries:* Under the NeGP, various MMPs are owned and spearheaded by the concerned line Ministries (Tables 7.1, 7.2 & 7.3). In case there are any ongoing projects which fall in the MMP category, they would be suitably enhanced to align them with the objectives of NeGP. For major projects like Bharat Nirman, Rural Employment Guarantee Schemes etc., the line ministries concerned are advised to make use of e-Governance as also automation techniques from the inception stage. States have been given the flexibility to identify a few additional state-specific projects, which are relevant for the economic development of the State.

7.2.2 Different Mission Mode Projects conceptualized under NeGP initially, are described in Tables 7.1 to 7.3*:

Table 7.1 Mission Mode Projects - Central Government Category	
Sl. No. **Projects**	**Line Ministry/Department Responsible**
1 Income Tax	Ministry of Finance/Central Board of Direct Taxes
2 Passport Visa & Immigration	Ministry of External Affairs/Ministry of Home Affairs
3 MCA21	Ministry of Corporate Affairs
4 Insurance	Department of Banking

Table 7.1: Mission Mode Projects - Central Government Category *Contd.*

Sl. No.	Projects	Line Ministry/Department Responsible
5	National Citizen Database	Ministry of Home Affairs/Registrar General of India (RGI)
6	Central Excise	Department of Revenue/Central Board of Excise & Customs
7	Pensions	Department of Pensions & Pensioners Welfare and Department of Expenditure
8	Banking	Department of Banking
9	e-Office	Department of Administrative Reforms & Public Grievances

Table 7.2: Mission Mode Projects - State Government Category

Sl. No.	Projects	Line Ministry/Department Responsible
1	Land Records	Ministry of Rural Development
2	Road Transport	Ministry of Road Transport & Highways
3	Property Registration	Department of Land Resources/Department of Information Technology
4	Agriculture	Department of Agriculture & Cooperation
5	Treasuries	Ministry of Finance
6	Municipalities	Ministry of Urban Employment and Poverty Alleviation
7	Gram Panchayats	Ministry of Panchayati Raj
8	Commercial Taxes	Ministry of Finance
9	Police (UTs initially)	Ministry of Home Affairs
10	Employment Exchanges	Ministry of Labour & Employment
11	E District	Department of Information Technology

Sl. No.	Projects	Line Ministry/Department Responsible
	Table 7.3: Mission Mode Projects - Integrated Services Category	
1	EDI (E-Commerce)	Ministry of Commerce & Industry/ Department of Commerce
2	E-Biz	Department of Industrial Policy & Promotion / Department of Information Technology
3	Common Services Centres	Department of Information Technology
4	India Portal	Department of Information Technology and Department of Administrative Reforms & Public Grievances
5	EG Gateway	Department of Information Technology
6	E-Courts	Department of Justice, Ministry of Home Affairs
7	E-Procurement	Ministry of Commerce & Industry/ DGS&D

7.2.3 To sustain the above projects there is also need to create the right governance and institutional mechanisms, set up core infrastructure, formulate key policies, standards and the legal framework for adoption and to channelise private sector technical and financial resources into the National e-Governance efforts. For this purpose, certain key components have also been identified for implementation which are given in Table 7.4 below. These components cut across and support various projects.

Sl. No.	Support Components	Line Ministry/Department Responsible
	Table 7.4: NeGP Support Components Category	
1	Core Policies	Department of Information Technology
2	Core Infrastructure (SWAN, NICNET, SDCs, etc.)	Department of Information Technology
3	Support Infrastructure (CSCs, etc.)	Department of Information Technology
4	Technical Assistance	Department of Information Technology

Table 7.4 NeGP Support Components Category		*Contd.*
S. No.	**Support Components**	**Line Ministry/ Department Responsible**
5	R&D	Department of Information Technology
6	Human Resource Development & Training	Department of Information Technology and Department of Administrative Reforms & Public Grievances
7	Awareness & Assessment	Department of Information Technology and Department of Administrative Reforms & Public Grievances
8	Organization structures	Department of Information Technology and Department of Administrative Reforms & Public Grievances

7.3 Analysis of NeGP

The Commission has examined the following components of NeGP:

    a.   The Institutional Structure

    b.   The Common Support Infrastructure

    c.   The Mission Mode Projects

7.3.1 The Institutional Structure

7.3.1.1 *Macro (National and State) Level:* Since the formulation of the NeGP, it has become essential to ensure that the numerous projects being implemented by the Union and State Government departments are consistent with a broad policy and adhere to common standards. This requires empowered institutional arrangements to oversee, drive and manage implementation. The arrangements may vary at different levels but there should be consistency of key roles i.e. formulating and ensuring uniform policies and standards, addressing implementation bottlenecks and monitoring progress and desired outcomes. To ensure this at the national level, NeGP has established well-defined institutional structures as depicted below:

Figure 7.1: NeGP, Overall Governance Structure

Programme Management - NeGP
Overall Governance Structure
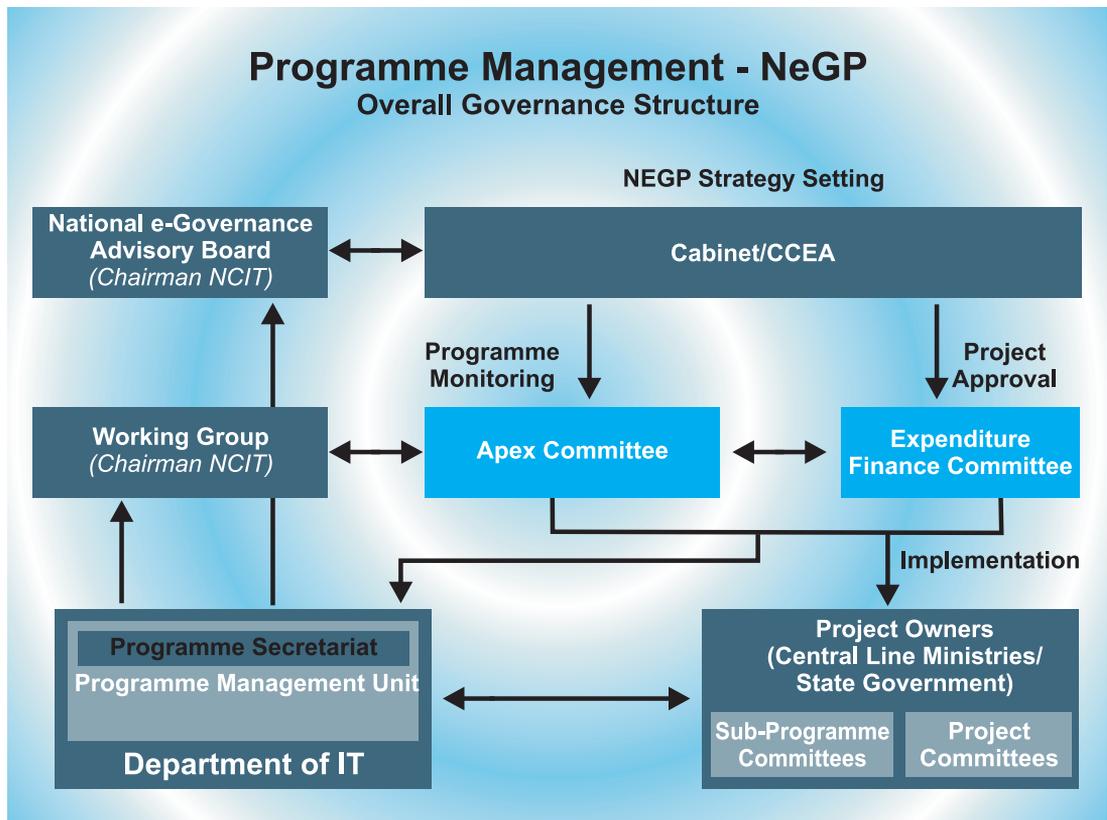
7.3.1.2 *Governance Structures:* These are decision-making bodies which are empowered to formulate policies, take decisions, and in general, guide the project implementers. Since they are not involved in implementation, they can take stock of the macro picture and provide proper guidance to the field-level implementation teams. The governance structures for most e-Governance projects are: Apex Committees, High Powered Committees, Project Standing Committees, etc. Given the fact that these governance structures are staffed by officers at senior levels, it is expected that they would devote adequate quality time to project guidance.

Fig 7.2: NeGP Governance Structure at State Level
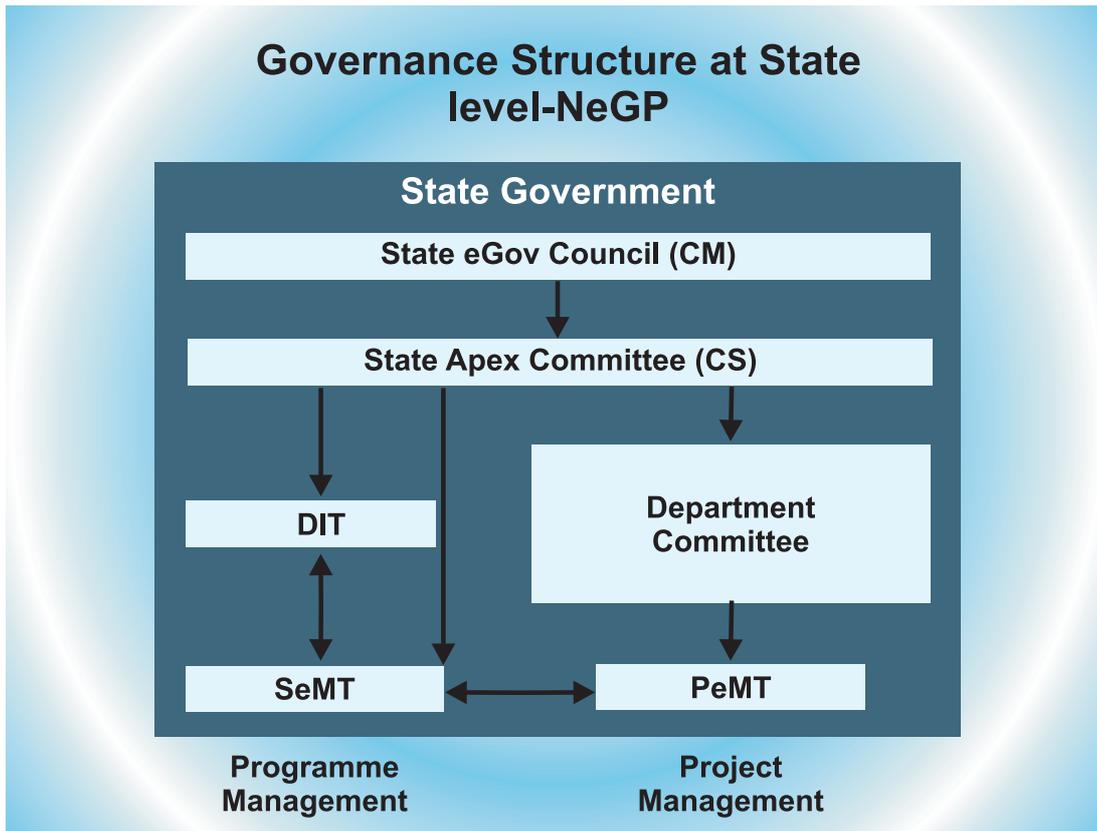
7.3.1.3 For implementation of NeGP, the Programme Management Structure is as follows:[81]

i. **Prime Minister's Office:** To provide leadership to the NeGP; prescribe deliverables and milestones; and monitor periodically the implementation of NeGP.

ii. **National e-Governance Advisory Group:** Under the Chairmanship of the Union Minister for C&IT, it obtains views of external stakeholders, advises the Government on policy issues and strategic interventions necessary for accelerating introduction of e-Governance across Union and State Government Ministries/Departments.

[81]Source: Information provided by NeGP PMU (25.08.08)

iii.   **Apex Committee (NeGP):** Functions under the Chairmanship of the Cabinet Secretary; oversees the NeGP programme and provides policy and strategic directions for its implementation, resolves inter-ministerial issues; moderates and drives services, process re-engineering and service levels of each MMP, wherever required.

iv.   **Planning Commission and Ministry of Finance:** Allocate funds for NeGP through Plan and Non-plan budgetary provisions and lay down appropriate procedures in this regard.

v.   **Line Ministries/Departments:** Take ownership of the MMP and conceptualize the project by fixing the objectives, hold consultations with all the stakeholders, prepare comprehensive Project Document including identification of e- services and service levels, obtain sanction for schemes, and implement the project and its various components.

vi.   **State Governments/UT Administrations:** Responsible for implementing State Sector MMPs, under the overall guidance of the respective Line Ministries in cases where central assistance is also required. An Apex Committee at the State level headed by the Chief Secretary is constituted to implement the projects.

vii.   **Department of Information Technology (DIT) including National Informatics Centre (NIC):** DIT serves as a secretariat to the Apex Committee and assists it in managing the NeGP projects. DIT assists National e-Governance Advisory Group and Prime Minister's Office; facilitates implementation of NeGP by various Ministries and State Governments; carries out technical appraisal of all NeGP projects; prepares suitable template(s) for preparing project document(s) (e.g. detailed project report), for use by individual departments; provides technical assistance to various Ministries and State Governments either directly or through NIC or in collaboration with external professional Consultants; undertakes monitoring of all the MMPs.

viii.   **Department of Administrative Reforms & Public Grievances (DAR&PG):** Responsible for generic Process Re-engineering and Change Management, which are desired to be realised across all Government departments. However, concerned Line Ministries / Implementing Agencies are primarily responsible for carrying out the required Process Re-engineering and Change Management; promoting initiatives for Human Resource Development, and training and awareness building.

7.3.1.4 In Chapter 6, the Commission has already recommended that the Departments of Information Technology at the Union and State Government levels should provide institutional support to other departments and organizations at the appropriate level in implementation of e-Governance projects identified and conceptualized by them (paragraph 6.9.5). The Commission re-iterates these recommendations.

7.3.2 The Common Support Infrastructure

The issues related to the implementation of Common Support Infrastructure – SDC, SWAN and CSCs – are discussed in the following paragraphs.

7.3.2.1 *State Data Centre (SDC)*

7.3.2.1.1 State Data Centres have been identified as one of the important elements of the core infrastructure for supporting e-Governance initiatives under NeGP. These would consolidate services, applications and infrastructure to provide efficient electronic delivery of G2G, G2C and G2B services through common delivery platform seamlessly supported by the State Wide Area Network (SWAN) connecting up to the villages through the Common Service Centres (CSCs). Its key functions would be to act as the Central Repository of the State, provide secure data storage, disaster recovery and remote management functions etc. The DIT has already provided the 'Guidelines for Technical and Financial Support for Establishment of State Data Centre'[82] which offer two options before the States: (a) the State/UT and NIC together form a composite team for the State Data Centre, where the NIC team would provide services for infrastructure upkeep, operations etc.; (b) the capabilities of existing commercial internet data centres are leveraged. The Scheme was approved in January 2008 and so far, all the 23 States whose proposals have been approved till now, have opted for the first option.[83]

7.3.2.1.2 Although the State Data Centres form one of the core elements of NeGP, the absence of any fixed time frame for its implementation has resulted in delays. The Standing Committee on Information Technology had noted this lacuna and recommended in its 22nd Report (December 2005) that *"… the Committee feel that absence of fixed time frame in this regard has actually worked as a de-motivator as the States had not been put under any obligation to fulfil the commitment of establishing the SDCs by a prescribed date. The Committee feel that there should not be any laxity and ambiguity in an ambitious and important plan like NeGP. The Committee, therefore, strongly recommend that a definite time frame should be drawn and all the States/UTs should be motivated and persuaded to establish their State Data Centres within the prescribed time schedule."[84] The Committee also noted that policy guidelines for creation of SDCs were only in a formulation stage. In their

[82]http://www.mit.gov.in/download/guidelines.pdf
[83]Source: http://www.egovonline.net/interview/interview-details.asp?Title=State-Data-Centres:-The-Critical-Infrastructure&interviewid=434 (extracted on 6.08.2008)
[84]Recommendation 24; 22nd Report of the Standing Committee on Information Technology, December 2005

29th Report (July 2006), the Committee while examining Demand for Grants (2006-07) had recommended that *"State Data Centres are one of the important components of National e-Governance Plan (NeGP) and is an element of the core-infrastructure. Hence, they are necessarily required to put in effective e-Governance plan and delivery of services to the Citizens on-line. Data Centres are relevant in the form of Central repositories or Common Technology Infrastructure which will avoid duplication or separate computing and store facilities by each department in the State and incur avoidable cost. As considerable time has already been taken to roll out NeGP, the Committee feel that any further delay in establishing the core infrastructure will delay the facilities to be provided to the masses. Hence, the matter requires urgent attention of the appropriate authorities at the highest level."*[85] In their 37th Report on Action Taken by Government on the Recommendations/Observations of the Committee (December 2006) the Committee expressed their hope that *"… as assured by the DIT, SDCs would be ready by the time SWANs and CSCs are established in the States so that work under NeGP does not come to a stand still due to non-creation of SDCs".* In their 58th Report concerned with the Demand for Grants for 2008-09, the Committee found that the scheme for establishing SDCs was originally scheduled to be completed in respect of ten States by March/December 2007 and 20 SDCs were to be operationalised by March, 2008. However, the actual progress indicated that in 23 States/UTs the centres would be ready by March 2009 and for the remaining States/UTs they would be ready only by December 2009. The Committee while expressing their strong disapproval recommended that as *"the State Data Centre is a crucial Component of core infrastructure of National e-Governance Plan not only from the service delivery perspective but also from strategic point of view as it would involve sovereign data. The Committee are of the opinion that implementation of SDCs should solely be entrusted to the Government agencies like NIC, ERNET etc. to ensure safety and sanctity of data. They, therefore, desire*

Box 7.1: State Data Centres

In Karnataka there is no consensus amongst state departments about using a common infrastructure. The National e-Governance plan envisages the setting up of a state data centres (SDC) across the country and share infrastructure, allowing departments to access information easily and also cut costs in the process.

But the reality is quite different. A draft report prepared by Pricewater Cooperhouse, consultants to the government for e-Governance projects, lists about 18 state departments that could move their applications and projects to the State Data Centre. The applications range from hosting websites to managing applications using SDC as a back up and for disaster recovery. Almost all departments have given a negative answer.

At present, the SDC hosts several applications like Bhoomi, Nemmadi, Human Resources Management Systems (HRMS), e-procurement and back up for Bangalore One amongst others.

Almost all departments ranging from the Agriculture to the Treasury have shown unwillingness to move to the SDC. Reasons vary. Sources in the e-Governance department say that most of the departments have plenty of funds and are keen on setting up their own data centre. There is also a reluctance to hand over the reins to a third party when the application is an interface between the citizen and the department concerned.

(Source:http://deccanherald.com/Content/Aug42008/state2008080382651.asp)

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[85]Recommendation 39; 29th Report

that the Department should clearly highlight national security perspective involved in establishing and operationalising SDCs to all participating States and guide/help them in placing adequate safeguards in this regard".[86]

7.3.2.1.3 Apart from implementation delays, institutional hurdles have also been cropping up. For example, there has been be a tendency in some State departments to set up their own data centre which would give them control over the data and its disaster management and recovery. Further, as many of the departments already have functional website/portals hosted by NIC, they may see no benefit in changing the status quo. (See Box 7.1)

7.3.2.1.4 The Commission is of the view that owing to the nature of data and security concerns, the implementation of SDCs should lie in the domain of government agencies such as NIC. Further, all state-level data centres should be subsumed in the SDCs. Due to the interlinked nature of the core components of NeGP such as SDCs, SWANs and CSCs, implementation of these projects should be co-ordinated in a way that there is no time lag in their operationalisation.

7.3.2.2 State Wide Area Network (SWAN)

7.3.2.2.1 This is aimed at establishing Wide Area Networks in all States and UTs across the country, from the Headquarter of each State/UT to the Blocks. These are expected to be implemented by June 2009 in all States/UTs. It would serve in providing G2G and G2C services, especially for the various Mission Mode Projects contemplated under the National e-Governance Plan. Various other NeGP initiatives of the Department of IT, namely, e-District, State Data Centre, CSC, India Portal, Unique ID etc. would be directly using these Wide Area Networks in addition to all other G2G and G2C initiatives being taken at the Union and State levels. Implementation of the SWAN Scheme is in full swing across the country. Presently, SWAN has been rolled-out in Delhi, Chandigarh, Haryana, Himachal Pradesh and Tamil Nadu.[87] There are various States/UTs, such as Assam, Bihar, Gujarat, Jharkhand, Tripura, Sikkim, Kerala, West Bengal, Maharashtra, MP, Punjab, Puducherry, Manipur, Mizoram, Karnataka, UP, J&K, Uttarakhand where the Scheme is at various stages of implementation. In some other States/UTs, viz. Orissa, Chhattisgarh, Rajasthan, bid processes have been concluded. In case of States/UTs of Andhra Pradesh, Meghalaya, Nagaland, Arunachal Pradesh, Dadra & Nagar Haveli and Daman & Diu, the bid processes are in progress while for Lakshadweep, the proposal is under submission. Goa and Andaman & Nicobar Island have opted out of the SWAN Scheme with the approval of Government of India.

[86]Recommendation 11; 58th Report of the Standing Committee on Information Technology, April 2008.on 6.08.2008)
[87]Source: http://mit.gov.in/default.aspx?id=824 (As on 15.12.2008)

7.3.2.2.2 The e-Governance initiatives under the NeGP would run on the connectivity provided by the State Wide Area Networks (SWANs) and NICNET. The SWANs would connect each State/UT headquarters with the District headquarters and each District headquarter with the block headquarters with a minimum 2Mbps leased line. It is expected that seamless connectivity provided by the SWANs could be extended to reach the villages through wireless and other technologies relevant for the last mile connectivity.

7.3.2.2.3 The guidelines for establishment of SWANs offer two options to the State Governments for their establishment. The first option involves the PPP model for outsourcing the establishment, operation and maintenance of the Network. The second option involves designating NIC as the prime implementation agency for the SWAN as an integral part of NICNET. As per the guidelines, DIT support covers the entire cost of establishment, operation and maintenance of the SWAN for a period of five years on 100% grant basis. In case of the first option, cost of personnel hired by the operator is also covered by the grant support. In case of implementation by NIC (second option), no extra cost was envisaged at NIC headquarters in establishing the SWANs in the States – cost of hiring personnel at district/block level is covered by the grant. However, in spite of these cost benefits and the fact that the NICNET is operational up to the district level in the States, out of the 22 States/UTs where actual implementation is in progress or completed, only 7 have opted for the NIC model while others have opted for the PPP model.[88]

7.3.2.2.4 The guidelines also stipulate that while dedicated SWANs are being established by the State Governments, NICNET will also separately operate with upgraded technology up to the district level. Central applications may ride on NICNET up to the district level and through the SWAN or through dial up into the NICNET (or through dedicated lines leased by the Union Department concerned) further up to the block level. However, formulation of the guidelines for standardization, inter-operability and inter-connect requirements between NICNET and the SWANs and also between different SWANs would be the responsibility of the NIC.[89]

7.3.2.2.5 The Standing Committee on Information Technology, while examining the Demands for Grants for 2008-09, found that the time limit for implementing the SWAN was December 2007 which is now continuously being extended. Further, they were also informed that *'at the implementation level also the States/UTs are facing problems of availability of basic telecom infrastructure at the block level'*.[90] The Commission is of the view that the highest priority needs to be given to the simultaneous roll out of SWAN across the country so that the MMPs and other e-Governance initiatives, which would ride on this network, can also be expeditiously implemented.

[88]As on 18.09.2008 (Source: http://www.mit.gov.in/default.aspx?id=824)
[89]Source: Guidelines for Technical and Financial Support for Establishment of State Wide Area Network; http://www.mit.gov.in/download/policyguidelinesforSWAN.pdf
[90]Paragraph 48; 58th Report; April 2008

7.3.2.3 Common Service Centres (CSCs)

7.3.2.3.1 The Common Service Centre Scheme is one of the three important infrastructural initiatives of the NeGP, the other two being (a) the State Wide Area Network (for connectivity) and (b) the State Data Centre Scheme (for secure hosting of data and applications). These centres are intended to serve as front-end delivery points for government, private and social sector services in an integrated manner to rural citizens of India. This scheme aims at establishing about 100,000 Common Services Centres across the country, one each for every six census villages. The objective is to develop a platform that can enable government, private and social sector organizations to align their social and commercial goals for the benefit of the rural population in the remotest corners of the country through a combination of IT-based as well as non-IT-based services. The placement of a CSC in a cluster of villages is supposed to follow a 'honey comb' structure so that the services provided by it are easily accessible to the rural population residing in the cluster. The Scheme is being implemented as a Public-Private Partnership (PPP). The Common Service Centres are designed as ICT-enabled Kiosks having a PC along with basic support equipment like printer, scanner and UPS.

7.3.2.3.2 It is already recognized that the implementation of a project of this size and scope would pose significant challenges of project management at the national level as also in exploiting opportunities to achieve significant economies of scale in the identification, customization and implementation of the physical and digital infrastructure required for the project. Further, many of the potential citizen-centric services would lend themselves to aggregation at the national level. To serve the above objectives and to enable the State-specific implementation plans to benefit from such economies of scale, aggregation of best practices etc., DIT has appointed a National Level Service Agency (NLSA) with defined Terms of Reference to coordinate the entire activity.

7.3.2.3.3 The CSC Scheme has a 3-tier implementation framework:[91]

- The local Village Level Entrepreneur (VLE - loosely analogous to a franchisee) constitutes the first level. This would form the cutting edge of the whole scheme, with the responsibility of providing services to the rural customer in a cluster of 5-6 villages.

- At the second/middle level would be the Service Centre Agency (SCA - loosely analogous to a franchiser) with the responsibility to operate, manage and build the VLE network and business. A SCA would be a private entity and would be given the territorial responsibility for rolling out the CSCs in one or more districts (one district would cover about 100-200 CSCs).

- At the third level would be an agency designated by the State Government, called the State Designated Agency (SDA), to facilitate implementation of the Scheme within the State and to provide requisite policy, content and other support to the SCAs. The SDA would be a PSU/Society or any other entity controlled by the State Government.

7.3.2.3.4 The Scheme envisages the involvement of two other entities:

- The National Level Service Agency (NLSA), which would provide program management support to the DIT for rolling out the CSC Scheme. It would also monitor implementation of the Scheme to enable DIT to review its progress.

- The Special Purpose Vehicle, which would be for day-to-day monitoring of the Scheme.

7.3.2.3.5 The critical elements of this Scheme, so far as its implementation is concerned and which would influence its outcome, are discussed below:[92]

i. *Role of the State Government:* It is required to provide policy, financial and infrastructural support to the Scheme through the State Designated Agency (SDA). It has to decide on the mode and degree of integration of the Scheme with the existing physical, digital and institutional infrastructure of Government agencies/departments, especially in case of schools, Gram Panchayats, Public Health Centres, Community Information Centres, Post Offices as also in case of development programmes in areas related to education, health, agriculture, employment etc.

ii. *Role of the SDA:* It is required to coordinate, manage and monitor the receipt and utilization of financial support received from the Union and State Governments. It is also required to facilitate the integration of existing ICT enabled and other Government Schemes into the CSC Scheme as also the interaction between the SCA and State Government entities for enabling delivery of Government services through CSCs. It is further required to facilitate e-readiness of the State, awareness campaigns, training and capacity building and the SWAN interface.

[92]Source: 'Guidelines for Implementation of the Common Services Centres (CSC) Scheme in States'; www.mit.gov.in/download/CSCguidelines.pdf

iii.   *Connectivity:* CSCs are expected to ride on the connectivity provided by the SWAN. Another option is broadband connectivity through Union Department of Telecommunications. The State Government, in conjunction with the DIT, has to formalize a plan for last mile connectivity to the CSCs.

iv.   *Location of CSCs:* The State Government has to work out the number of CSCs required to be established in each block at the rate of one CSC for every six census villages. The SCA may locate a CSC anywhere in the block provided not more than one CSC is established in one Gram Panchayat (this would not be the case where the number of Gram Panchayats in the block is less than the number of CSCs worked out for a block).

v.   *Revenue support:* It is envisaged that G2C services may take longer to be operational, hence the SCAs are to be provided support in the form of "Guaranteed Provision of Revenue from Governmental Services" over a period of four years, once the CSCs are certified as operational by the SDA. The amount of revenue support is proposed to be 33.33% of the normative value[93] which works out to Rs. 3304/- per CSC per month. This support is to be shared by the Union and State Governments in equal ratio, with the State Governments having the option to meet their share by using their Additional Central Assistance for NeGP provided by the Planning Commission. However, the exact amount of support is to be arrived at through a 'price discovery mechanism' discovered through bids (not to exceed 50% of the normative value). The revenue generated from delivery of e-Government services would be offset from the revenue support given to the SCA.

vi.   *Integration of existing kiosks:* State Governments are expected to make efforts for subsuming existing kiosks within the CSC Scheme either in the form of SCAs or VLEs. Where they are not able to meet the eligibility criteria, State Governments are expected to consider providing them G2C services, SWAN connectivity etc on terms and conditions similar to those offered to SCAs.

vii.   *Enablement plan for G2C services:* Since the revenue support is based on the availability of G2C services, State Governments are expected to develop enablement plans for providing these services including the technology architecture.

[93]Normative Value has been worked out as a minimum operating expenditure including servicing of CAPEX per CSC per month on an average basis over a four-year period.

7.3.2.3.6 The present status of rollout of CSCs in various States is presented in Fig 7.3 :[94]

Fig 7.3: Implementation of CSCs (November 2008)

CS Implementation of CSCs (November, 2008)

RFP under discussion → **Punjab**

Lakshadweep

RFP to be issued in Nov08 → **Karnataka**

RFP Issued → **Kerala, Arunachal Pradesh, Puducherry**

SCA Selected → **J & K, Rajasthan (3 zones), Mizoram**

LOI Issued → **Andhra Pradesh (2 zones), Nagaland**

CSC Rollout (20) → **Haryana, WB, Jharkhand, Bihar, Tripura, Gujarat, MP, Assam, UP, Sikkim, Uttarakhand, Orissa, Tamil Nadu, Meghalaya, Manipur, Maharashtra, HP, Chhattisgarh, Andhra Pradesh (4 zones), Rajasthan (4 zones)**

Note: Delhi, Chandigarh, Goa, Andaman as of now are not inclined to implement the CSC scheme of GOI

As CSCs are reported to have been rolled out in many of the States, it needs to be examined in light of the critical aspects delineated above. As an illustration, its implementation in the State of Uttar Pradesh is discussed below.[95]

7.3.2.3.7 In the State of Uttar Pradesh, the CSCs have been designated as Jan Seva Kendras. For the purpose of establishing the Jan Seva Kendra, the State has been divided into seven zones and for each zone, a SCA has been selected through a transparent open bidding process. The details of the SCA along with revenue support is given Table 7.5.

[94]http://mit.gov.in/images/cscstatus_nov08.jpg
[95]Source: 'Jan Seva Kendra: Role of Different Stakeholders'; http://infotech.up.nic.in/eGov/Role%20of%20Stakehoders%20in%20CSC.pdf (extracted on 25.08.2008)

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Table 7.5: The Jan Seva Kendras				
Sl. No.	**Zone**	**Related Divisions**	**Selected SCA Name**	**Total No. of Jan Seva Kendras** / **Revenue Support (Per CSC/Month)**
1.	Moradabad	Moradabad and Saharanpur	CMS Computers Limited	1615 — Rs.890/-
2.	Varanasi	Varanasi, Allahabad and Mirzapur	SREI Infrastructure Finance Limited	3669 — Zero
3.	Faizabad	Faizabad and Azamgarh	Comat Technologies Private Limited	2601 — Rs.2106/-
4.	Lucknow	Lucknow, Gorakhpur and Basti	SREI Infrastructure Finance Limited	4449 — Rs.10/- (-ve bid) i.e. SCA to pay to GoUP
5.	Bareilly	Bareilly and Devipatan divisions	Comat Technologies Private Limited	2120 — Zero
6.	Agra	Agra and Meerut	3i Infotech Limited	1688 — Rs.14/- (-ve bid) i.e. SCA to pay to GoUP
7.	Kanpur	Kanpur, Jhansi and Chitrakoot Dham	CMS Computers Limited	1767 — Zero

7.3.2.3.8 The role for the State departments is as follows:

a. *Service provider for e-Government services* – Departments will identify and inform the Department of IT and Electronics about various departmental Government-to-Citizen (G2C) services which can be delivered through Jan Seva Kendras electronically.

b. Departments would do the back-office computerization for the identified services at headquarter, district, tehsil and block levels.

c. Departments will provide the required support for framing policies and in deciding certification process.

d. Departments will take necessary action to make the Jan Seva Kendra scheme a success.

7.3.2.3.9 The role for the district administration in the scheme is defined is as follows:

a. The district administration along with various departments and stakeholders shall organize the awareness and sensitization workshops for the masses.

b.   The district administration shall provide help to SCAs in identifying the space for establishing the Jan Seva Kendra and in the selection of VLEs.

c.   They will identify and ensure the delivery of the district level G2C services to be delivered through the Jan Seva Kendra.

d.   They will help in certifying the district level G2C services to be delivered through Jan Seva Kendra.

e.   The district administration shall give priority in resolving the problems/issues of the rollout of the Jan Seva Kendra Scheme.

7.3.2.3.10 The SCAs will provide all the services of '*Lokvani*' through the Jan Seva Kendra. Since the revenue support is based on the availability of G2C services, the State has to develop appropriate G2C service enablement plans, at least for key government services. The services and revenue to be provided by the Jan Seva Kendra has been decided as given in Table 7.6:

Table 7.6: The Revenue Model of Jan Seva Kendra				
Type of Transaction	Charge to Citizen (per sale)	GoUP's share	SCA/ VLE's share (per sale)	Utility provider to pay
E-Governance Services	Rs.10/-	Rs.0	Rs.10/-	Rs.0
Utility Collection	Rs.0	Rs.0	Rs.4/-	Rs.4/-
Land Record	Rs.25/-	Rs.10/-	Rs.15/-	Rs.0

7.3.2.3.11 The Jan Seva Kendra would offer a multitude of services ranging in the areas of e-Governance, education, health, agriculture, commercial, retail, etc. The delivery of government services would be mandatory for the Jan Seva Kendra. Some of the possible service areas are listed as follows:

Prospective Key Government (G2C) Services

• Land records

• Registration of vehicles

• Issue of certificates / Government schemes

• Employment exchange

- Ration cards

- Electoral services

- Pension schemes

- Road transport

- Public grievance

- Utility / Telephone Bills (Government undertakings)

7.3.2.3.12 It is evident from the above that there is no role for the local governments in the implementation of the CSCs. In fact, the Standing Committee on Information Technology was of the view that *"monitoring bodies of elected representatives should be set up at each level i.e. Central, State, district and local levels to monitor and review the implementation progress as well as operationalisation of CSCs and other components of NeGP."*[96] On the other hand, it needs to be kept in mind that:[97]

   i.   The SCAs are entitled to the revenue support as per the bid amount accepted by the State Government upon completion of the rollout as per the MSA timelines irrespective of the G2C readiness in the State. In fact, the SCA is entitled for full revenue support irrespective of the number of G2C services available to be delivered through the CSCs.

   ii.   Further, the revenue support is not linked to the actual use of the centres by the citizens. The SCA is entitled to get the revenue support if it is deemed to be operational and certified as per the MSA.

These facts suggest that State Governments must be in a position to make more and more G2C services available to the citizens for proper utilization of the CSCs and further, the Gram Panchayats should play a proactive role in making the people aware about the services provided by the CSCs so that the revenue support is not wasted.

7.3.2.3.13 In fact, the CSCs have not been formulated as a purely 'e-Governance' scheme. The Guidelines for Implementation of CSCs state that the CSC Scheme is *'not about rolling out IT hardware in rural areas, but building 100,000 rural businesses in hitherto untapped and unchartered areas of the country, besides promoting rural entrepreneurship and involving community participation'.*[98] Thus, even after implementation of the CSC Scheme, the need for e-Governance structures at the panchayat level would remain as the

[96]Recommendation 13; 58th Report; April 2008
[97]Source: Information provided by NeGP PMU
[98]Source: 'Guidelines for Implementation of the Common Services Centres (CSC) Scheme in States'; www.mit.gov.in/download/CSCguidelines.pdf

CSCs are basically business centres. The Gram Panchayat Mission Mode Project (to be implemented by the State Governments) promises to fill this gap as it includes providing proceedings of Gram Sabha meetings, details of funds transfer, data regarding BPL, digitization of village infrastructure on a map, certificates of births and deaths, information about internal processes of Panchayats etc. as its proposed services. However, this MMP is still in its formulation stage.

7.3.2.3.14 The Commission has considered these issues. It agrees with the view of the Standing Committee that the CSCs need to be monitored by the local governments, especially during the first four years of operation when they are receiving revenue support for provision of G2C services. The Gram Panchayats should also make the people aware about the services made available by the CSCs and encourage them to utilize these services. State Governments should also see to it that an ever expanding bouquet of G2C services is made available through the CSCs. Further, it is also of the view that the CSCs are not a substitute for enabling the Panchayats in providing e-Governance solutions to rural population. The last mile connectivity achieved in case of CSCs should also be utilized to establish panchayat based kiosks. Also, as the CSC model is based on user charges, it may not be very effective in providing services to persons below the poverty line and other disadvantaged sections of rural society. The Commission has already recommended the following in its Sixth Report entitled 'Local Governance':

- Local governments should become one point service centres for providing various web-based and satellite-based services. This would, however, require capacity building in the local governments (paragraph 3.10.2.8 b).

- Steps should be taken to set up Information and Communication Technology (ICT) and Space Technology enabled Resource Centres at the Village and Intermediate Panchayat levels for local resource mapping and generation of local information base. These Resource Centres should also be used for documenting local traditional knowledge and heritage (paragraphs 4.5.5.6 a&b).

7.3.2.3.15 Thus, the Commission is of the view that the MMP on Gram Panchayats should be formulated in a way that it includes these aspects and is implemented with a focused approach. The development of related capacities, such as rural electrification and rural road networks should accompany its implementation.

7.3.2.3.16 Recommendations

a. As recommended by the Standing Committee on Information Technology in its 58th Report, the State Data Centres (SDCs) should be maintained by Government agencies such as NIC as it involves handling of sovereign data. Further, all data centres at the State level should be subsumed in the SDCs.

b. The implementation of SDCs, SWANs and CSCs should be co-ordinated to prevent significant time-lag between their operationalisation. Last mile connectivity issues involved in operationalisation of CSCs should also be addressed in a time-bound manner.

c. Gram Panchayats should be involved in monitoring the operation of the Common Services Centres in the first four years of their operation when they are receiving revenue support from government for providing 'Government to Citizen' services. They should proactively engage in making citizens aware of the services provided through the CSCs and encourage them to make use of them.

d. State Governments should make available a large bouquet of G2C services through the CSCs. In doing so, they should adopt the approach outlined in this Report while discussing identification and prioritization of e-Governance projects.

e. The Mission Mode Project on Gram Panchayats should be finalized and implemented in a time-bound manner. The MMP should incorporate the recommendations made by the Commission in its Sixth Report entitled 'Local Governance', in paragraphs 3.10.2.8 and 4.5.5.6.

7.3.3. Mission Mode Projects

The present status of implementation of the MMPs at the Union and State Government levels and the integrated MMPs is decribed below.[99]

7.3.3.1 Union Government MMPs

1. **MCA 21:** The MMP is in its post-implementation stage and is providing electronic services to the Companies registered under the Companies Act for their related activities such as allocation and change of name, incorporation,

[99]Based on information provided by NeGP PMU (25.08.2008)

online payment of registration charges, change in address of registered office, viewing of public records and other related services. The benefits being made available to the citizens are continuously monitored.

2. **Pension:** The Pensioners' portal launched in March 2007 provides updated information on government pension rules and regulations; helps facilitating registration of pensioners' grievances; enables monitoring timely sanction of pension/gratuity; maintains a database of Pensioners and providing links to the websites of the Directorates of Pensions and the AGs of various States.

3. **Income Tax:** This MMP which is under implementation offers a set of 17 e-services of the Income Tax Department to the taxpayers. Some of the important e-services being offered include facility for downloading of various forms, online submission of applications for PAN and TAN, query-based services for allotment of PAN and TAN, e-filing of Income Tax Returns, e-filing of TDS returns, online payment of Taxes, issue of refunds through Electronic Clearance Scheme (ECS) and Refund Banker, etc. The Primary Data Centre and the Business Continuity Planning sites for the project have been installed and commissioned.

4. **Passport, Visa and Immigration:** The implementation of the Passport & Visa MMP has streamlined the process for issuance of passport and other related services like providing efficient immigration services to people visiting India. The e-services being offered under the MMP include re-issue of Passport, issue of duplicate Passport, issue of Tatkal Passport, change in name, address, ECNR/ECR suspensions, passport status enquiry etc. The immigration services are in design and development phase.

5. **Central Excise:** The MMP is under implementation and is facilitating availability of e-services related to indirect taxation for industry, importers and exporters, inbound travellers etc. The important e-services being offered include e-filing of Import and Export documentation, electronic processing of declarations, facilities for e-filing of Central Excise and Service Tax returns, e-registration services, digital signatures, e-payment of Customs Duties etc.

6. **Banking:** The MMP which is being implemented by the banking industry aims at streamlining various e-services initiatives undertaken by individual banks. e-Governance implementation is being done by the banks concerned, with the Banking Department providing a broad framework and guidance to

them. Out of three components of the MMP, the component on Electronic Mass Payment System may not be taken-up for implementation because banks are independently taking up their own initiatives on this front. The other two components i.e. Electronic Central Registry and One India One Account for Public Sector Banks have been referred to the Indian Banks Association.

7. **MNIC:** The Pilot project of MNIC was completed and brought to a close on 31.03.2008. Distribution of smart cards to citizens is still under progress. The 20 MNIC Centres, set up in each tehsil/ block, will remain functional till 31.03.2009 for maintenance and updating of database.

8. **UID:** The strategy for collation of UID and MNIC schemes was approved in January 2008 and a decision to constitute an UID Authority under the Planning Commission was taken. The timelines for the intermediate milestones of the UID MMP were: approval of UID scheme by March 2008 and notification of UID Authority by the Planning Commission by April 2008. It is expected that implementation of UID project will be undertaken by the notified UID Authority and further milestones and timelines including those for linkage with MoRD/PDS database would be firmed up by the Authority. A pilot project is required to be undertaken by DIT and Registrar General of India to determine the feasibility of enumeration and creation of the National Population Register using UID database.

9. **e-Office:** The MMP is being conceptualised and project consultants have been appointed.

10. **Insurance:** The MMP is an industry initiative (by public sector insurance companies) and is in the conceptualisation stage. The MMP aims at facilitating customer services, automating grievance redressal mechanism and, creating a holistic database of insurance users.

7.3.3.2 Integrated MMPs

1. **CSC:** The MMP is a part of the core and support infrastructure of NeGP. These CSCs will offer e-Governance services to rural citizens. In many States, Service Centre Agencies (SCAs) have been selected. In the remaining States/ UTs, action is also progressing well. The implementation of this massive project is likely to be completed by the end of second quarter of 2009.

2. **e-Courts:** The MMP aims at utilising technology for improved provisioning of judicial services to citizens. In the first phase of this project, 700 courts in metro cities and 900 courts in capital cities barring those in the North-Eastern region, Ahmedabad and Patna have already been computerized and funds have been sanctioned for computerisation of the remaining 13000 district and subordinate courts and for upgrading the ICT infrastructure at High Courts and the Supreme Court. Site estimates of 618 Court Complexes have been prepared. The second phase of the MMP is in the implementation stage in which the services, which are proposed to be offered include availability of copies of judgments and staggered cause list, e-filing of cases, video conferencing of outstation witnesses, issue of notices to clients through e-mail etc. The network plan and the strategy for integrating it with SWAN are also being worked out. Pilot implementation will be undertaken at the High Courts of Chennai, Mumbai, Cochin, Gwalior, Dehradun and Nagaland.

3. **Electronic Data Interchange/e-Trade (EDI):** The MMP aims at facilitating Electronic Data Interchange amongst various agencies involved in the process of Imports and Exports. This project is currently under implementation and offers services like electronic filing and clearance of EXIM documents and e-Payments of duties and charges etc. At present, 85% of EXIM business is being conducted by electronic facilities created under the project. Various licenses issued by DGFT are being done electronically. The drawback payments through net banking of exporters have started at 35 locations. e-Payment of duties for the top 50 clients of Customs Department at Nava Sheva Port at Mumbai has been made compulsory from 1.4.2008.

4. **India Portal:** This MMP is in post-implementation stage and is providing a single window access to information and services of Government at all levels, in a multilingual form. National Portal Coordinators in 35 States/UTs and 63 Central Ministries are responsible for the content development, compilation, etc. The portal is available in Hindi and English. Launched in November 2005, the India Portal has been awarded the Website Quality Certificate by Standardisation, Testing and Quality Certification (Quality Level I). Special web interfaces pertaining to "NGO Partnership" and "RTI Complaints & Appeals" have been introduced.

5. **National Service Delivery Gateway:** The MMP aims at providing a common interface between the service seekers and service providers (Government

Departments). The project is in implementation stage. CDAC has finalised the implementation approach for NSDG and a pilot has been implemented and tested. NSDG portal has been launched in mid August, 2008.

6. **e-Biz:** The MMP aims at expediting the process for setting-up a commercial enterprise by offering an integrated platform of services across various departments both at the Union and State levels. The MMP is under conceptualization. Stakeholder workshops have been held for the project.

7. **e-Procurement:** This MMP of the Ministry of Commerce aims at rolling-out IT-enabled procurement by Government Departments. The project is currently in the conceptualisation stage. Preparation of DPRs in respect of three States viz. Kerala, Madhya Pradesh, Himachal Pradesh and Ministry of Health and Family Welfare is under progress. The Core Scope Document has been approved by the Department of Commerce and circulated to all the stakeholders.

7.3.3.3 State MMPs

1. **Land Records:** This is one of the projects pertaining to pre-NeGP phase which covers computerisation of Land Records. In the pre-NeGP phase, two schemes of the Ministry of Rural Development – Computerisation of Land Records (CLR) and Strengthening of Revenue Administration and Updation of Land Records (SRA & ULR) – were being implemented. These are fully operational in 13 States. These two schemes – CLR and SRA&ULR – have been merged into a new scheme called the National Land Records Modernisation Programme (NLRMP). This scheme aims at providing integrated land related information and services to citizens.

2. **Road Transport:** This MMP proposes to offer many e-Services and some of its components are under implementation from the pre-NeGP period. The MMP aims to induct technology in transport offices across India to offer vehicle registration, driving licenses and Smart Card based RCs (Registration Certificates) to citizens. Out of a total 763 RTOs, 486 have started offering vehicle registration services, while 440 RTOs are offering driving license related services. Six States are offering Smart Card based RCs and driving licenses.

3. **Agriculture:** The MMP aims at providing information regarding farm practices, market trends, agricultural and technical know-how and other related

services to the farming community. The pre-NeGP MMP has two continuing components i.e. AGRISNET and AGMARKNET. AGMARKNET aims at creating an information network which will capture/update information at various agricultural produce markets. As on date, 2500 plus *mandis* have been computerized for capturing information regarding prices and arrival of various agricultural commodities. The other component aims at back-end computerization of State Agriculture departments and selected districts in States for delivery of afore-mentioned services. Already, 17 States have been sanctioned money for implementation. A new initiative has also been started by the Department of Agriculture and Cooperation to systematically improve the delivery of services.

The work order for Phase-II of the MMP was issued to NISG on 7th February, 2008 and an agreement was signed on 25th February, 2008. The first phase of the study has already been conducted and 23 services have been prioritised for delivery to farmers. In the second phase, the timelines have been compressed and the project is moving from the design and development stage to the scheme preparation stage.

4. **Police:** Earlier the Mission Mode Project of the Police aimed at facilitating the process of civil policing and law enforcement by utilizing ICT effectively. Under this project, more than1200 police stations were to be computerized which were expected to create an information base on crimes and criminals. Work is still going on for computerization of the remaining police stations across the country. However, the Planning Commission has been approached to include the MMP as a new scheme called Crime and Criminal Tracking Network and System (CCTNS) in the Eleventh Plan period instead of providing Grants-in-Aid for the earlier project called CIPA. The Planning Commission has agreed and has approved a provision of Rs. 2,000 crore in the Eleventh Plan period with an outlay of Rs. 210 crore in the FY 2008-09.

5. **Treasuries:** This MMP aims at computerisation of treasuries involving common set of standards for seamless integration of participating agencies. Some States like Uttarakhand, UP, Maharashtra, Mizoram and Karnataka have achieved considerable progress.

6. **Municipalities:** The MMP aims at providing various services offered by Urban Local Bodies (ULBs) to residents electronically. The Planning Commission has decided that the scheme would be a part of Jawaharlal Nehru National

Urban Renewal Mission (JNNURM) for 35 cities with populations of over 10 lakh and it would be a new Centrally Sponsored Scheme (CSS) for other cities and towns. However, the new CSS for cities and towns other than the 35 big cities would wait till the implementation is assessed in 35 cities as part of JNNURM. MoUD has released the guidelines on the National Mission Mode Project (NMMP) on e-Governance as a part of the Jawaharlal Nehru National Urban Renewal Mission.

7. **e-District:** This MMP aims at delivery of high volume, citizen-centric services through CSCs. These would primarily be services not covered by other specific MMPs. A minimum of 7 services have been identified to be delivered in every State. The MMP is currently in the design and development stage and pilots have been approved for 14 States. This MMP is being regularly monitored so as to synchronize it with the CSC and SWAN rollout. In UP and Bihar, the BPR study has been completed and identification of vendor for data digitization, application development, etc. is underway. In Assam, the BPR is being finalized. For the rest of the States, BPR study has been initiated. In UP, the application is under development by NIC and the process for data digitization is in progress. In Maharashtra, the BPR is complete.

8. **Commercial Taxes:** The MMP, which aims at providing electronic services to commercial taxes payers, is being formulated. The consultation process with the States is on-going and the Ministry of Finance has been asked to expedite the consultation process for taking it to the next logical stage and initiate implementation on the ground.

9. **Gram Panchayat:** This massive MMP aims at improving governance at the grass roots and providing various e-services at the Panchayat level. In the near future, pilot projects are being planned in some States. The Core Scope Document was submitted in January 2008. The total cost implication estimated by the Ministry of Panchayati Raj, is Rs 6833 crore with timelines of three years for which the sanction of Planning Commission is yet to be obtained.

10. **Employment Exchange:** This MMP of the Ministry of Labour aims at providing e-services to employment seekers and employers. The process of engaging the services of a consultant for preparation of the Detailed Project Report has commenced and the techno-commercial proposal of the Consultant is being vetted.

7.3.3.4 The present time frames and the stage of implementation of all the Mission Mode Projects implemented under NeGP are presented in the Table below:

Table 7.7: Activity Status of Mission Mode Projects under NeGP[100]			
Sl.No MMP	Scheme Sanction Status	Project Stage	Completion date
ACTIVITY STATUS OF CENTRAL MMPs			
1. MCA 21	Sanctioned	Post Implementation	September 2006 (Completed)
2. Pensions	-do-	Post Implementation	March 2007 (Completed)
3. Income Tax	-do-	Implementation	December 2008
4A Passport and Visa	-do-	Implementation	September 2009 (T+ 19 months) (T is contract award date)
4B Immigration	Sanction expected by August 2008	Design & Development	October 2009
5 Central Excise	Sanctioned	Implementation	December 2009
6 Banking	Industry Initiative	Implementation	--
7A MNIC (Pilot)	Sanctioned	Implementation	--
7B UID	Draft scheme under discussion and EFC note for appointment of UID authority under preparation by Planning Commission.	Design & Development	(T is appointment of UID authority) T+15 months
8 e-Office (Pilot)	To be prepared	Design & Development	Pilots under conceptualization
9 Insurance	Industry Initiative	Conceptualisation	--
ACTIVITY STATUS OF INTEGRATED MMPs			
1 CSC	Sanctioned	Implementation	June 2009
2A e-Courts (Pre NeGP)	Ongoing scheme	Implementation	Operational
2B e-Courts	Sanctioned	Implementation	December 2008
3 EDI	Sanctioned	Implementation	December 2008
4 India Portal	Sanctioned	Post Implementation	Operational
5 NSDG	Sanctioned	Implementation	August 2008

[100]Source: Based on information provided by NeGP, Programme Management Unit (6.10.2008)

		Table 7.7: Activity Status of Mission Mode Projects under NeGP		*Contd.*
Sl.No	**MMP**	**Scheme Sanction Status**	**Project Stage**	**Completion date**
6	e-Biz # Pilot)[101]	Sanctioned	Design & Development	#
7	e-Procurement++[102]	Scheme was to be prepared by March 2008, now it is communicated as NA	Design & Development	March 2010
ACTIVITY STATUS OF STATE MMPs				
1	Land Records Ph.I (Pre NeGP)		Operational	Operational in 12 States
2	Land Records Ph.II & Reg. (NLRMP)[103]	Recommended for sanction by EFC	Conceptualisation	To be firmed up
3	Road Transport	Sanctioned	Implementation	October 2010
4A	Agriculture (Pre NeGP)		Operational	Operatonal
4 B	Agriculture	Scheme to be approved by July, 2008	Conceptualisation	December 2011
5	Police	EFC note under circulation; being vetted by DIT	Conceptualisation	December 2010
6A	Treasuries (Pre NeGP)		Implementation	Under operation
6B	Treasuries[104]	Pilot implementation from April, 2008	Design & Development	March 2010
7	Municipality[105]	Approved	Design & Development	2008-2013
8	e-District (Pilot)	Pilot in 14 States sanctioned	Design & Development	T+18 months (T is date of approval)
9	Commercial Taxes	To be prepared	Design & Development	To be firmed up
10	Gram Panchayat	EFC note for the scheme vetted by DIT and observations communicated to the Ministry	Conceptualisation	To be firmed up
11	Employment Exchange	To be prepared	Conceptualisation	To be firmed up.

[101]# Earlier tender cancelled; new timelines under finalization.
[102]++ New timelines for preparation of scheme to be firmed up
[103]Earlier it was CLR and SRA&ULR. Department has now developed a combined project including Registration and Land Records called NLRMP. Department has indicated that decision regarding inclusion of National Land Records Modernisation (NLRMP) in Mission Mode Project would be taken once the scheme is ready.
[104]Pilot to be implemented in 4 States
[105]Planning Commission has decided the modalities for implementation.

7.3.3.5 The table shows that while a number of projects are still in the conceptualization or design and development phase, others would be completed after 2008 (only the Central MMP pertaining to Income Tax and Integrated MMPs on EDI and NSDG are expected to be completed by 2008). Thus, in the post-NeGP scenario, only the Central MMPs pertaining to MCA 21 (Ministry of Corporate Affairs) and Pensions (Ministry of Personnel, Public Grievances and Pensions) have been completed. It is evident that e-Governance initiatives have been launched on a wide spectrum at one go which has possibly resulted in their slow progress. Projects related to technical tasks such as data architecture, standardization, inter-operability, data centres etc. are proceeding in tandem with those related to providing connectivity across the country as well as those pertaining to providing G2C, G2B and G2G services and information.

7.3.3.6 Of the three broad components of NeGP, the third one viz. the Mission Mode Projects have the potential of creating a direct impact on citizens. Often these are sectors where the citizens' interaction with the Government produces maximum dissatisfaction and grievances. Unfortunately, these are the very sectors where progress in implementation in NeGP is lagging. There has been an absence of a clear strategy for governance reforms based on the development of a road-map for major e-Governance projects. Poor progress is due to a variety of factors including the volume and breadth of the transactions involved, prevalence of outdated and cumbersome procedures, inertia and resistance to change, the overhang of old and outdated records, inadequate attention to BPR and lack of clear demarcation of responsibility of the project authorities.

7.3.3.7 Most of the State level e-Governance projects under NeGP are still at the conceptual stage. The Union and State Governments have not been able to give momentum to these projects despite their best efforts. The Commission is of the view that many of these projects have pre-maturely gone ahead with the ICT component of the project without first prioritizing the governance reforms that are a pre-requisite for these projects. This would result in automation of the existing inefficiencies in the system . As mentioned earlier, the success of all these projects is heavily dependant on a radical overhaul of the existing systems and procedures. These projects also seem to suffer from absence of clear-cut division of responsibility and accountability as well as inadequate empowerment of the project management authorities.

7.3.3.8 Recommendations:

a.   State Governments should first provide a clear mandate for governance reforms that must precede the e-Governance initiatives. This would involve, if necessary, changing procedures and even structures and statutes. Therefore as a first step, these issues need to be analysed, decision points identified and political approval taken.

b.   The major decisions involved in (a) above should be identified by the State Level Apex Committee and approval of the State Government obtained within six months.

c.   The Secretaries of the concerned departments should be entrusted with the responsibility of project implementation in unambiguous terms. They should be provided with the requisite authority and resources for project implementation.

d.   Thereafter, the business process re-engineering and capacity building exercise should be completed by the concerned department within a maximum period of one year. The IT component of these projects should not be funded until this step is completed.

e.   The Annual Performance Appraisal Report (APR) of public servants entrusted with the responsibility of project implementation under NeGP should have a separate entry for evaluation of their performance in this regard.

7.3.4 Analysis of Some Mission Mode Projects

In order to highlight the issues emerging out of the implementation of these Mission Mode Projects on e-Governance, the Commission has examined some of the projects. These are discussed below.

*7.3.4.1 Mission Mode Project on Computerisation of Land Record*s

7.3.4.1.1 *Background:* Computerisation of land records in India has been going on for quite some time and the delays and problems associated with it highlight the major issues involved in implementation of e-Governance projects involving complex data bases and dealing with more than one statute. Government of India had initiated two Centrally Sponsored Schemes in the form of (a) Strengthening of Revenue Administration & Updating of Land Records (SRA&ULR) and (b) Computerization of Land Records (CLR).

7.3.4.1.2 The first scheme (i.e. SRA&ULR) was launched in 1987-88 with the objective of assisting the States and UTs in updating and maintaining land records, setting up and strengthening the survey and settlement institutions including the survey training infrastructure, modernization of the survey & settlement operations, and strengthening of the revenue machinery. Initially, the Scheme was approved for the States of Bihar and Orissa which was extended to other States/UTs, during 1989-90.[106] While Central assistance to the States has been 50% on cost-sharing basis, in the case of the UTs, 100% assistance has been provided. About Rs. 41,000 crore has been released under this scheme since its inception; however, only 67.85% of the funding was utilized. Larger States where utilization was low are Chhattisgarh, Orissa, Gujarat, Bihar and Rajasthan with percentage utilization of 10.77, 22.75, 41.26, 45.27 and 48.80 respectively.[107]

7.3.4.1.3 The second scheme (CLR) was launched in 1988-89 with pilot projects in 8 districts of 8 States with 100% Central assistance and was subsequently extended to cover the rest of the country. The main objective of the scheme was to ensure that the landowners get computerized copies of the RoRs (Records of Rights) on demand.

The phased coverage of this scheme has already been discussed in Chapter 4.[108]

7.3.4.1.4 The activities covered under this scheme included (1) undertaking data entry work, (2) setting up computer centres at the taluk/tehsil/block/circle levels and sub-divisional level, (3) establishing District Land Records Data Centres, (4) imparting training on computer awareness and application software to revenue officials for regular updating of record of rights and smooth operation of computer centres, (5) setting up of a monitoring

[106]http://pib.nic.in/archieve/ecssi/ecssi2006/3ruraldev_ecssi2006.asp
[107]Annual Report, Union Ministry of Rural Development, 2007-08
[108]Refer to paragraph 4.2.1.2

cell at the State Headquarters and (6) digitization of cadastral maps.[109] The present status of computerization of land records in the States and UTs, 'as assessed through a detailed sizing exercise',[110] is presented in Table 7.8 below:

Sl.No.	Phase of Activity	State/UT
	Table 7.8: Progress of Computerisation of Land Records	
1.	Still at preparatory stage	Jammu & Kashmir, Punjab, Meghalaya, Chandigarh, Lakshadweep
2.	RoR data entry begun but not completed	Arunachal Pradesh, Bihar, Jharkhand, Kerala, Manipur, Mizoram, Nagaland, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu
3.	RoR data entry likely to be completed soon	Assam, Haryana, Himachal Pradesh, Orissa, Tripura, Puducherry
4.	RoR data entry completed	Chhattisgarh, Goa, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal, NCT of Delhi
5.	Manual issue of RoRs stopped	Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal
6.	RoR data placed on websites	Chhattisgarh, Gujarat, Madhya Pradesh, Orissa, Rajasthan, Uttarakhand
7.	Funds received for digitization of cadastral maps	Andhra Pradesh, Assam, Bihar, Gujarat, Jharkhand, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal and Puducherry

7.3.4.1.5 As mentioned in paragraph 4.2.1.4 above, the implementation of the scheme was far from satisfactory and a committee on computerisation of Land Records was constituted by the Union Ministry for Rural Development. This committee made various suggestions.

7.3.4.1.6 The weaknesses in the SRA & ULR and CLR schemes which contributed to delays in their implementation in the last 20 years could be identified as follows (Source: DoLR):

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[109]National Land Records Modernisation Programme (NLRMP) – 2008 (information received from DOLR)
[110]National Land Records Modernisation Programme (NLRMP) – 2008 (information received from DOLR)

i.   outdated records were being computerized and scanned.

ii.   The most important activity for updation of land records, i.e., survey was neglected by most of the States. Further, technology options for surveys were not indicated.

iii. Both the schemes excluded inter-connectivity between GIS mapping and registration of documents.

iv.   The choice of activities was left to the States and UTs. Each activity was a goal in itself. Most States/UTs chose activities that strengthened the revenue administration. For example, more than 90% of the SRA&ULR funds were utilized for construction activities.

v.   Funds were thinly spread.

vi.   Due to the absence of a time frame, the exit mode from the scheme was not defined.

vii. The system of monitoring was not specifically spelled out.

7.3.4.1.7 To assess the impact of various State-level e-Governance projects, the DIT had commissioned a survey-based study. The Report of this study (July 2008) prepared by the Centre for Electronic Governance, IIM, Ahmedabad draws attention to some basic issues, especially in case of projects involving computerisation of land records and registration. These are mentioned below:

i.   *Computerized service delivery is in the early stages of evolution.* In most States, land record computerization has been limited to the issue of Records of Rights (RoR). Mutation, which is a more complex process, has been computerized in just five States. No State in India has reached an evolved stage in land records computerization which integrates the functioning of the three related agencies – revenue department where land records are maintained; survey department where maps of land parcels are maintained; and registration department where deeds of sale/purchase of land are registered and maintained.

ii.   *Even basic computerized delivery has not reached the entire population in the States covered by the study.* In most of the States, computerized delivery has

not reached beyond the taluka level and in half the States, fifty per cent of the districts still operate services in a manual mode.

iii. *E-government projects have not resulted in any significant transformation in the working of government organizations and processes which should be the key objective of an e-government project.* In the land records computerization project, for example, the emphasis was on digitizing manual records, while in case of property registration, the emphasis was on converting the process of manual copying of registered deeds to scanning them. In many cases, even basic process reforms like simplification and rationalizing of forms, and putting in place an appointment and queue management system have not been undertaken. That is why most projects have not been able to harness the potential benefits that e-Governance can offer.

iv. *There is a great deal of difference in the performance of the "best" and the "worst" State in case of these computerized applications.* Given the fact that the processing steps in the delivery of these services can be similar across the States, there is no explanation for the variations in performance, other than the varying quality of process reform and design of these systems. This indicates that each State has chosen to design its application without learning from the available best practices. Therefore, for new initiatives, it is important to build the required capacity in both, the public and private sectors, for conceptualizing, designing and implementing basic process reforms.

7.3.4.1.8 In fact, in case of computerization of land records, the study revealed that only ten States had implemented the project on a scale which warranted an assessment. Rajasthan, Gujarat, Tamil Nadu, Uttarakhand, West Bengal, MP and Orissa have covered all talukas of the State. Services are delivered from departmental offices located at taluka headquarters. Only in Rajasthan are other channels such as cyber cafes used for delivering non-authenticated copies. In Himachal Pradesh, 65% of talukas have been covered while in Haryana and Delhi, computerization is at a nascent stage. Besides Tamil Nadu, all other States started the implementation after the year 2000. Two basic services have been computerized: issue of Records of Rights (RoR), which has been computerized in all States covered by the assessment; and mutation of land records upon a transfer of land to another owner, which has been implemented in five States. However, in case of mutation, even after computerization, agents continue to be used by a large proportion of users in four States. Only Gujarat has been able to eliminate the use of agents.[111]

[111]Source: 'State level e-Governance Projects in India: Overall Assessment of Impact on Citizens'; Report prepared by Centre for Electronic Governance, IIM, Ahmedabad; July, 2008

7.3.4.1.9 The system of land records management varies from State to State depending upon their historical evolution and local traditions. Several departments are involved in managing land records in most of the States, and the citizen has to approach more than one agency for complete land records, e.g., Revenue Department for textual records and mutations; Survey & Settlement (or Consolidation) Department for the maps; Registration Department for verification of encumbrances and registration of transfer, mortgage, etc.; the Panchayats (in some States, for mutation), and the municipal authorities (for urban land records). These departments work in a stand-alone manner, and updating of records by any one of them makes the records of the others outdated. Thus, the records are almost always outdated and do not reflect the ground realities. Also, there is no integration of textual and spatial records, making it difficult to give maps-to-scale with the Records of Rights (RoRs). Further, the most important activity for updating the records, i.e., survey has been neglected in most of the States. Original survey for cadastral mapping has not taken place in many parts of the country.

7.3.4.1.10 The Government of India have now decided to implement a modified Centrally-Sponsored scheme in the shape of the National Land Records Modernization Programme (NLRMP) by merging the two existing Centrally-Sponsored Schemes of Computerization of Land Records (CLR) and Strengthening of Revenue Administration and Updating of Land Records (SRA&ULR) in the Department of Land Resources (DoLR), Ministry of Rural Development. The integrated programme is aimed at modernizing the system of management of land records, minimizing the scope of land disputes, enhancing transparency in the land records maintenance system and facilitating the eventual move towards guaranteed conclusive titles to immovable properties in the country. The major components of the programme are computerization of all land records including textual and spatial records and mutations, survey/re-survey and updation of all survey & settlement records including creation of original cadastral records wherever necessary, computerization of registration, development of core GIS and capacity building.[112] The State-level MMPs on land records and property registration under the NeGP would now be implemented under this new programme.

7.3.4.1.11 The driving force behind the launch of NLRMP is the need for a comprehensive modernization scheme which would integrate Land Records with Registration. The long-term goal of the NLRMP is to usher in a system of conclusive titles with title guarantee in the country. The system of conclusive titles as proposed under NLRMP is based on four principles:

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i. Principle of a single agency to handle land records;

ii. the "mirror" principle, which states that, at any given time, land records mirror the ground reality;

iii. the "curtain" principle, which refers to the fact that the record of title is a true depiction of the ownership status, mutation is automatic following registration and title is a conclusive proof of ownership; and

iv. principle of title insurance - the title is guaranteed for its correctness and the party concerned is indemnified against any loss arising because of inaccuracy in this regard.

7.3.4.1.12 The basic premise under the NLRMP is that the present land records management system in India does not reflect any of these principles. Based on the field experience of the States/UTs and the technical agencies, the components and activities of NLRMP have been proposed as under:

i. Computerization of land records

   a. Data entry/re-entry/data conversion of all textual records including mutation records and other land attributes data

   b. Digitization of cadastral maps

   c. Integration of textual and spatial data

   d. Tehsil, sub-division/district data centres

   e. State-level data centres

   f. Inter-connectivity among revenue offices

ii. Survey/re-survey and updating of the survey & settlement records (including ground control network and ground 'truthing') using the following modern technology options:

   a. Pure ground method using electronic total station (ETS) and global positioning system (GPS); or

b.   Hybrid methodology using aerial photography and ground truthing by ETS and GPS; or

c.   High Resolution Satellite Imagery (HRSI) and ground truthing by ETS and GPS.

iii.   Computerization of registration

    a.   Computerization of the sub-registrars' offices (SROs)

    b.   Data entry of valuation details

    c.   Data entry of legacy encumbrance data

    d.   Scanning & preservation of old documents

    e.   Connectivity to SROs with revenue offices

iv.   Modern record rooms/land records management centres at tehsil/taluk/circle/block levels

v.   Training & capacity building: a) Training, workshops, etc. and b) Strengthening of the survey and revenue training institutes

vi.   Core GIS

    a.   Village index base maps from satellite imagery, for creating the core GIS

    b.   Integration of three layers of data:

        1)   Spatial data from aerial photographs or high-resolution satellite imagery

        2)   Survey of India and Forest Survey of India maps

        3)   Cadastral maps from revenue records.

vii.   Legal changes

    a.   Amendments to the Registration Act, 1908

b. Amendments to the State Stamp Acts

c. Other legal changes

d. Model law for conclusive titling.

viii. Programme management

a. Programme Sanctioning & Monitoring Committee in the DoLR

b. Core Technical Advisory Group in the DoLR and the States/UTs

c. Programme Management Unit (PMU) in the DoLR and the States/UTs

d. Information, Education and Communication (IEC) activities

e. Evaluation.

7.3.4.1.13 It is expected under NLRMP that the new data and the conclusive titles would be further linked to various activities and institutions for better governance and overall development. These may include activities pertaining to land acquisition and rehabilitation & resettlement, land use planning, cropping pattern and food security, disaster management and institutions such as banking, credit, and insurance. The benefits to the citizens under NLRMP are envisaged as follows:

i. Real-time records will be available to the citizen.

ii. Since the records will be placed on the websites with proper security IDs, property owners will have free access to their records while maintaining confidentiality.

iii. Free accessibility to the records will reduce interface between the citizen and the Government functionaries, thereby reducing rent seeking and harassment.

iv. Public-Private Partnership (PPP) mode of service delivery will further reduce citizen interface with Government machinery, while adding to the convenience.

v.   Abolition of stamp papers and payment of stamp duty and registration fees through banks, etc. will also reduce interface with the Registration machinery.

vi.   With the use of IT inter-linkages, the time for obtaining RoRs, etc. will be drastically reduced.

vii.   The single-window service or the web-enabled "anytime- anywhere" access will save the citizen, time and effort in obtaining RoRs, etc.

viii.   Automatic and automated mutations will significantly reduce the scope of fraudulent property deals.

ix.   Conclusive titling will also significantly reduce litigation.

x.   These records will be tamper-proof.

xi.   This method will permit e-linkages to credit facilities.

xii.   Market value information will be available on the website to the citizen.

xiii.   Certificates based on land data (e.g., domicile, caste, income, etc.) will be available to the citizen through computers.

xiv.   Information on eligibility for Government programmes will be available, based on the data.

xv.   Issuance of land passbooks with relevant information will be facilitated.

7.3.4.1.14 The basic premise on which the NLRMP is formulated is that there is need for moving from presumptive titles (present RoRs) to conclusive titles. To achieve this, it is proposed that the 'Torrens System' needs to be adopted, which would require having a single agency to manage land records and result in the land records reflecting the ground reality (the 'mirror' principle). Thus, the record of title at any point of time would be the true depiction of ownership (the 'curtain' principle) and would be indemnified for correctness by the manager of land records. It is assumed that the present situation in India does not reflect any of these desirable situations and changing over to the Torrens System would guarantee these outcomes.

7.3.4.1.15 One of the outcomes envisaged under the NLRMP (by adopting the Torrens System) is that the land records at any point of time would reflect the ground position. It

needs to be understood that the present institutional and legal framework in most of the States/UTs in India does accommodate the 'mirror' principle. Thus, the Karnataka Land Revenue Act, 1964 provides the following:

"Record of Rights. – (1) A record or rights shall be prepared in the prescribed manner in respect of every village and such record shall include the following particulars:

 a) *the names of persons who are holders, occupants, owners, mortgagees, landlords or tenants of the land or assignees of the rent or revenue thereof;*

 b) *the nature and extent of the respective interest of such persons and the conditions or liabilities (if any) attaching thereto;*

 c) *the rent of revenue (if any) payable by or to any of such persons; and*

 d) *such other particulars as may be prescribed*

(2) The record of rights shall be maintained by such officers in such areas as may be prescribed and different officers may be prescribed for different areas.

(3) When the preparation of the record of rights referred to in sub-section (1) is completed in respect of any village, the fact of such completion shall be notified in the official Gazette and in such manner as may be prescribed.

Acquisitions of rights to be reported. – (1) Any person acquiring by succession, survivorship, inheritance, partition, purchase, mortgage, gift, lease or otherwise, any right as holder, occupant, owner, mortgagee, landlord or tenant of the land or assignee of the rent or revenue thereof, shall report orally or in writing his acquisition of such right to be prescribed officer of the village within three months from the date of such acquisition, and the said officer shall at once give a written acknowledgment of the receipt of the report to the person making it:

Provided that where the person acquiring the right is a minor or otherwise disqualified, his guardian or other person having charge of his property shall make the report to the prescribed officer:

Provided further that any person acquiring a right by virtue of a registered document shall be exempted form the obligation to report to the prescribed officer:

Provided also that any person reporting under this sub-section the acquisition by him of a right in partition in respect of the land shall annex with the report a sketch showing the metes and bounds and other prescribed particulars of such land and such person shall get the sketch prepared by a licensed surveyor.

Explanation I.- The rights mentioned above include a mortgage without possession but do not include an easement or a change not amounting to a mortgage of the kind specified in section 100 of the Transfer of Property Act, 1882 (Central Act No.4 of 1882).

Explanation II.- A person in whose favour a mortgage is discharged or extinguished or a lease determined acquires a right within the meaning of this section.

(2) Notwithstanding anything contained in sub-section (1), the State Government may, by notification, appoint any Revenue Officer to whom a report under sub-section (1) may be made, in which case such officer shall give a written acknowledgement of the receipt of such report to the person making it, and forward the report to the prescribed officer of the village concerned."

7.3.4.1.16 In spite of clear cut legal provisions for maintenance of RoR and their regular updation to reflect ground realities, the fact remains that this does not take place. Thus a mandate alone is not adequate to guarantee the mirror principle. Therefore, what is required, apart from a strong legal framework, is the need for processes and institutional reforms combined with technology, to redress the situation.

7.3.4.1.17 As mentioned earlier, efforts for computerization of land records have been on-going for more than a decade. There has been some success in a few States. But this is limited to 'textual computerisation' of existing records. This by no standards is a mean achievement, as it has brought in transparency and improved accessibility to land records. However, two major problems remain. Firstly, the maps in use are totally outdated and secondly, the titles indicated in relation to the land are not up-to-date. Sometimes, the time lag is more than a generation.

7.3.4.1.18 These two basic problems would need to be addressed on a priority basis. Modern technology can be of assistance in quickly carrying out the measurements of land and this does constitute an important part of NeGP. But, unless mechanisms are put in place to ensure that any change in titles is quickly captured by the land records, any amount of

ICT would not provide optimal solutions. Therefore, the existing mechanism for updating land records – which varies from State to State – would have to be analysed, improved and strengthened so that henceforth all transactions in titles are executed in the land records immediately.

7.3.4.1.19 NeGP focuses on integration of Registration with the Record of Right. But this by itself will not be sufficient, as a large number of changes in titles of land occurs through other means – namely, succession, will, partition, gift, survivorship etc. Therefore, any land record system should be able to detect such transactions and accordingly update the records.

7.3.4.1.20 Also, there are bound to be disputes where land titles are concerned. All State land records laws provide for a dispute resolution mechanism – the revenue courts. Over time, the functioning of this mechanism has left much to be desired. There is urgent need to build the capability of this mechanism.

7.3.4.1.21 Thus, if the technological part of the programme is not supported by complete business process re-engineering required for carrying out an extensive survey of the field situation, recording of the correct position, merger of agencies dealing with different aspects of landed property and maintenance of land records (i.e. titles in the proposed system) accompanied by changes in various statutes, the e-Governance project would not yield the desired results.

7.3.4.1.22 While the above discussion is concerned with lands lying in rural areas, in case of urban lands, the situation is graver as records are virtually non-existent. The NLRMP does not cover urban lands and properties. In fact, these are also not covered under the JNNURM. Growth in urbanization would result in continuous conversion of rural land into urban land. Thus, there cannot be two systems for management of rural and urban lands. However, the computerization and management of urban land records taken together with survey operations would pose challenges which would require devoting substantial human and financial resources along with making changes in processes and statutes. Thus, there is a pressing need for a de novo exercise in carrying out surveys and measurements in urban areas and devising a suitable system for titles.

7.3.4.1.23 Recommendations

a. **Surveys and measurements need to be carried out in a mission mode utilizing modern technology to arrive at a correct picture of land holdings and land parcels and rectification of outdated maps.**

b.   **This needs to be accompanied by an analysis of the existing mechanism for updating land records – which varies from State to State – to be supplanted by an improved and strengthened mechanism which ensures that all future transactions in titles are immediately reflected in the land records. Such a system should be able to detect changes in titles through various means – namely, succession, will, partition, gift, survivorship etc and update records accordingly.**

c.   **The dispute resolution mechanism with regard to land titles needs to be strengthened in order to be compatible with the demands made on it.**

d.   **In case of urban areas, a similar exercise needs to be undertaken especially since measurements and surveys have not been done in many of such areas and even record of titles is not available in most cities.**

7.3.4.2 Passport & Visa MMP

7.3.4.2.1 This is one of the important Central MMPs with the objective of providing e-services regarding applications for fresh passport, ECNR, renewal of passport, application status tracking etc. The Department of Information Technology, Government of India had commissioned a survey based study on the impact of some Central MMPs, which included the MMP on passports. Based on this study, the Centre for Electronic Governance, IIM, Ahmedabad has prepared a Report (September 2008) which highlights the main issues concerned with this MMP. These are outlined below.

7.3.4.2.2 Computerization of passport offices was initiated as a pilot project at the Regional Passport Office (RPO) at Delhi in 1989. Subsequently, computerization was extended to all 34 passport offices across India. Computerization of passport offices was done in phases involving basic computerization of the office, Index card image capturing,[113] online Index checking[114] and passport printing. In addition, computerization of passport application collection centres, provision for authenticated e-mail services, communication between the passport offices and district offices through authenticated e-mail, electronic storage and retrieval of documents furnished by the applicants are also being undertaken. The online services were extended to cover the remaining passport offices in 2007-08. For online registration, an applicant needs to submit required information such as name, address, date of birth etc. through an online form. Upon successful registration, the applicant is required to submit the original application, supporting documents and fee at the passport

[113]Scanning of Index cards allows simultaneous processing of the applications by different sections of the passport office, thereby making the processing of an application quicker.
[114]This is done to verify if an applicant has applied for a passport before or already possesses one. Checking is done using a phonetic search to match the applicant's details and photograph with existing data in the master table of the online database server.

office on pre-specified date. Other major services offered through the online mode include provisions to check the status of one's application, download application forms, and access information on services and procedures. Passport services offered through the online mode can also be availed of through the manual mode. Most passport applicants, irrespective of the mode of application, prefer to engage an intermediary/agent to help in getting their application processed. The complicated process of passport application and the time required to pursue the application process may be responsible for dissuading applicants from personally submitting their applications. The use of online services is mainly limited to downloading of application forms and seeking information on application processes. Thus the Report concludes that:

> **Box 7.2: Comparison of Visa Systems**
>
> Indian system (Indian High Commission, London): It is not just that the passport and its owner must be physically present. The fee must be in cash; the visa form must be filled in by hand and authenticated with signature and a photograph (a hard copy, not a digital file). The procedure has scarcely changed in 60 years. The 500 people waiting at 8.30 a.m., when the visa office opens, should get their visas by noon, though on busy days stragglers may be told to collect it the next day. Applying by post is possible, but may take weeks.
>
> US system (US Embassy, London): Procedures at America's fortress-like embassy are even more stringent, requiring all visa applicants to present themselves in person, with no postal option. But here the procedure is backed up by intelligent use of electrons. Applications must be submitted online, accompanied by a non-refundable $131, paid electronically. In return, the applicant receives a confirmation e-mail, which includes a barcode with the information from the completed form. Printed out, it is also the entry ticket to the embassy, controlling outsiders' access to one of the main terrorist targets in London. Inside, the barcode is scanned, putting the data onto the visa officer's computer; fingerprints are digitally recorded. The visa itself, collected shortly afterwards, has banknote-style security features, plus a scanned picture of the applicant.
>
> *Source: "The electronic bureaucrat: A special report on technology and government"; The Economist dated February 16, 2008; pages-3&4.*

    i.   In the case of passports, the reduction in the number of trips and waiting time is very marginal as only submission of application was partially computerized leaving most of the back-end process in their old inefficient form.

    ii.   Online passport services are limited to partial e-enabling of the application procedure while the rest of the application process had remained more or less similar for both the online and offline applicants.

    iii.   Online provisioning of passport services is still at a nascent stage.

7.3.4.2.3 Recently, Government has awarded the ambitious 'Passport Seva Project' contract to a private service provider entailing digitisation of the entire passport services. This project is aimed at ending the serpentine queues and the long wait in issue of passport.[115] It is expected that the process for issue of a new passport would be expedited to three working

[115]Source : The Hindu Businessline dated 14.10.2008

days (or less), subject to police verification. Passports applied under the '*tatkal*' scheme would be dispatched the same day, subject to address and police verification. While the Ministry of External Affairs (MEA) would continue to perform the sovereign function such as verification and grant of passport, all peripheral activities would be done by the private service provider.

7.3.4.2.4 The Ministry of External Affairs (MEA) now aims to nearly quadruple the number of passport counters to 1,250 from the current 345 and bring the entire process of issuing travel documents online. As many as 77 fully computerised new Passport facilitation centres would be opened across the country. To speed up the process of police verification, a secure network is also being set up. The Passport facilitation centres would act as primary hubs to support activities such as biometric capture, photograph, payment and verification and grant of passports in the presence of applicants for most cases. A call centre would be established to help the applicants with information regarding passport procedures and the status of submitted requests. Bangalore and Chandigarh will be the first to get the new Passport Seva Kendras by March 2009 which would be functional on a pilot basis.

7.3.4.2.5 As mentioned earlier, for any e-Governance initiative to succeed, there is need for identification of processes involved in providing any service, analysis of the validity of these processes and associated forms and re-engineering of these process keeping the concerns of simplicity and security in mind. While implementing, there is need for prioritization, keeping in view what could be achieved by internal computerization and connectivity and through an organisation's own database. The steps involving other databases and agencies could be implemented over time. In the case of passports, the use of biometrics for identification and digital photographs etc. (in the absence of unique national identity card), online payment, online application and tracking system etc. were activities which could have been identified earlier for inclusion in the e-Governance initiative. As the verification part is dependent on another organization and database, only when the records of the police organization are computerized, made up-to-date and online would the process be further expedited. It needs to be recognized that the whole process consists of three phases:

     i.   Pre-police verification phase

     ii.   Police verification phase

     iii.   Post-police verification phase

7.3.4.2.6 The Commission is of the view that the processes which precede and follow the police verification phase need to be re-engineered and put in e-Governance mode

immediately. While the ultimate goal of this exercise should be integration with computerized and online police systems and citizen identification database, pending such integration the police verification exercise may be streamlined and made time-bound.

7.3.4.2.7 Recommendation

    a.   **The entire passport issue process needs to be put on an e-Governance mode in phases. As the processes which precede and follow the police verification have already been re-engineered and put in e-Governance mode, this may be integrated with online police and citizen identification data bases. In the mean time, the process of police verification should be streamlined and made time bound.**

7.3.4.3 Unique National Identity Number/Card

7.3.4.3.1 The need for a unique identity card for citizens has been considered necessary not only for security reasons but also for delivery of services to citizens and taking the development programmes to the target population. In fact, many of the developmental programmes and schemes (for example, NREGA) include provisions for identifying the target population. However, it has been observed that implementation of each new scheme culminates in a de novo exercise for identifying the target population without reference to any existing database. Even where databases do exist, their reliability remains doubtful as there is no system of continuous corroboration with the field situation and regular updation. On the other hand, illegal immigration into the country is now posing a serious threat to national security and one way of dealing with this issue is by means of a citizen's identity number/card.

7.3.4.3.2 Government of India has already implemented a pilot project for a 'Multi-purpose National Identity Card' (MNIC) in select areas of 13 districts in 12 States and one Union Territory. This project had the following aims:

    i.   To create a credible individual identification system

    ii.   To allow speedy and efficient transactions between the individual and the service provider (government and non-government)

    iii.   To create a user-friendly interface between the citizen and the government

    iv.   To facilitate improvement in services to the people in 'Below Poverty Line' (BPL) or 'Above Poverty Line' (APL) categories

v. To act as a deterrent for future illegal immigration.

7.3.4.3.3 Some of the districts covered under this project were Karimganj (Assam), Kathua (Jammu and Kashmir), Kachchh (Gujarat), Jaisalmer (Rajasthan), Pithoragarh (Uttarakhand), West Tripura (Tripura), Murshidabad (West Bengal) and Ramanathapuram (Tamil Nadu). Thus, this project has focused on select border areas of the country with illegal immigration in mind. To facilitate the project, Section 14A was inserted in the Citizenship Act, 1955 by way of the Citizenship (Amendment) Act, 2003 to provide for, inter alia, the following:

> *"(1) The Central Government may compulsorily register every citizen of India and issue national identity card to him.*
>
> *(2) The Central Government may maintain a National Register of Indian Citizens and for that purpose establish a National Registration Authority."*

As per Section 14A(3), the Registrar General, India shall act as the National Registration Authority.

7.3.4.3.4 The project was completed in March 2008 and more than 12 lakh identity cards have been issued to persons above 18 years of age. Twenty MNIC centres (one in each tehsil/block in the pilot areas) will remain functional till March, 2009 for updating of database and issuing identity cards to those who would attain the age of 18 years during this period.[116] Thus, individuals below 18 years of age were outside the purview of this project.

7.3.4.3.5 With the completion of the MNIC project, the Planning Commission has been entrusted with the formulation of the Mission document for the UID project. As per the Eleventh Five Year Plan document, *'the long-term objective of the UID Project is to create a Core Database (CDB) for all residents, each having a unique identification number, which is regularly updated and is easily accessible to, and is used by all departments for identification of residents in the country'.* The aim would be to use this CDB as the basis for identifying an individual and enabling cross-linkage of major databases in the country. The 'unique identity' is expected to reduce significantly identity related fraud and allow for better targeting of government schemes. It also envisaged that the UID Project will eventually become the underpinning of the Citizens Smart Card Project. The Smart Card would have a memory partitioned into distinct modules representing different entitlement groups for which free services or implicit/explicit subsidies are given. These would include food and nutrition, energy (kerosene, LPG, electricity), education and health services, civic amenities and services (drinking water, latrines/sanitation), employment (National Rural

[116]Source: http://pib.nic.in/release/rel_print_page1.asp?relid=43993

Employment Guarantee) and economic/farming (fertilizer, irrigation water, MSP). These separate modules could, in principle, be managed by the Ministry/Department under which the group falls. They would be responsible for setting up and maintaining the back-end financial and database system that is vital for eliminating errors of omission and commission and improving delivery efficiency. These Ministries/Departments would control the entry of data into their own module of the Smart Card. Any subsidy received by an individual would be entered on his/her Smart Card when the goods or service is delivered/charged for by the authorized supplier (for example, the fair price shop, kerosene/LPG dealer, fertilizer outlet). The rules and regulations for delivery of subsidy and its reimbursement to the goods/service supplier would be defined by the concerned department. The data entered on the Smart Card should, however, be accessible by all monitoring/evaluating agencies so that they can put together a picture of what subsidies are being received by whom, as well as those who are not receiving a subsidy for which they are eligible. To overcome initial problems, the Smart Card initiative for service delivery would go through a pilot phase before it is extended to all parts of the country. The Government of India has on November 10, 2008 approved the establishment of a Unique Identity Authority for the purpose of implementation of a Unique Identity System for all residents in the country. The scheme envisages that at the inception, the UID number will be assigned to all voters by building on current electoral roll data and progressively adding other persons including those below 18 years of age who do not figure in the voter lists.

7.3.4.3.6 Concerns have been raised that such cards would lead to invasion of privacy of an individual as the controller of the database would have, through linkages across different networks, a "global" view of a person's activities. Concerns have also been raised regarding the need for a separate card when other pan-Indian cards are available.

7.3.4.3.7 The country presently possesses two mega databases which have a pan Indian presence: (a) The voter identity card, issued by Election Commission of India and (b) PAN (Permanent Account Number) card issued under Section 139A of the Income Tax Act, 1961. The voter identity card is issued to Indian citizens who have attained 18 years of age. On the other hand, Section 139 A of the IT Act requires every 'person' to obtain a PAN if

    i.   His/her total income exceeds the maximum amount which is not chargeable to tax, or

    ii.   His/her gross receipts etc exceed or are likely to exceed five lakh Rupees during a year (in case of business or profession), or

    iii.   He/she is required to furnish a return of income.

Further, the Union Government by notification may require a class or classes of persons by whom tax or duty is payable under any law or for the purpose of collecting any information, to obtain PAN.

7.3.4.3.8 The target population with respect to PAN is very wide and specific to the IT Act as Section 2(31) defines a 'person' to include an individual, Hindu Undivided Family, company, firm, association of persons, body of individuals whether incorporated or not, local authority and any other artificial juridical person. In case of individuals, there is no minimum age prescribed. In fact, it covers both residents and non-residents as the IT Act taxes 'residents' on their global income and 'non-residents' on their source income (subject to specific provisions). Another important point to consider is that as the PAN is inseparable from individual private consumption patterns (different from governmental transactions) through payment transactions, it does raise the threat of invasion of privacy if linked across departments.

7.3.4.3.9 On the other hand, the voter identity card is not a foolproof system as the requirements for providing proof of residence and identification while applying for a card is quite lax, which has resulted in illegal immigrants freely acquiring such cards.

7.3.4.3.10 Even in the US, a person needs to have either a Tax Identification Mumber (TIN) or a Social Security Number. As in India, the TIN applies to various categories of persons. However, in case of individuals, those who possess a Social Security Number are not required to have an Individual Tax Identification Number (ITIN). The social security program is formally known as the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund program which presently covers the three benefits for retirement, disability and death. A multitude of government agencies presently use the Social Security number as an identifier.[117] However, there are certain individuals who are not covered by the social security program (e.g. family members of so called 'green' card holders etc.) who have to compulsorily acquire the ITIN.

7.3.4.3.11 The Commission is of the view that creation of a separate unique identity card system would only be useful if it is exhaustive, accurate and tamper proof. This would require creation of a database that links an individual to unique identifier which remains constant over his life time. Such identifiers may include parameters such as an individual parentage, date of birth, place of birth etc. In addition, the unique ID may capture other parameters such as place of residence, occupation, educational qualification etc. which are likely to change over the lifetime of an individual. Ideally, the unique ID should be based on a parameter that remains constant and which gets activated at the time of birth itself. At the age of 18, this card can automatically be activated as a voter identity card which

[117]Source: 'Entitlement Reform for Empowering the Poor: The Integrated Smart Card (ISC); Report of the Eleventh Plan Working Group on Integrated Smart Card System; January 2007

would need to be extinguished after the death of the individual. This would mean that the panchayats and urban local bodies would need to play a proactive role in every hamlet, village and urban centre of the country in order to, without fail, account for every live birth and every death taking place within their jurisdiction and initiate the process of acquisition of a unique identity as also its extinguishing. This would, in turn, require equipping the local governments with the necessary capabilities for ensuring 100 per cent registration of all births and deaths in their jurisdictions. The Commission would therefore suggest that the newly created Unique ID Authority should take these aspects into account in order to develop an accurate and fool-proof unique identity card system for all Indian citizens. To start the process immediately, it may be desirable to give unique IDs prospectively for all future births that take place in the country. As the system stabilises, this could then be extended to all citizens in a phase manner.

7.3.4.3.12 Recommendation

a. **The proposed Unique ID Authority should evolve a database of UIDs on the basis of permanent identifiers such as date of birth, place of birth etc. as described in paragraph 7.3.4.3.11.**

8 LEGAL FRAMEWORK FOR e-GOVERNANCE

The Information Technology Act, 2000 was enacted to *"… provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as "electronic commerce",* which involve the use of alternatives to paper-based methods of communication and storage of information, to facilitate electronic filing of documents with the Government agencies and further to amend the Indian Penal Code, the Indian Evidence Act, 1872, the Bankers' Books Evidence Act, 1891 and the Reserve Bank of India Act, 1934 and for matters connected therewith or incidental thereto."

Thus, the focus of this Act is on electronic commerce and electronic records. The Act contains provisions on digital signatures and authentication of electronic records, legal recognition of digital signatures and electronic records, retention of electronic records, attribution, acknowledgement and dispatch of electronic records, security of electronic records, regulation of Certifying Authorities, Cyber Regulation Appellate Tribunal etc. To facilitate the implementation of e-Governance projects at various levels across the country, a more wholistic legal framework is required.

8.1 Need for Statutory Backing for E-Governance

8.1.1 The institutional and managerial aspects of NeGP as well as different Mission Mode Projects have been discussed in Chapter 7. The Department of Information Technology (DIT) in Government of India has been tasked with creating the common core and support infrastructure. As mentioned earlier, this consists of the National and State Wide Area Networks, National and State Data Centres, Common Services Centres and the Electronic Service Delivery Gateways. It is also evolving/laying down Standards and Policy Guidelines in its role as facilitator and catalyst. Owing to the complexities involved in evolution/development and adoption of the overall technology architecture, framework standards, security policy, funding strategy, service delivery mechanism, sharing of common infrastructure etc., the nodal role of the DIT cannot be overemphasized, especially as the NIC comes under its administrative control. To perform its role in the implementation of

the NeGP, it is aptly functioning as the Secretariat to the Apex Committee headed by the Cabinet Secretary.[118] In fact, to ensure sharing of information and seamless inter-operability of data and e-Governance applications under NeGP, an Apex body has also been constituted with a mandate to approve, notify and enforce the Standards/Guidelines formulated by different Working Groups (WG).

8.1.2 Such initiatives and the institutional aspects of NeGP are similar to those undertaken in the USA. However, in the case of the latter, these have been given a statutory backing. The salient features of this Act, which bring out the benefits of having such a legislation, are mentioned below:

8.1.3 This Act, first of all defines "electronic Government" to mean (Title I, Section 3601):[119]

> *"the use by the Government of web-based Internet applications and other information technologies, combined with processes that implement these technologies, to-*
>
> > *(A)   enhance the access to and delivery of Government information and services to the public, other agencies, and other Government entities; or*
> >
> > *(B)   bring about improvements in Government operations that may include effectiveness, efficiency, service quality, or transformation."*

8.1.4 By providing a definition for e-government under law, this Act removes at one go the scope for having differing approaches to e-Governance across governments and institutions. Thus, it unequivocally states that e-Governance implies the use of web-based applications and other information technologies 'by the Government' either for providing 'Government information and services' to the public and government institutions alike, or to bring about 'improvements in Government operations' aimed at, but not limited to, achieving efficiency, effectiveness etc. In other words, 'electronic Government' has the objective of, inter alia, transforming government operations through what has been called 'business process re-engineering'. This Act, therefore, separates these two objectives, making them activities capable of being pursued independently apart from establishing them as statutory requirements.

8.1.5 The Act then establishes an Office of Electronic Government, headed by an Administrator appointed by the President, in the Office of Management and Budget (OMB).[120] It requires the Administrator to assist the Director and Deputy Director for

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[118]Based on the Annual Report for 2007-08; Department of IT; Government of India
[119]Source: 'E-Government Act of 2002; http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_public_laws&docid=f:publ347.107.pdf
[120]ibid, Title I, Section 3602

Management and work with the Administrator of the Office of Information and Regulatory Affairs in setting strategic direction for implementing electronic Government under relevant statutes, including the Privacy Act, the Government Paperwork Elimination Act, and the Federal Information Security Management Act of 2002. It then places the following responsibilities on the Administrator (Section 3602):

> "(e)   *The Administrator shall work with the Administrator of the Office of Information and Regulatory Affairs and with other offices within the Office of Management and Budget to oversee implementation of electronic Government under this chapter, chapter 35, the E-Government Act of 2002, and other relevant statutes, in a manner consistent with law, relating to –*
>
> (1)   *capital planning and investment control for information technology;*
>
> (2)   *the development of enterprise architectures;*
>
> (3)   *information security;*
>
> (4)   *privacy;*
>
> (5)   *access to, dissemination of, and preservation of Government Information;*
>
> (6)   *accessibility of information technology for persons with disabilities; and*
>
> (7)   *other areas of electronic Government.*

8.1.6 As the Office of Management and Budget (OMB) is an integral part of the Executive Office of the President, the intent of the legislation in placing the Office of Electronic Government within the OMB is quite clear: it sends the message that promoting electronic governance is at the core of governmental activities and leadership is provided right from the top of the administrative pyramid. The law also centralizes such important institutional and overarching aspects of e-Governance as identification of technological requirements at different ends and sequential planning for their application (i.e. development of 'enterprise architectures'), security and privacy matters, planning and investment matters etc.

8.1.7 Apart from providing leadership, the Administrator of Office of Electronic Government is required to assist the Director of OMB in establishing policies for setting up the framework for information technology standards for the Federal Government developed by the

National Institute of Standards and Technology, including the standards and guidelines for inter-connectivity and inter-operability and for Federal Government computer system efficiency and security.[121] He has also been given the responsibility of sponsoring a dialogue among Federal, State, local, and tribal government leaders on electronic Government in the executive, legislative, and judicial branches, as well as leaders in the private and non-profit sectors, to encourage collaboration and enhance understanding of best practices and innovative approaches in acquiring, using, and managing information resources. Further, the Administrator is required to:[122]

"(10) Sponsor activities to engage the general public in the development and implementation of polices and programs, particularly activities aimed at fulfilling the goal of using the most effective citizen-centered strategies and those activities which engage multiple agencies providing similar or related information and services.

(11) Oversee the work of the General Service Administration and other agencies in developing the integrated Internet-based system under Section 204 of the E-Government Act of 2002.

(12) Coordinate with the Administrator for Federal Procurement Policy to ensure effective implementation of electronic procurement initiatives.

(13) Assist Federal agencies, including the General Services Administration, the Department of Justice, and the United States Access Board in –

(A) implementing accessibility standards under Section 508 of the Rehabilitation Act of 1973 (29 USC 794d); and

(B) ensuring compliance with those standards through the budget review process and other means.

(14) Oversee the development of enterprise architectures within and across agencies.

(15) Assist the Director and Deputy Director for Management in overseeing any agency efforts to ensure that electronic Government activities incorporate adequate, risk-based, and cost-effective security compatible with business processes.

(16) Administer the Office of Electronic Government established under this section.

[121]ibid; Title I, Section 3602
[122]ibid; Title I, Section 3602

(17) *Assist the Director in preparing the E-Government report established under Section 3606."*

8.1.8 After making the Administrator responsible for the purposes of the Act, it creates an inter-agency forum in the form of the Chief Information Officers Council (CIOC) aimed at improving agency practices related to the design, acquisition, development, modernization, use, operation, sharing and performance of 'Federal Government information resources' (Title I, Section 3603). The Deputy Director for Management in the OMB is the Chairperson of this Council and the Administrator of OEB, the Administrator of the Office of Information Regulatory Affairs, the chief information officers of various agencies including the CIA etc. are members of this Council. Section 3604 of the Act establishes an 'E-Government Fund' for the purposes of the Act. Further, Section 3606 of Title I of the Act enjoins the Director of OMB to submit an E-Government status report to the Senate and the House of Representatives before 1st March of each year containing information on implementation and requirements of the Act.

8.1.9 Thus, the US law is a comprehensive legislation to deal with different aspects of e-Governance. It creates new institutions to implement the overall e-Governance initiatives and to co-ordinate between governments, agencies and institutions. It also lays down responsibility and accountability frameworks. Another significant aspect of the US legislation is that it provides for implementation and procedural time frames. This aspect is clearly brought out in a 'Memorandum to All Departments and Agency Heads' issued by the OMB on August 1, 2003, which is presented in Table 8.1 below.[123]

Table 8.1: E-Government Act 2002 – Required Activities, Time Frames and Lead Agencies		
Required Activity or Product	**Statutory and other Timeframes**	**Lead**
The Office of E-government and IT & Administrator (Sec 101, 3602)	Established on April 17, 2003	OMB
Sponsor ongoing dialogue with interest parties (including state, local, and tribal governments, private and non-profit sectors, and the general public) to find innovative ways to use IT to improve the delivery of Government information and services (Sec 101, 3602)	Ongoing	OMB
The CIO Council (Sec 101, 3603)	Established on April 17, 2003	OMB

[123]Source: http://www.whitehouse.gov/omb/memoranda/m03-18.pdf

Table 8.1: E-Government Act 2002 – Required Activities, Time Frames and Lead Agencies *(Contd.)*		
Required Activity or Product	**Statutory and other Time Frames**	**Lead**
The E-Government Fund (Sec 101, 3604)	Established on April 17, 2003	GSA/OMB
Establish program to encourage contractor innovations that enhance government-wide electronic services (Sec 101, 3605)	Ongoing	GSA/OMB
Annual E-Government Report to Congress (Sec 101, 3606)	March 1 of each year, beginning 2004	OMB
• Agencies supporting reports to OMB	By December 15 of each year, beginning in 2003	All agencies
Development of citizen and productivity-related performance measures to be incorporated into the agency's annual Performance Plan and the agency's Strategic Plan (Sec 202)	Ongoing	All agencies
Implement inter-operable electronic signature capability for secure electronic transactions with government (Sec 203)	Ongoing	GSA, to be conducted through the E-authentication initiative
Federal Internet Portal (Sec 204)	Ongoing	GSA, to be conducted through the First Gov. gov.initiative
Timetable for agency compliance with electronic dockets for regulatory agencies (Sec 206)	By March 2004 (in first E-Government Report to Congress)	OMB, to be conducted through the Online Rule making initiative
Establish Inter-agency Committee on Government Information (Sec 207)	Established on June 17, 2003	OMB
Issues Policies on: • Categorisation and indexing standards • Standards for Agency Websites • Policies to improve agency reporting and dissemination of Federally funded R&D (Sec.207)	By December 2005	OMB
Archivist to issue policies and procedures for recordkeeping of Federal Government information on the Internet and other electronic records (Sec 207(e)(2)-(3)	By December 2005	NARA

Table 8.1: E-Government Act 2002 – Required Activities, Time Frames and Lead Agencies *(Contd.)*

Required Activity or Product	Statutory and other Time Frames	Lead
Work with agencies to create public domain directory of Government websites (taxonomy) (Sec 207)	By December 2004	OMB
Issue guidance on Privacy Impact Assessments (PIAs) and agency privacy notices on websites (Sec 208)	Ongoing	OMB
IT Workforce issues (Sec 209) • Analyse personnel needs of Federal government in IT and IRM • Identify current gaps • Oversee development of curricula, training methods, and training priorities for projected personnel needs • Assess current training offerings in IT • Issue policies and guidance	On going On going	OPM, in consultation with OMB, the CIO Council and GSA OPM, in consultation with OMB
Develop IT training programs (Sec 209)	Ongoing	Agencies, in consultation with OPM, the CIO Council, and GSA
Ensure that agencies collect standardized information on IT and IRM workforce assessments (Sec 209)	Ongoing	OMB
Oversee the IT exchange program and develop implementing regulations (Sec 209)	Ongoing	OPM
IT Workforce Reports to Congress I. Report on existing government-wide IT training programs and recommendations for improvement or establishment of a program if none exist.	By September 2003 (Sec 209)	OPM in consultation with the CIO Council and GSA

Table 8.1: E-Government Act 2002 – Required Activities, Time Frames and Lead Agencies *(Contd.)*		
Required Activity or Product	**Statutory and other Time Frames**	**Lead**
II. IT Exchange Program • Report on existing personnel exchange programs	April 17, 2004	OPM
• Prepare a bi-annual report for Congress on agency use of the IT Exchange Program (to be published in Federal Register and on the Internet)	April 30 and October 31 of each year	OPM
Modification of FAR for government-wide use of share-in-sharing contracts (Sec 210)	By January 2004	OMB/OFPP/FAR Council
Report to Congress on share-in-savings progress (Sec 210)	By April 2005	OMB, in consultation with executive agencies
Report to Congress on State and local use of Federal Supply Schedules (Sec 211)	By March 2004	GSA/OMB
Designation of up to 5 pilot projects that integrate data elements (Sec 212)	Ongoing	OMB
Report to Congress on study of data integration (Sec 212)	By April 2006	OMB, in consultation with agencies and others
Study and report to Congress on best practices of Community Technology Centers (Sec 213)	By April 2004	OMB, to be conducted by the Department of Education
Development of an online tutorial on government information and services (Sec 213)	Ongoing	OMB, to be conducted by the Department of Education and the Institute of Museum and Library Services
Study on use of IT to Enhance Crisis Response (Sec 214)	Ongoing	OMB, to be conducted by DHS (FEMA)
Report to Congress on Crisis Management (Sec 214)	2 years following contract date	OMB
Pilot Projects and Further Reports on using IT in Disaster Management (Sec 214)	Following study and report	OMB
Digital Divide study (Sec 215)	Ongoing	GSA, to be conducted by the National Academy of Sciences / National

Table 8.1: E-Government Act 2002 – Required Activities, Time Frames and Lead Agencies *(Contd.)*		
Required Activity or Product	**Statutory and other Time Frames**	**Lead**
Report to Congress on Digital Divide	By December 2004	Research Council GSA
Common Geospatial Protocols (Sec 216)	Ongoing	OMB, in consultation with Interior and an interagency group, to be conducted through the Geospatial One Stop initiative

8.1.10 It is evident from Table 8.1 that not only is the coverage of the US legislation comprehensive, it lays down well-defined time frames and deliverables along with accountability mechanisms. Similarly, the New Zealand Government, in its e-government vision document came up with a simple mission objective "By 2004, the internet will be the dominant means of enabling ready access to government information, services and processes". Having achieved this, Government of New Zealand, put forth the following revised goals:

- *"By **2007**, information and communication technologies will be integral to the delivery of government information, services and processes.*

- *By **2010**, the operation of government will be transformed as government agencies and their partners use technology to provide user-centred information and services and achieve joint outcomes.*

- *By **2020**, people's engagement with the government will have been transformed, as increasing and innovative use is made of the opportunities offered by network technologies.*

The Commission is of the view that a clear road map with a set of milestones should be outlined by Government of India with the ultimate objective of transforming the citizen government interface at all levels to the e-Governance mode by 2020.

8.1.11 e-Governance in India does not yet have a separate enabling legal framework. The Information Technology Act, 2000 was enacted to provide legal recognition for transactions carried out through electronic data interchange and other means of electronic

communication which involve the use of non-paper based methods of communication and storage of information, facilitating the electronic filing of documents with government agencies. However, the scope of NeGP is very wide covering almost all aspects of governance - right from delivery of services and provision of information to business process re-engineering within the different levels of government and its institutions. Thus, its task is of mammoth proportion. It would therefore be advisable if such a gigantic task is implemented, monitored and regulated through a legal framework so that its vision becomes a reality.

8.1.12 In fact, while implementing the NeGP, various structural and institutional issues have already arisen which clearly call for a statutory mandate for their resolution. While examining the constraints experienced in the implementation of various Mission Mode Projects under the NeGP, the Standing Committee on Information Technology found out the Central Line Departments were facing difficulties on account of the fact that these projects were 'large, complex and technology driven'. Some of these issues were related to :[124]

- Lack of clarity on composition, role, responsibility and financial powers of the Empowered Committee.

- Laying down policy changes for fast-track approval of MMPs and Special Scheme for State MMPs.

- Issues regarding the role and responsibility of the States and the Union Line Ministries in project implementation. (Project specific interfaces between the State and Line Ministries also need to be provided urgently).

- Policy for inter-ministerial Governance structure for Integrated Services Projects.

- Setting up an organization structure to deal with issues arising during post implementation period.

8.1.13 Such issues arise because various components of NeGP are to be separately implemented by the Union and State Governments as the functional areas fall within their specific jurisdictions. However, the country already has two landmark legislations which deal with issues falling within the jurisdiction of both the Union and State Governments. These are, the National Rural Employment Guarantee Act, 2005 (NREGA) and the Disaster Management Act, 2005 (DMA). The NREGA, apart from laying out the deliverables,

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provides for the implementing and monitoring authorities at various levels of governance for the purposes of the NREG Scheme in the form of the Central and State Employment Guarantee Councils, the District Programme Coordinator, the Programme Officer (at the Intermediate Panchayat level) and the Gram Panchayats along with their duties and functions. It also provides for social audit, grievance redressal mechanism, establishment of National and State level funds, funding pattern, transparency and accountability, power of Central Government to give directions etc. Similarly, the DMA provides for establishment of Disaster Management Authorities at the National, State and District levels along with their functions and duties, National, State and District level Plans, measures to be taken by authorities at different levels for preparation, capacity building, relief and rehabilitation etc, Disaster Mitigation and Disaster Response Funds at the National and State levels, allocation of funds etc.

8.1.14 Based on the above, the Commission is of the view that components of the NeGP may be enshrined in a legal framework keeping in consideration the mammoth dimension of the task, the level of required coordination between the Union and State Governments and the diverse and complex field situations in which it is being implemented. The purpose would be to give statutory mandate to the institutional entities, setting up of a separate Fund, defining responsibilities and providing for time frames and oversight mechanisms. Thus, this legislation may, inter alia, contain provisions regarding the following:

- Definition of e-Governance in the Indian context, its objectives and role

- Coordination and oversight mechanisms, support structures at various levels, their functions and responsibilities

- Role, functions and responsibilities of government organizations at various levels

- Mechanism for financial arrangements including public-private partnership

- Specifying the requirements of a strategic control framework for e-Government projects dealing with statutory and sovereign functions of the government

- Responsibility for selection and adoption of standards and inter-operability framework

- Framework for digital security and data protection etc.

8.1.15 Such legislation should be in the nature of an overarching framework and avoid going into micro-details. The Commission is of the view that this law should provide ample flexibility to organizations and support subordinate delegation as conceptualization and implementation of e-Governance initiatives and business process reengineering in different organizations would throw up myriad problems which would need adopting a wide variety of approaches to arrive at solutions.

8.2 Recommendations

a.   **A clear road map with a set of milestones should be outlined by Government of India with the ultimate objective of transforming the citizen-government interaction at all levels to the e-Governance mode by 2020. This may be enshrined in a legal framework keeping in consideration the mammoth dimension of the task, the levels of required coordination between the Union and State Governments and the diverse field situations in which it would be implemented.**

b.   **The legal framework should, inter alia, include provisions regarding:**

   i.   **Definition of e-Governance, its objectives and role in the Indian context;**

   ii.   **Parliamentary oversight mechanism;**

   iii.   **Mechanism for co-ordination between government organizations at Union and State levels;**

   iv.   **Role, functions and responsibilities of government organizations with regard to e-Governance initiatives, especially business process re-engineering;**

   v.   **Financial arrangements;**

   vi.   **Specifying the requirements of a strategic control framework for e-Government projects dealing with the statutory and sovereign functions of government;**

      vii.   **Framework for digital security and data protection; and**

      viii.   **Responsibility for selection and adoption of standards and inter-operability framework.**

c.   **This legislation should have an overarching framework and be able to provide flexibility to organizations.**

KNOWLEDGE MANAGEMENT

9.1 Importance of Knowledge Management in Government

9.1.1 Earlier e-Governance was considered as mere application of ICT tools to the governance processes. But, as has been emphasized in this Report, a successful e-Governance intervention requires a holistic approach as it encompasses domain knowledge, process reform management, resources management, project management and change management. In each one of these, Knowledge Management (KM) is an important component. Knowledge Management (KM), is defined as *"a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving and sharing enterprise information assets."* (Gartner Group). Knowledge Management is a process that, continuously and systematically, transfers knowledge from individuals and teams, who generate them, to the brain of the organisation for the benefit of the entire organisation. It is the systematic, explicit, and deliberate building, renewal, and application of knowledge to maximize an enterprise's knowledge-related effectiveness and returns from its knowledge assets.[125] Knowledge Management in an organization involves the following steps:

a.   Identification of the knowledge assets within the organization - explicit and tacit

b.   Development of these knowledge assets

c.   Capturing and preservation of the knowledge

d.   Using and sharing of the knowledge.

9.1.2 Knowledge Management is often perceived as merely a technological solution; in fact it has a much wider connotation since it is aimed at enabling people to efficiently perform their functions. *For citizens, the benefits to be reaped from KM include better services, more choices, more personalization and greater accountability of how their money is spent. For the organization, KM provides the major benefit of improving the organization's performance through increased efficiency and innovation. But for these benefits to occur, the back office processes must be in place. KM is founded on the notion that the organization's*

[125]http://www.tatasteel.com/technologyupdate/km/km_basics.htm

most valuable resource is the knowledge of its people. This year's Survey therefore looks at the issue of connected governance from the perspective of how governments manage and how they should manage their back office processes.[126] The steps of a KM process can be summarized as

- Knowledge creation

- Knowledge capture

- Knowledge application

- Knowledge impact measurement

9.1.3 Governments across the globe are the biggest source of information and knowledge by virtue of their size and complexity of processes. Inadequate or no knowledge management practices within the Government generally lead to loss of opportunity as a result of lost institutional memory, knowledge gaps and non-availability of appropriate inputs for decision making. Although, Government has lagged behind a bit in realizing the importance of knowledge management, but with the tremendous investment in KM in the private sector leading to substantial benefits, governments too have started to appreciate the benefits of KM. The motivation for the Government to adopt KM practices are factors like existence of a vast knowledge pool, shrinking Government budgets and the need to promote knowledge sharing within and across government organizations leading to achievement of better governance.

9.1.4 In India, governments, both at the Union and State levels, have witnessed the intervention of KM initiatives albeit in a sporadic manner. These efforts have been initiated either because of the interest of some Government officials or due to a push from technology/consulting companies to sell their products/services. There have been no instances of KM initiatives undertaken as a matter of policy.

9.2 Promoting KM in Government

9.2.1 Knowledge Management is essentially about facilitating the processes by which knowledge is created, shared and used in organizations. It is not about setting up a new department or getting in a new technology. It is about making changes to the way individuals in organisations function. There are many ways of looking at Knowledge Management and different organizations will take different approaches. Generally speaking, creating a knowledge environment usually requires changing organizational values and culture, changing people's behaviours and work patterns, and providing people with easy access

[126]UN E-Government Survey, 2008

to each other and to relevant information resources. The typical phases to be followed in building a Knowledge Management system are:[127]

Phase I – Undertake Knowledge Audit: This phase answers the questions like who collects what information? Why is it collected? Is it collected in time? Is collected knowledge put to any use? Is there a better way of collecting knowledge? Is required information being collected?

Phase II – Create Knowledge: Phase II helps in taking stock of existing knowledge and assessing knowledge needs of the organization. Determine who will create what information, when and in what format? Use knowledge management (KM) tools for knowledge creation.

Phase III – Capture Knowledge: Phase III deals with the transformation of tacit knowledge into storable explicit knowledge. It deals with activities like recording one-to-one conversations, recording a brainstorming session, recording minutes of meetings and other proceedings. It also deals with recording success profile of individual e-government champions.

Phase IV – Store Knowledge: This phase of the KM cycle deals with organizing knowledge into codifiable and non-codifiable categories. Use of electronic media for knowledge storage should be encouraged. Opening a knowledge centre in the ministry/department implementing an e-Government project is a good practice. The knowledge centre should Identify and use "best practices" in knowledge storage and should disseminate the same to the intended audience.

Phase V – Use Knowledge: Knowledge captured and stored should be made accessible to all concerned personnel. A culture of knowledge sharing should be promoted within the organization. Setting up knowledge distribution and knowledge sharing mechanisms within the organization will help the KM cause. Providing knowledge inputs to policy makers and monitoring knowledge use will help in taking mid-course correction measures.

Phase VI – Review Knowledge: The phase deals with the scanning of the horizon to anticipate knowledge needs of a ministry/department. Review the existing stock and flow of knowledge. Make use of simple but effective knowledge indicators. Involve stakeholders in knowledge review. The project implementers should constantly ask the question: has knowledge led to better decision making and/or higher productivity?

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[127]Mishra D.C (Dr.), 2007, Ten guiding principles for introduction of knowledge management in e-Government in developing economies for increased productivity

9.3 Knowledge Management Toolbox for e-Government

9.3.1 A number of Knowledge Management (KM) tools and techniques exist for e-governance. These include:

a. *After Action Reviews (AARs):* This technique was pioneered by the US Army for learning lessons from an activity or project. It basically involves making an assessment of a project or major activity after it has been completed with the aim of allowing the employees and leaders to discover and learn what happened and why. It is in the nature of a professional discussion.[128]

b. *Communities of Practice (COPs):* In simple terms, "CoPs are small groups of people who have worked together over a period of time and, through extensive communication, have developed a common sense of purpose and desire to share work related knowledge and experience".[129]

c. *Knowledge Audit:* A systematic process to identify an organisation's knowledge needs, resources and flows, as a basis for understanding where and how knowledge can add value. It also involves a comparison of performance against pre-set standards.

d. Knowledge Plan (Based on knowledge strategy)

e. Exit Interviews (Capturing knowledge of departing employees)

f. Sharing Best Practices (Identifying, capturing in one part of organisation and sharing with all others)

g. Knowledge Centres (Connecting people, information, databases)

h. *Knowledge Harvesting:* It generally refers to an integrated set of processes that capture the often hidden insight of human expertise available in an organization or system. Just as individual skills are acquired through practice over time, so the skills of an organisation are developed and sustained only through experience.[130] Thus it basically involves capturing knowledge of "experts" and making it available to others.

i. *Peer Assists:* A peer assist is a meeting or workshop where people are invited from other organizations and groups to share their experience, insights and knowledge with a team who have requested some help early on in a piece of

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[128]http://www.nwlink.com/~Donclark/leader/leadaar.html
[129]http://www.tfriend.com/op-lit.htm, cited in http://www.intercooperation.org.in/images/icindia/CoP%20experience%20in%20India.pdf
[130]Source: N. Raghavendra Rao; http://www.blonnet.com/2004/11/19/stories/2004111900310900.htm

work.[131] In practice, it generally amounts to learning from experience of others before undertaking an activity or project.

9.4 The Commission is of the view that Knowledge Management is central to governance reforms in general and e-Governance reforms in particular. Therefore, the Union and the State Governments should take proactive steps in establishing Knowledge Management systems as a pivotal step in the implementation of e-Governance initiatives.

9.5 Recommendation

a. **Union and State Governments should take proactive measures for establishing Knowledge Management systems as a pivotal step for administrative reforms in general and e-Governance in particular.**

[131]Source: N. Raghavendra Rao; http://www.blonnet.com/2004/11/19/stories/2004111900310900.htm

CONCLUSION

10.1 In this Report on e-Governance, the Commission has examined various aspects of e-Governance reforms in India. The Commission is of the view that even in any e-Governance initiative, the focus has to be on governance reforms with the technological tools provided by ICT being utilized to bring about fundamental changes in the governmental processes.

10.2 In view of the wide range of e-Governance initiatives that have been carried out in India with varying degrees of success as well as the diversity of conditions in the country, the Commission recognizes that e-Governance projects have to be designed for specific contexts and environments. The Commission has analyzed the progress made as well as the lack of progress in several e-Governance initiatives including some components of the NeGP. It has tried to glean out from such experiences, certain general principles, cross-cutting issues and key constraints that are likely to be relevant for e-Governance projects in the country.

10.3 Some of these core principles include a clear understanding and appreciation of the objectives to be achieved through e-Governance, making governance reforms rather than ICT the key focus for these projects, a step-by-step approach to maximum outcomes and benefits, complete re-engineering of government systems and procedures, constant monitoring and evaluation, and use of local languages for ensuring citizen-friendly interface.

10.4 The Commission notes that India's e-Governance experience shows a plethora of pilot projects with varying rates of success but with the common characteristic that the majority of them are not up-scaled or widely replicated. The Commission feels that it is essential to learn from such experiences and each pilot project should be taken to its logical end. For this to happen, emphasis has to be on the reforms in government procedures, structures and systems and must take precedence over mere technological solutions.

10.5 Ultimately, the success of an e-Governance initiative lies in how efficiently it has enhanced people's participation in government functioning through wide ICT access, bringing government and the services it offers closer to its citizens, promoting accountability, transparency and responsiveness in government functioning and ensuring that government works better at lesser costs. These are the sine qua non for good governance and a vibrant democracy.

SUMMARY OF RECOMMENDATIONS

1. (Para 6.2.2) Building a Congenial Environment

    a. Building a congenial environment is a sine qua non for successful implementation of e-Governance initiatives. This should be achieved by:

        i. Creating and displaying a will to change within the government

        ii. Providing political support at the highest level

        iii. Incentivising e-Governance and overcoming the resistance to change within government

        iv. Creating awareness in the public with a view to generating a demand for change.

2. (Para 6.3.9) Identification of e-Governance Projects and Prioritisation

    a. Government organizations/departments at Union and State Government levels need to identify e-Governance initiatives which could be undertaken within their functional domain, keeping the needs of the citizens in mind. Such initiatives may be categorized as follows:

        i. Initiatives which would provide timely and useful information to the citizens.

        ii. Initiatives which would not require the creation of a database for providing useful services to the citizens. This may include initiatives where database may be created prospectively without waiting for the updation of historical data.

        iii. Initiatives which allow for making elementary online transactions including payment for services.

      iv.   Initiatives which require verification of information/data submitted online.

      v.   Initiatives which require creation and integration of complex databases.

   b.   Instead of implementing all such initiatives at one go, these should be implemented after prioritizing them on the basis of ease of implementation, which would generally follow the categories mentioned above in that order. However, suitable modifications in their prioritization may be made by organizations/departments on the basis of the needs of and likely impact on citizens.

   c.   Respective Departments of Information Technology at the Union and State Government levels should coordinate between organizations and provide technical support if needed, in the task of identification and prioritisation.

3. (Para 6.4.16) Business Process Re-engineering

   a.   For every function a government organisation performs and every service or information it is required to provide, there should be a step-by-step analysis of each process to ensure its rationality and simplicity.

   b.   Such analysis should incorporate the viewpoints of all stakeholders, while maintaining the citizen-centricity of the exercise.

   c.   After identifying steps which are redundant or which require simplification, and which are adaptable to e-Governance, the provisions of the law, rules, regulations, instructions, codes, manuals etc. which form their basis should also be identified.

   d.   Following this exercise, governmental forms, processes and structures should be re-designed to make them adaptable to e-Governance, backed by procedural, institutional and legal changes.

4. (Para 6.5.22) Capacity Building and Creating Awareness

a. Capacity building efforts must attend to both the organizational capacity building as also the professional and skills upgradation of individuals associated with the implementation of e-Governance projects.

b. Each government organization must conduct a capacity assessment which should form the basis for training their personnel. Such capacity assessment may be carried out by the State Department of Information Technology in case of State Governments, and the Union Department of Information Technology in the Centre. Organisations should prepare a roadmap for enhancing the capabilities of both their employees and the organization.

c. A network of training institutions needs to be created in the States with the Administrative Training Institutes at the apex. The Administrative Training Institutes in various States should take up capacity building programmes in e-Governance, by establishing strong e-Governance wings. ATIs need to be strengthened under the NeGP.

d. State Governments should operationalise the Capacity Building Roadmap (CBRMs), under the overall guidance and support of the DIT, Government of India.

e. Lessons learnt from previous successful e-Governance initiatives should be incorporated in training programmes.

f. The recommendations made by the Commission in its Second Report entitled 'Unlocking Human Capital' in paragraph (5.2.1.6) should be adopted for creating awareness among people with regard to e-Governance initiatives.

5. (Para 6.6.2.10) Developing Technological Solutions

a. There is a need to:

i. Develop a national e-Governance 'enterprise architecture' framework as has been done in some countries.

ii.   Promote the use of 'enterprise architecture' in the successful implementation of e-Governance initiatives; this would require building capacity of top level managers in all government organizations.

6. (Para 6.7.2.7) Implementation

a.   All organizations should carry out a periodic independent evaluation of the information available on their websites from the citizens perspective and then re-design their websites on the basis of the feedback obtained.

b.   Each government organization should prepare a time-bound plan for providing of transactional information through their websites. To begin with, this could be done by updating the websites at regular intervals, while at the same time, re-engineering the back-end processes and putting them on computer networks. Ultimately, all the back-end processes should be computerized.

c.   Complex e-Governance projects should be planned and implemented like any major project having several parts / components for which Project Management capability should be developed in-house.

d.   Implementation of e-Governance projects would involve a detailed 'project management' exercise which would consist of the following activities:

i.   Breaking up entire e-Governance projects into components/ activities

ii.   Planning each activity in detail

iii.   Allocating resources, both human and financial

iv.   Commencement of activities as per the plan and continuous tracking

v.   Need-based mid-course correction

e.   While implementing transformational programmes like the NeGP, it is essential to recognise of the importance of a structured approach to Change Management – the people side of transformation. It is necessary for Government agencies, especially the nodal Ministries and the Administrative

Reforms and IT Departments, to design appropriate Change Management Strategies and Plans to accompany the e-Governance implementation.

7. (Para 6.8.3) Monitoring and Evaluation

a.   Monitoring of e-Governance projects should be done by the implementing organization during implementation in the manner in which project monitoring is done for large infrastructure projects. Even after the project has been implemented, constant monitoring would be required to ensure that each component is functioning as per the design.

b.   Evaluation of success or failure of e-Governance projects may be done by independent agencies on the basis of parameters fixed beforehand.

8. (Para 6.9.5) Institutional Framework for Coordination and Sharing of Resources/ Information

a.   The Departments of Information Technology at the Union and State Government levels should provide institutional support to other departments and organizations in implementation of e-Governance projects identified and conceptualized by them. The DIT should focus on the following:

   1.   Conducting an e-preparedness audit for each organization

   2.   Enforcing standardization

   3.   Assisting in co-ordination when e-Governance projects transcend an organisation's functional domain

   4.   Carrying out evaluation of e-Governance projects

   5.   Acting as a repository of best practices and encouraging horizontal replication of successful projects

   6.   Helping in selection of technological solutions.

b.   The Second Schedule to the Government of India Allocation of Business Rules, 1961 may be suitably amended to incorporate these elements with regard to the subject matter of 'e-Governance'.

9. (Para 6.10.6) Public-Private Partnership (PPP)

a. **Several components of e-Governance projects lend themselves to the Public-Private Partnership (PPP) mode. In all such cases (PPP) should be the preferred mode.**

b. **The private partner should be selected through a transparent process. The roles and responsibilities of government as well as the private partner should be clearly laid down in the initial stage itself, leaving no room for any ambiguity.**

10. (Para 6.11.2) Protecting Critical Information Infrastructure Assets

a. **There is need to develop a critical information infrastructure assets protection strategy. This should be supplemented with improved analysis and warning capabilities as well as improved information sharing on threats and vulnerabilities.**

11. (Para 7.3.2.3.16) The Common Support Infrastructure

a. **As recommended by the Standing Committee on Information Technology in its 58th Report, the State Data Centres (SDCs) should be maintained by Government agencies such as NIC as it involves handling of sovereign data. Further, all data centres at the State level should be subsumed in the SDCs.**

b. **The implementation of SDCs, SWANs and CSCs should be co-ordinated to prevent significant time-lag between their operationalisation. Last mile connectivity issues involved in operationalisation of CSCs should also be addressed in a time-bound manner.**

c. **Gram Panchayats should be involved in monitoring the operation of the Common Services Centres in the first four years of their operation when they are receiving revenue support from government for providing 'Government to Citizen' services. They should proactively engage in making citizens aware of the services provided through the CSCs and encourage them to make use of them.**

d. **State Governments should make available a large bouquet of G2C services through the CSCs. In doing so, they should adopt the approach**

outlined in this Report while discussing identification and prioritization of e-Governance projects.

e. The Mission Mode Project on Gram Panchayats should be finalized and implemented in a time-bound manner. The MMP should incorporate the recommendations made by the Commission in its Sixth Report entitled 'Local Governance', in paragraphs 3.10.2.8 and 4.5.5.6.

12. (Para 7.3.3.8) Mission Mode Projects

a. State Governments should first provide a clear mandate for governance reforms that must precede the e-Governance initiatives. This would involve, if necessary, changing procedures and even structures and statutes. Therefore as a first step, these issues need to be analysed, decision points identified and political approval taken.

b. The major decisions involved in (a) above should be identified by the State Level Apex Committee and approval of the State Government obtained within six months.

c. The Secretaries of the concerned departments should be entrusted with the responsibility of project implementation in unambiguous terms. They should be provided with the requisite authority and resources for project implementation.

d. Thereafter, the business process re-engineering and capacity building exercise should be completed by the concerned department within a maximum period of one year. The IT component of these projects should not be funded until this step is completed.

e. The Annual Performance Appraisal Report (APR) of public servants entrusted with the responsibility of project implementation under NeGP should have a separate entry for evaluation of their performance in this regard.

13. (Para 7.3.4.1.23) Mission Mode Project on Computerisation of Land Records

a. Surveys and measurements need to be carried out in a mission mode utilizing modern technology to arrive at a correct picture of land holdings and land parcels and rectification of outdated maps.

b. This needs to be accompanied by an analysis of the existing mechanism for updating land records – which varies from State to State – to be supplanted by an improved and strengthened mechanism which ensures that all future transactions in titles are immediately reflected in the land records. Such a system should be able to detect changes in titles through various means – namely, succession, will, partition, gift, survivorship etc and update records accordingly.

c. The dispute resolution mechanism with regard to land titles needs to be strengthened in order to be compatible with the demands made on it.

d. In case of urban areas, a similar exercise needs to be undertaken especially since measurements and surveys have not been done in many of such areas and even record of titles is not available in most cities.

14. (Para 7.3.4.2.7) Passport & Visa MMP

a. The entire passport issue process needs to be put on an e-Governance mode in phases. As the processes which precede and follow the police verification have already been re-engineered and put in e-Governance mode, this may be integrated with online police and citizen identification data bases. In the mean time, the process of police verification should be streamlined and made time bound.

15. (Para 7.3.4.3.12) Unique National Identity Number/Card

a. The proposed Unique ID Authority should evolve a database of UIDs on the basis of permanent identifiers such as date of birth, place of birth etc. as described in paragraph 7.3.4.3.11.

16. (Para 8.2) Legal Framework for e-Governance

a. A clear road map with a set of milestones should be outlined by Government of India with the ultimate objective of transforming the citizen-government

interaction at all levels to the e-Governance mode by 2020. This may be enshrined in a legal framework keeping in consideration the mammoth dimension of the task, the levels of required coordination between the Union and State Governments and the diverse field situations in which it would be implemented.

b. The legal framework should, inter alia, include provisions regarding:

  i. Definition of e-Governance, its objectives and role in the Indian context;

  ii. Parliamentary oversight mechanism;

  iii. Mechanism for co-ordination between government organizations at Union and State levels;

  iv. Role, functions and responsibilities of government organizations with regard to e-Governance initiatives, especially business process re-engineering;

  v. Financial arrangements;

  vi. Specifying the requirements of a strategic control framework for e-Government projects dealing with the statutory and sovereign functions of government;

  vii. Framework for digital security and data protection; and

  viii. Responsibility for selection and adoption of standards and inter-operability framework.

c. This legislation should have an overarching framework and be able to provide flexibility to organizations.

17. (Para 9.5) Knowledge Management

a. Union and State Governments should take proactive measures for establishing Knowledge Management systems as a pivotal step for administrative reforms in general and e-Governance in particular.

List of Reports Submitted by the
Second Administrative Reforms Commission up to November 2008

1. First Report: *Right to Information: Master Key to Good Governance*

2. Second Report: *Unlocking Human Capital: Entitlements and Governance – A Case Study*

3. Third Report: *Crisis Management: From Despair to Hope*

4. Fourth Report: *Ethics in Governance*

5. Fifth Report: *Public Order – Justice for All . . . Peace for All*

6. Sixth Report: *Local Governance – An Inspiring Journey into the Future*

7. Seventh Report: *Capacity Building for Conflict Resolution – Friction to Fusion*

8. Eighth Report: *Combatting Terrorism – Protecting by Righteousness*

9. Ninth Report: *Social Capital – A Shared Destiny*

10. Tenth Report: *Refurbishing of Personnel Administration – Scaling New Heights*