

GOVERNMENT OF INDIA

SECOND ADMINISTRATIVE REFORMS COMMISSION

ELEVENTH REPORT

PROMOTING e-GOVERNANCE
The SMART Way Forward

DECEMBER 2008

PREFACE

In his *Grundlegung Zur Metaphysik de Sitton*, Immanuel 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

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,

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 four 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


- 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

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 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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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

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

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.

- *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).*

- *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 programmes (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

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

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.

⁶Source: <http://www.coe.int/T/E/Com/Files/Themes/e-voting/definition.asp>

⁷Source: ‘E-Government Act of 2002; http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_public_laws&docid=f:publ347.107.pdf

- (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

- 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.

- *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

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

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

- 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;

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

- 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:

- (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

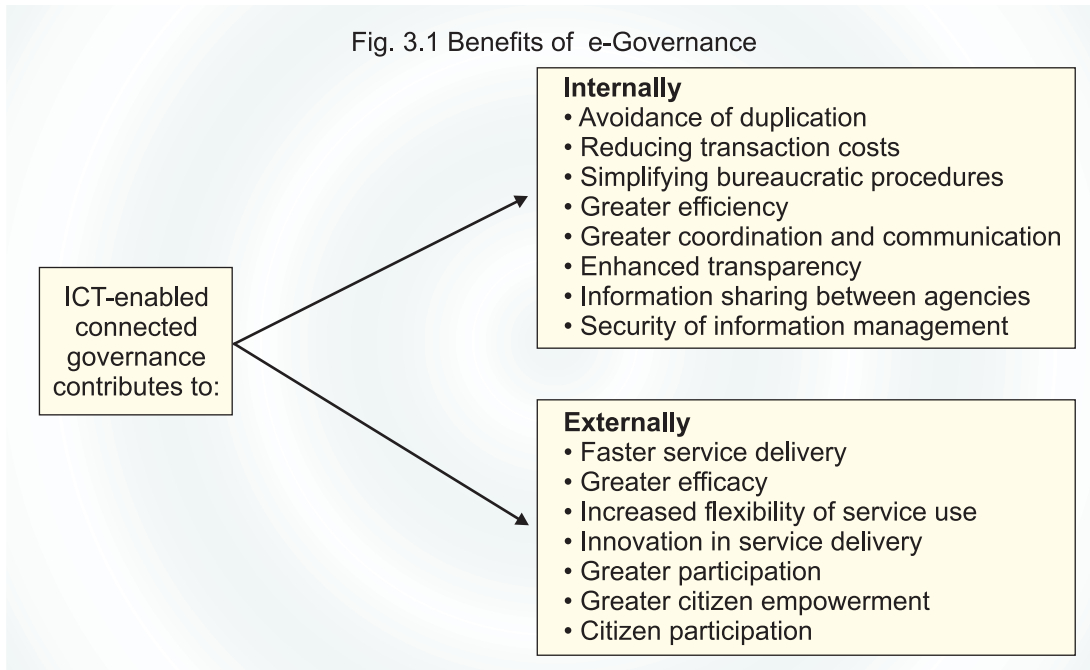
Box 3.1: Evaluation of e-Governance Initiatives in New Zealand

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'

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



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

¹⁶Source: Figure 1.2; The United Nations e-Government Survey 2008

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.

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

²¹Adapted from 'Minimum Agenda for e-Governance in the Central Government'; <http://darpg.nic.in/arp-g-website/ReformInitiatives/eGovernance/IndianExperience/EgovExp73.doc>

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.

²²Based on 'Computerisation of land records in India'; <http://www.gisdevelopment.net/application/lis/overview/lisrp0015a.htm>, accessed on 22.08.08

²³Annual Report, Ministry of Rural Development, 2007-08

- 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/tippa 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

²⁶ibid

- 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.

4.2.3 *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

²⁸Source: based on information posted on <http://www.gyandoot.nic.in> and 'India: e-Readiness Assessment Report 2003'

²⁹Source: <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan015131.pdf>

- 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 *Kotedar*s (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-Governance 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>

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 eSeva (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 eSeva 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 eSeva 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, eSeva is providing 'One-stop-shop' for over 66 G2C and B2C services in 46 eSeva 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.*

³⁸<http://www.apdip.net/resources/case/in07/view>

³⁹<http://esevaonline.com/>

⁴⁰Subhash Bhatnagar: One Stop Shop for Electronic Delivery of Services: Role of Public-Private Partnership (<http://www.iimahd.ernet.in/~subhash/pdfs/OneStopShopForElectronicDeliveryJun2005.pdf>)

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 Pradesh⁴²

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.

⁴²Based on: <http://siteresources.worldbank.org/INTEGOVERNMENT/Resources/APeProcurement.doc>

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.

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.*

- 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

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

⁴⁵Source: Annual Report 2007-08; Ministry of Corporate Affairs

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

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

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

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

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

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 in rural areas 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

⁵⁰Based on : India: e-Readiness Assessment Report 2003

⁵¹ibid

⁵²ibid and also, India: e-Readiness Assessment Report 2004

⁵³Based on : India: e-Readiness Assessment Report 2004

⁵⁴Based on : India: e-Readiness Assessment Report 2005

⁵⁵<http://www.gyandoot.nic.in/gyandoot/intranet.html> (extracted on 22.08.08)

⁵⁶Source: <http://esevaonline.com> (extracted on 22.08.08)

⁵⁷http://sitapur.nic.in/lokvani/intro_eng.doc

Parameters		Projects				Contd.
		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.

⁵⁹http://sitapur.nic.in/lokvani/intro_eng.doc

⁶⁰Source: Subhash Bhatnagar: One Stop Shop for Electronic Delivery of Services: Role of Public-Private Partnership (<http://www.iimahd.ernet.in/~subhash/pdfs/OneStopShopForElectronicDeliveryJun2005.pdf>)

⁶¹Subhash Bhatnagar; op cit

⁶²<http://dhar.nic.in/GYANDOOT.htm>

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,

- 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-

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.

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

⁶⁵Inaugural 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>)

- 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

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.

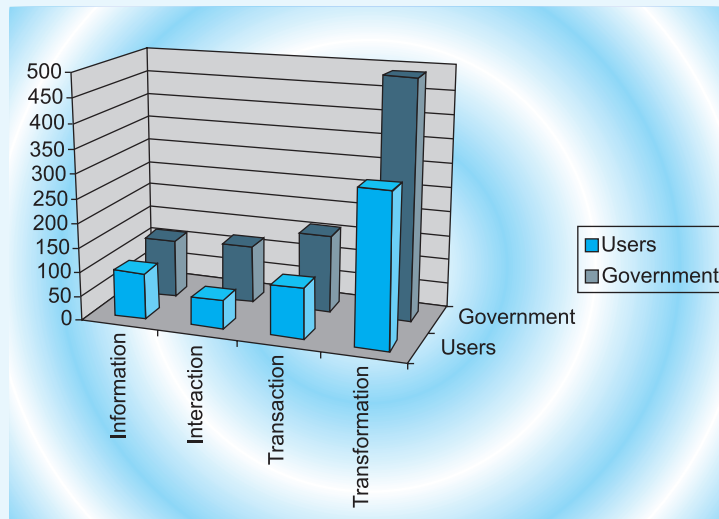
6.3.6 Fourth, are initiatives which require verification of information/data submitted online. A higher level of technological and process re-engineering required is represented by initiatives which cater to provision of services such as issuing of licences, registration for PDS (Public Distribution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

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

Fig. 6.1: Benefits from e-government Projects at Different Levels of Sophistication (million Euros)



(Source: Based on The Economist, February 16th, 2008)

- 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.

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

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

⁶⁸Source: http://www.incometaxindia.gov.in/archive/NoteonBPR_26082008.pdf

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

⁷⁰Ibid; Recommendation 54.

⁷¹Paragraph 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

- 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.

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

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:

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.

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)

⁷⁵ibid

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.*

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

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,

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

⁷⁷Gartner 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/>

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

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 than 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.

- 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 document⁷⁹ 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.

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

- 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

- 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) Carrying 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:**

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.

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.**

7.2 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

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

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

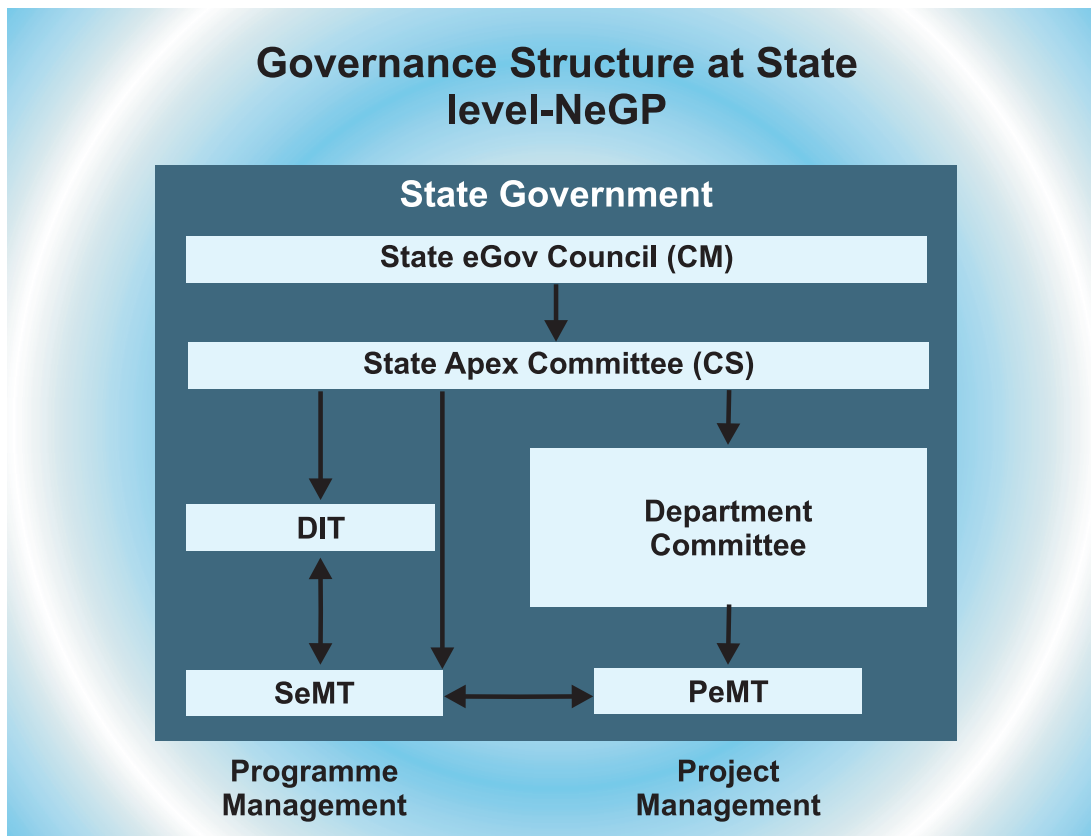
The Commission has examined the following components of NeGP:

- 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:

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.

⁸¹Source: Information provided by NeGP PMU (25.08.08)

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>

⁸³Source: <http://www.egovonline.net/interview/interview-details.asp?Title=State-Data-Centres:-The-Critical-Infrastructure&interviewid=434> (extracted on 6.08.2008)

⁸⁴Recommendation 24; 22nd Report of the Standing Committee on Information Technology, December 2005

*that the Department should clearly highlight national security perspective involved in establishing and operationalising SDCs to all participating States and guidelhelp 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 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.

⁸⁶Recommendation 11; 58th Report of the Standing Committee on Information Technology, April 2008, on 6.08.2008)

⁸⁷Source: <http://mit.gov.in/default.aspx?id=824> (As on 15.12.2008)

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).

⁹¹Source: '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 value⁹³ 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.

⁹³Normative 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.

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.

- 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

⁹⁶Recommendation 13; 58th Report; April 2008

⁹⁷Source: Information provided by NeGP PMU

⁹⁸Source: ‘Guidelines for Implementation of the Common Services Centres (CSC) Scheme in States’; www.mit.gov.in/download/CSCguidelines.pdf

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 described 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,

⁹⁹Based on information provided by NeGP PMU (25.08.2008)

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.

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

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.

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 firm up
3	Road Transport	Sanctioned	Implementation	October 2010
4A	Agriculture (Pre NeGP)		Operational	Operational
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 firm up
10	Gram Panchayat	EFC note for the scheme vetted by DIT and observations communicated to the Ministry	Conceptualisation	To be firm up
11	Employment Exchange	To be prepared	Conceptualisation	To be firm up.

¹⁰¹# Earlier tender cancelled; new timelines under finalization.¹⁰²++ New timelines for preparation of scheme to be firm up¹⁰³Earlier 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.¹⁰⁴Pilot to be implemented in 4 States¹⁰⁵Planning Commission has decided the modalities for implementation.

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.

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:

Table 7.8: Progress of Computerisation of Land Records

Sl.No.	Phase of Activity	State/UT
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):

¹⁰⁹National Land Records Modernisation Programme (NLRMP) – 2008 (information received from DOLR)

¹¹⁰National Land Records Modernisation Programme (NLRMP) – 2008 (information received from DOLR)

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

¹¹¹Source: 'State level e-Governance Projects in India: Overall Assessment of Impact on Citizens'; Report prepared by Centre for Electronic Governance, IIM, Ahmedabad; July, 2008

- 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. 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.

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 from the obligation to report to the prescribed officer:

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.**

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-38&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

¹¹⁵Source : The Hindu Businessline dated 14.10.2008

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

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.

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.**

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

¹¹⁸Based on the Annual Report for 2007-08; Department of IT; Government of India

¹¹⁹Source: ‘E-Government Act of 2002; http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_public_laws&docid=f:publ347.107.pdf

¹²⁰ibid, Title I, Section 3602

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 policies 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.*

¹²¹ibid; Title I, Section 3602

¹²²ibid; Title I, Section 3602

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
II. IT Exchange Program • Report on existing personnel exchange programs • 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 17, 2004 April 30 and October 31 of each year	OPM 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

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,

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;**

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*

¹²⁵http://www.tatasteel.com/technologyupdate/km/km_basics.htm

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?

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.**

¹³¹Source: N. Raghavendra Rao; <http://www.blonnet.com/2004/11/19/stories/2004111900310900.htm>

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.**

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.**

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'.**

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.**

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 interoperability 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.**

