

White Paper on E-Governance Strategy in India

The E-Governance Strategy White Paper discusses the broad issues surrounding the e-readiness for E-Governance in India. It looks into the relationship and application of information, knowledge, information systems, and information and communication technologies in the process of government

E-Governance Strategy in India SAMEER SACHDEVA

December'2002

E-Governance in India

CONTACT

SAMEER SACHDEVA

E.Mail : sachdeva_sameer@yahoo.co.in

Table of Contents

EXECUTIVE SUMMARY	3
A. SCOPE OF E-GOVERNANCE	5
<i>Government to Citizen (G2C)</i>	<i>5</i>
<i>Citizen to Government (C2G)</i>	<i>6</i>
<i>Government to Government (G2G)</i>	<i>7</i>
<i>Government to Business (G2B).....</i>	<i>8</i>
<i>Government to NGO (G2N)</i>	<i>9</i>
B. PRIORITIES AND OBJECTIVES	10
C. ISSUES FOR E-GOVERNANCE	11
D. STRATEGY FOR E-GOVERNANCE IMPLEMENTATION	13
<i>Stage 1: Building e-Governance Awareness and Commitment</i>	<i>15</i>
<i>Stage 2: Building e-governance strategic capacity.....</i>	<i>17</i>
<i>Stage 3: Building e-governance implementation capacity.....</i>	<i>21</i>
<i>Stage 4: Building infrastructure for e-governance implementation.....</i>	<i>24</i>
<i>Stage 5: Government Process Reengineering.....</i>	<i>27</i>
<i>Stage 6: Building e-governance pilot projects.....</i>	<i>28</i>
<i>Stage 7: Evaluation of e-projects</i>	<i>30</i>
<i>Stage 8: Identifying projects with long term prospective.....</i>	<i>31</i>
<i>Stage 9: Global Vision.....</i>	<i>33</i>
<i>Stage 10: Popularising E-Governance.....</i>	<i>34</i>
E. CONCLUSION	35

E-Governance Strategy in India

Sameer Sachdeva

Author contact: sachdeva_sameer@yahoo.co.in

EXECUTIVE SUMMARY

Information and communication technologies have a valuable potential to help meet good governance goals in India. Yet that potential remains largely untapped to date. Why? Because of poor human, organisational and technological infrastructure and because of the inappropriate approaches taken by donors, vendors and governments. This paper hopes to give a strategy to proper implementation of various E-Governance initiatives in India. It emphasizes establishment of various institutions for E-Governance especially, the School of E-Governance. The paper suggests the establishment of following state of art institutions

- MIT Interoperability Commission: to look into interoperability of all IT projects.
- Commission to ensure Universal access to information
- An institution for Research and Development in E-Governance (on lines of C-DAC)
- An institution for Training and Coaching of Human resources (School of E-Governance)
- An institution for spreading awareness. (On lines of company like Exhibitions India Pvt. Ltd.)
- An institution to support PKI.
- A software and technology standards organization
- Government Certification Authorities:

The paper also brings in various legislative gaps in administration. Like:

- Accountability Law: will hold the Public Servants including the elected representatives accountable for non-functioning / mal-functioning of their departments.
- Law for Privacy: will ensure that the information about the Citizens is not misused.
- A law like the US Government Paper Elimination Act (GPEA) to promote use of Electronic media.
- Freedom of Information Act allowing access to citizen to Government data.
- Amendments to Consumer Protection Law, Tariffs and Taxation Laws, Intellectual Property Regulations etc are required.
- Further guidelines for Content, Technological Standards, Electronic payments are also necessary.

The paper points out various other gaps hindering implementation of E-Governance in India. It brings a six point strategy for implementing E-Governance in India and thereby fulfilling the dream of better governance. It brings forth the objective of achieving Electronic Governance (EG) beyond mere computerization of stand alone

back office operations. It brings forth the idea of fundamental changes as to how the Government operates. It identifies the new set of responsibilities for the executive, legislature and the citizenry and brings the need for their training.

THE E-GOVERNANCE STRATEGY

Stage 1: Building e-Governance Awareness and Commitment

- 1.1 National e-Governance Summit
- 1.2 Raising Awareness Among Leaders
- 1.3 Awareness-Raising Among the Donor Community
- 1.4 National Association for SMART State Governments

Stage 2: Building e-Governance Strategic Capacity

- 2.1 Building Strategic Institutions for e-Governance
- 2.2 Building Legislative Infrastructure for e-Governance
- 2.3 Building Commitment for e-Governance
- 2.4 Building e-Governance Strategy
- 2.5 Information Obligation

Stage 3: Building e-Governance Implementation Capacity

- 3.1 Building Human Capacities for e-Governance Implementation
- 3.2 Building Data Systems for e-Governance Implementation
- 3.3 Financial Dimension to e-Governance

4. Building Infrastructure for e-Governance Implementation

- 4.1 Institution for Infrastructure: NIC
- 4.2 Backbone Infrastructure
- 4.3 Delivery Infrastructure

Stage 5: Government Process Reengineering

- 5.1 Study of existing processes
- 5.2 Recommendations for Reengineering

Stage 6: Building e-Governance Pilot Projects

- 6.1 Identifying e-Governance Pilot Projects
- 6.2 Implementing e-Governance Pilot Projects

Stage 7: Evaluation of e-Projects

- 7.1 Study of causes of success or failure
- 7.2 Replicating the successful projects
- 7.3 Bridging the gaps for failure

Stage 8: Identifying projects with long term prospective

- 8.1 Citizen Card
- 8.2 Establishment of national networks

Stage 9: Global Vision

- 9.1 Design of policy based on global interoperability
- 9.2 Networking National networks with global Networks

Stage 10: Popularizing E-Governance

- 10.1 Marketing and Promotion

A. SCOPE OF E-GOVERNANCE

E-Governance is the use of information and communication technologies to support good governance. It has the following main dimensions :

1. GOVERNMENT TO CITIZEN (G2C)

G2C will aim at connecting citizens to government by talking to citizens and supporting accountability, by listening to citizens and supporting democracy, and by improving public services. It will involve better services to the citizens through single point delivery mechanism and will involve areas like:

1.1 E-Citizen

Under e-citizen integrated service centres will be created. The purpose of these centres will be to take over the various customer services in due course. It will offer services like issue of Certificates, Ration Cards, Passports, Payment of Bills and taxes etc . These centres will become one-stop Government Shops for delivery of all services.

1.2 E-Transport

The transport aspects that can be easily e-governed include:

Registration of motor vehicles, Issue of driving licenses, Issue of plying permissions (Permits), Tax and fee collection through Cash and Bank Challans and Control of Pollution

1.3 E-Medicine

It will involve linking of various hospitals in different parts of the country and provide better medical services to the citizen.

1.4 E-Education

E-Education will constitute various initiatives of educating the citizen and the Government with the various Information technologies

1.5 E-Registration

E-Governing the registration and transfer of the properties and stamp duty to be paid thereon will bring substantial reduction of paper work and reduce the duplicating of entries. Further the transparency in work will increase and the overall time of process registration will reduce.

The spirit behind G2C services will encompass all the services that the Government is delivering to its citizens.

Essentials for achievement

- **Information for All:** Keeping the citizen informed, providing him with details of Government activities. The citizen will act as watch dog to Government if the information will be available to him. Certain interest groups like the journalists, opposition will always keep an eye on the expenditure of the Government, status of which will be available on-line. The same will bring accountability amongst Civil Servants. The rationale is to increase the pressure on staff to perform well and to improve public understanding of government.

- **Citizen Feedback:** Citizen feedback is must for improving the Government Services. Unless the Government listens to its customer, it will not be able to find out what does the citizens want. The elected representatives who are said to be voice of citizens also are not the true voice for they get their votes according to their offerings and not their offerings are according to customer wants. In short it is an effort to make the public sector decision responsive to citizens' view or needs.
- **Improving services:** World's best companies have done it, Indian companies have copied them, Governments abroad have followed the suit, why can't the Indian Government. Improving the service delivered to the citizen on dimensions such as speed, quality, reliability, convenience and cost. Information Technology will have a big role to play in the same; the services can be delivered from 24-hour one-stop Government shops.

2. CONSUMER TO GOVERNMENT (C2G)

C2G will mainly constitute the areas where the citizen interacts with the Government. It will include areas like election when citizens vote for the Government; Census where he provides information about himself to the Government; taxation where he is paying taxes to the Government.

2.1 E-Democracy

The e-democracy is an effort to change the role of citizen from passive information giving to active citizen involvement. In an e-democracy the Government will be informing the citizen, representing the citizen, encouraging the citizen to vote, consulting the citizen and engaging the citizen in the Governance. Taking the citizens input about the various government policies by organizing an e-debate will further strengthen the e-democracy. The concept of e-debate is similar to chat over the Internet, wherein not only the citizens but also the political leaders contesting the elections participate. The citizens give their feedback about the various policies of the parties and particularly the manifesto of the party. The initiative will further strengthen the process by *enhancing* the representative role, improving accessibility of citizens to their elected members and developing the capacity of elected representatives to engage in e-government. Elected members will also be provided with access to the local authority's Intranet and e-mail systems so that they become available online for decision making and people can easily access them.

Essentials for achievement:

- **Citizen Participation:** For achievement of the above initiative the citizen has to participate in the Government Business and therefore spreading awareness becomes the responsibility of the State. The elections should not be fought on the principle of what one party or other has to offer. But they should be fought on the principle of what the citizens require. Market research programs should be carried out using the Information Systems to determine the needs of the citizens. GIS could be used as a tool to find out potential gaps in the services offered.

3. GOVERNMENT TO GOVERNMENT (G2G)

This can also be referred as *e-Administration*. It involves improving government processes by cutting costs, by managing performance, by making strategic connections within government, and by creating empowerment. It will involve networking all Government offices so as to produce synergy among them. The major areas are:

3.1 E-Secretariat

Secretariat which is the seat of power has a lot of valuable information regarding the functioning of the State. The cross-linking of various departments and exchange of information amongst various components will simplify the process of Governance.

3.2 E-Police

E-Police will help to built citizen confidence. There will be two databases. One of police personnel and the other of criminals. The database of personnel will have the records of their current and previous postings. This will help to track policemen specialized in certain geographical regions and skills. Take for example, we want to look for a forensic expert. The database within seconds gives the list of all forensic experts. The same database will give the track of their details like service record, family background etc which will also be helpful in intelligent posting and promotion of personnel.

The second database will be of criminals. This database has to be upgraded to national database for its total utility. By just typing the name of a criminal a police officer will be able to know the details of his past activities, including his modus operandi and the area of operation.

Further a database like this will help tap the criminals easily for all the police stations will have simultaneous access to their record.

The module will also include G2C activities like online filing of FIR's, finding the case status of an FIR. Creating a database of Lost and Found can assist further lost and found of valuables and individuals.

3.3 E-Court

The pending court cases in India has brought the legal system to a halt. Not only are the consumers asking for changes in the administration, but also the system will collapse if it continues in this manner. IT can transform the system and bring in the court cases to a level of zero dependency. Creating a database of cases can do the same. In fact such a system will help to avoid all the appeals to High Courts and Supreme Court, for the Judges can consider the appeals from an intranet wherein the case remains in the same district court but the Higher Court gives their decision online based on the recorded facts of the case. Such a step will not only help the citizens but will also reduce the backlog of cases. Further the use of IT in the areas like recording of court proceedings, high resolution remote video to identify fraudulent documents, live fingerprints scanning and verification, remote probation monitoring, electronic entry of reports and paper work will further speed up the court proceedings.

3.4 State Wide Networks

This will involve linking all the departments of the Government with various district headquarters and the state capital, facilitating the flow of information between the various state departments and it's constituents. Here various blocks will be linked to

district Headquarters, district headquarters to State Headquarters and State Headquarters to the National Capital.

Essentials for achievement

- **Cutting Expenditure:** With proper process control the input output ratio can be improved. The same can be achieved by cutting financial time costs. Cutting Government expenditure will lead to saving and accountability.
- **Organize around outcomes, not tasks.** This principle suggests that a single person should perform all the steps in a process and that the person's job be designed around the outcome or objective rather than a single task. Say, for example, a citizen applies for a permit – it becomes the duty of the receiving authority that the citizen gets the same, rather than moving around to get it done.
- **Managing process performance:** planning, monitoring and controlling the performance of process resources (human, financial and other). Informatisation supports this by providing information about process performance and performance standards. The rationale is to make more efficient or effective use of process resources.
- **Establish a network:** Treat geographically dispersed resources as though they were centralized. Government can use databases, telecommunications networks, and standardized processing systems to get the benefits of scale and coordination, while maintaining the benefits of flexibility and service. Strategic connections in Government should be established like central-to-local, ministry-to-ministry, executive-to-legislature, and decision maker-to-data store.
- **Delegate and Empower:** Put the decision point where the work is performed, and build control into the process. Thus, for overall GPR to succeed the decision-making should pass on to the people who do the actual work from the people who are just monitoring it. People engaged in actual activities should be empowered to make decisions at the required focal point and hence to delegate such activities on their own so that the process itself can have built in controls. This will not only speed up the process but will cut cost as well.

4. GOVERNMENT TO BUSINESS (G2B)

4.1 E-Taxation

This will constitute the various services a business house needs to get from the Government, which includes getting licenses etc. In a similar scenario, it can also flow from a business house to the Government as in the case of procurements, from such business houses by the Government. This will become a B2G service.

Essentials for achievement

- **Standards:** Standards for Electronic Transactions or E-Commerce needs to be built. The standards will also include standards on content etc.
- **Payment Mechanism:** A secure payment mechanism needs to be built to enable payments over the electronic medium.
- **PKI:** PKI or Public key Infrastructure is required for secure and authentic transactions.

5. GOVERNMENT TO NGO (G2N)

5.1 E-Society

Building interactions beyond the boundaries of government by developing communities, by building government partnerships, and by building civil society. It will involve building various associations or interest groups that will ensure the betterment of the society. Such initiatives deal particularly with the relationship between government and citizens: either as voters/stakeholders from whom the public sector derives its legitimacy, or as customers who consume public services.

Essentials for Achievement

- **Publishing:** Delivering data to citizens. This will involve open access to Government Information. The citizen has a right to every Government information and its activities.
- **Interaction:** Delivering data to citizens and receiving data from citizens. This will involve taking feedback from the citizens and interacting with the interest groups.

B. PRIORITIES AND OBJECTIVES

For e-governance to succeed in India 'e-readiness' must be built. This means strengthening infrastructural inadequacies, reducing the barriers to e-governance, and strengthening the drivers to E-Governance. The priority for is therefore to build e-readiness in seven areas:

- Infrastructure
- Institutions
- Laws
- Leadership and commitment
- Human capacities
- Technology
- Data systems

The specific objectives are:

- To develop the high-level awareness and commitment that will carry forward e-governance for development.
- To develop the capacities necessary to address e-governance strategically.
- To develop the human and data infrastructure necessary for e-governance.
- To implement pilot projects.

C. ISSUES FOR E-GOVERNANCE

Funding: Funding is the foremost issue in e-Governance initiatives. The projects that are part of the e-governance initiatives need to be funded either through the Government sector or through the private sector. For the private sector to step into the funding activity their commercial interests needs to be ensured. The projects can be built either on BOO (Built Own Operate) or BOOT (Built Own Operate Transfer) basis. Also the Government interest of Value Addition in services also needs to be taken care of while transferring the services to private sector. Advertising, sharing of Government information etc could be a few revenue generators for the Government.

Management of Change: The delivery of Government services through the electronic media including EDI, Internet and other IT based technologies would necessitate procedural and legal changes in the decision and delivery making processes. It demands fundamental changes in Government decision management. The employees need to be delegated more authority. De-layering of the decision-making levels leads to re-engineering and appropriate sizing of the decision-making machinery. These changes need not only be accepted by the Government and citizens but also be accepted by various interests groups like Employees unions. Under such circumstances bringing in a change will involve changing the mindsets of the people, and a complete Reengineering process needs to be carried out for the same. This will involve training of the personnel at all levels, more so, at the lower rung of Government management organizations. There will also be a loss of vested interests and power amongst the legislature and the executive, which may lead, to resistance to change.

Privacy: The privacy of the citizen also needs to be ensured while addressing the issues. Whenever a citizen gets into any transaction with a Government agency, he shells out lot of personal information, which can be misused by the private sector. Thus, the citizen should be ensured that the information flow would pass through reliable channels and seamless network.

Authentication: Secured ways of transactions for the Government services are another issue of concern. The identity of citizens requesting services needs to be verified before they access or use the services . Here digital signature will play an important role in delivery of such services. But the infrastructure needed to support them is very expensive and requires constant maintenance. Hence a pertinent need still survives, compelling the authorities to ensure the authenticity in their transactions thereby gaining absolute trust and confidence of the citizen.

Interoperability : A major design issue for integrated service delivery sites is, how to capture data in a Web-based form and transfer it to an agency's systems for processing and sharing that information in a common format. Infact the interoperation of various state Governments, the various ministries within a state Government is a critical issue. Further how the various islands of automation will be brought together and built into one is another key issue of e-Governance.

Delivery of services: The ability of citizens to access these services is another major issue. Since the penetration of PCs and Internet is very low in the country, some framework needs to be worked out for delivery of the e-Services that would be

accessible to the poorest of the poor. What will be the Government's network to deliver those services? Could we have something like a single stop shop of the Government? A proposed mechanism is delivery of the same through the Government Post Offices, for they already have the brick and mortar support and the most extensive network in the nation.

Standardization: Defining the standards for the various Government services is another issue that needs to be addressed. The standards need to be worked out not only for the technologies involved but also for issues like naming of websites to creating E-Mail addresses.

Technology Issues : A number of organizations, both in the Centre and the States, have taken commendable initiatives to develop hardware and software platforms to address the challenges offered by e-Governance. At the central level in particular, the C-DAC, CMC and a number of others are noteworthy. The e-Governance initiative would have to address these Technology Issues/Objectives by identifying the appropriate hardware platforms and software application packages for cost-effective delivery of public services. This knowledge repository should be widely available through appropriate Demo- Mechanisms. Offering a basket of these models to the State departments, both in the Center and the State, could be suitably customized as per location and work specific requirements.

Use of local languages: The access of information must be permitted in the language most comfortable to the public user, generally the local language. There do already exist technologies such as GIST and language software by which transliteration from English into other languages can be made.

D. STRATEGY FOR E-GOVERNANCE IMPLEMENTATION

	ACTION	GAP
Stage 1: Building e-Governance Awareness and Commitment		
1.1 National e-Governance Summit	Number of E-Governance Summits held at National Level	No GAP
1.2 Raising Awareness Among Leaders	One to One Counseling of leaders needed	GAP EXISTS
1.3 Awareness-Raising Among the Donor Community	Requires awareness amongst National Donor agencies and assurance to international agencies	GAP EXISTS
1.4 National Association for SMART State Governments	EG Club not able to get the required participation	GAP EXISTS
Stage 2: Building e-Governance Strategic Capacity		
2.1 Building Strategic Institutions for e-Governance	MIT, NIC exist	NO GAP
2.2 Building Legislative Infrastructure for e-Governance	IT Act, Convergence Bill	GAP EXISTS
2.3 Building Commitment for e-Governance	Requires a mechanism of training of IAS officials in EG	GAP EXISTS
2.4 Building e-Governance Strategy	No National or State level strategy exists. Duplication of efforts at various levels	GAP EXISTS
2.5 Information Obligation	Government is not bound to supply information	GAP EXISTS
Stage 3: Building e-Governance Implementation Capacity		
3.1 Building Human Capacities for e-Governance Implementation	Requires training and development of existing staff	GAP EXISTS
3.2 Building Data Systems for e-Governance Implementation	NO integrated effort till date	GAP EXISTS
3.3 Financial Dimension to e-Governance	Traditionally MIT has been funding the projects	GAP EXISTS
4. Building Infrastructure for e-Governance Implementation		
4.1 Institution for Infrastructure: NIC	NIC exists	NO GAP
4.2 Backbone Infrastructure	The backbone infrastructure in development phase	GAP EXISTS
4.3 Delivery Infrastructure	Delivery infrastructure only in pilot stages	GAP EXISTS
Stage 5: Government Process Reengineering		
5.1 Study of existing processes	No study is being carried out	GAP EXISTS
5.2 Recommendations for Reengineering	Mere automation is done without realizing if the process is required or not	GAP EXISTS

Stage 6: Building e-Governance Pilot Projects

6.1 Identifying e-Governance Pilot Projects A number of Pilot Projects exist NO GAP

6.2 Implementing e-Governance Pilot Projects Number of projects already implemented NO GAP

Stage 7: Evaluation of e-Projects

7.1 Study of causes of success or failure Success highlighted, failures suppressed GAP EXISTS

7.2 Replicating the successful projects Problems faced in replication GAP EXISTS

7.3 Bridging the gaps for failure Causes of failure not analyzed by independent authority GAP EXISTS

Stage 8: Identifying projects with long term prospective

8.1 Citizen Card The government is evaluating the concept GAP EXISTS

8.2 Establishment of national networks National networks like the National Health, Crime, Education, Post, tourism etc to be established GAP EXISTS

Stage 9: Global Vision

9.1 Design of policy based on global interoperability No development so far GAP EXISTS

9.2 Networking National networks with global Networks International developments going on, India to participate GAP EXISTS

Stage 10: Popularizing E-Governance

10.1 Marketing and Promotion No effort on this aspect GAP EXISTS

Stage 1: Building E-Governance Awareness and Commitment

1.1 A National E-Governance Summit

A number of seminars and summits have already been organized at National level and State level; including the one organized by the author at University of Roorkee. But these summits have not generated the requisite direction.

A Summit to create a document laying out process and structure, programme and project priorities for the National E-Governance Initiative, including any targets should be organized. It should ensure participation from all stakeholders concerned political parties, bureaucrats, academia, private sector, NGO and the citizens.

1.2 Raising Awareness Among Leaders

In addition to the Summit, other mechanisms would need to be used to raise awareness and commitment among senior officials. These would include the President, Prime Minister, Ministers, Chief Ministers, Secretaries and leaders of other institutions of civil society who largely determine whether and how change takes place. By addressing both government and civil society leaders, drivers to e-governance are created both inside and outside government.

For senior officials, private and personalized training will be required. In order to sustain skills and confidence, direct and continuing use of ICTs will be beneficial.

Political Acceptability

Despite the importance of technological and skill infrastructures, it is the politics of e-governance initiatives that probably hold the key. e-Governance projects have made slow progress in many countries because they do not serve the political self-interests of the major stakeholders, particular senior public officials.

The views of senior public officials are therefore absolutely critical; hence the emphasis laid on the issues of leadership and commitment, the emphasis on building awareness and confidence, and the emphasis on 'winning hearts and minds'. Public officials must be convinced that e-governance is in their self-interest:

- in order to gain election victory,
- in order to respond to threats,
- in order to gain access to donor funds,
- in order to gain control, credibility, kudos, and other intangible resources

Other civil society stakeholders – managers, users, citizens in some cases – have less power but can still delay, skew or block e-governance initiatives. Building capacities, listening, addressing self-interest and motivation, and devising adequate incentives will all have a role to play here.

1.3 Awareness-Raising Among the Donor Community

A package of activities could be delivered that includes:

- Seminars and training workshops for donor agency staff,

- Web-based documentation,
- Individual meetings with key donor personnel, and
- Support for monitoring and evaluation of donor e-governance projects.

In India the Planning and Finance Commissions are the two such bodies that require special attention. It has been observed that the major stake of contribution for E-Governance projects come from Ministry of Information Technology or Department of Science and Technology. In fact the contributions should be integrated with the development projects and all the Ministries should fund in the campaign.

There is a need for knowledge building by better monitoring and evaluation of e-governance projects. Because they have not followed some of the basic principles identified above, the majority of donor-supported e-governance projects have failed either wholly or partially. Not surprisingly, donors do not want this broadcast and have therefore been very reticent to conduct proper independent evaluation of ICT-related projects. Therefore the mistakes get repeated and multiplied.

Further the international donor agencies like the World Bank, UNDP etc should be sent proposals for funding such projects.

1.4 National Association for SMART State Governments: NASSgov

A tripartite body having participation from the private, Government and NGO sector should be formed to act as the watchdog of various E-Governance initiatives in the State. Author suggests formation of National Association of SMART State Governments or NASSgov for achieving the goal. NASSgov will be a national level body like NASSCom having representatives from Politics, Bureaucracy, IT industry, Academia and Citizens. The major activities of NASSgov will include :

A bimonthly newsletter on E-Governance

Provide consultancy on E-Governance

Bring out an annual status report on E-Initiatives in India

Assist Central and State Governments on tendering and User Specifications for E-Projects

Launch www.nassgov.org as a window of Indian E-Governance Initiatives.

Showcase world's Best Practices on E-Governance

Organize seminars, summits and information exchange programs

Establishment of a School of E-Governance

Stage 2: Building E-Governance Strategic Capacity

2.1 A national focal point for E-Governance: 'Ministry of Information Technology'

A single focal point for e-governance strategy, in form of Ministry of Information Technology, E-Governance Division will be needed, responsible for areas such as:

- Setting overall e-governance priorities;
- Leading the development and implementation of framework policies, standards and guidelines;
- Promoting cross-cutting e-governance infrastructure and applications;
- Acting as a focus for learning about e-governance;
- Possibly providing consultancy/facilitative inputs to individual e-governance projects

NIC will act as the implementation agency for such initiatives. Further other institutions that need to be build are:

- MIT Interoperability Commission: to look into interoperability of all IT projects.
- Commission to ensure Universal access to information
- An institution for Research and Development in E-Governance (on lines of C-DAC)
- An institution for Training and Coaching of Human resources (School of E-Governance)
- An institution for spreading awareness. (On lines of company like Exhibitions India Pvt. Ltd.)
- An institution to support PKI.
- A software and technology standards organization
- Government Certification Authorities: Certification Authorities provide digital certificates that help create an online identification and security system for the Internet allowing individuals, corporations and government organizations to conduct transactions and communications with full security and confidence.

A single focal point for knowledge- and skill building for e-governance will be valuable. Its key responsibility would be to provide training of relevance to e-governance: the emphasis – at least over time – might need to be less on generic ICT skills and more on the broader range of competencies required for e-governance, and the same can be achieved with the School of E-Governance. The School of E-Governance will help educate the people who are decision-makers in Government. The School will be built on **four pillars of Governance, Management, IT and E-Governance**. It will bring forth the concept of a Government Process Reengineering or GPR prior to IT implementation.

The target groups that would include current political/civil society top-level leaders, second-tier public officials, current e-governance leaders, future e-governance leaders. Given the importance of leadership a separate *Directorate for e-Governance Leadership* could be included within the Academy.

Other Academy activities could include:

- Collaborating with other national, regional and international institutions to collate and disseminate best practices in e-governance: policies, strategies, replicator projects, case studies, and stories.
- Collaborating with the MIT and State Governments to provide consultancy/facilitative inputs on individual e-governance projects.

2.2 Building Legislative Infrastructure for e-Governance

E-Governance requires a range of legislative changes including electronic signatures; electronic archiving; data matching; freedom of information; data protection; computer crime; and intellectual property rights legislation. Regulatory changes are required for a host of activities from procurement to service delivery. All changes would typically form part of broader change to support generic e-economy and e-nation initiatives.

The Government of India has already introduced the IT Act and Convergence Bill. The following needs to be done in above direction:

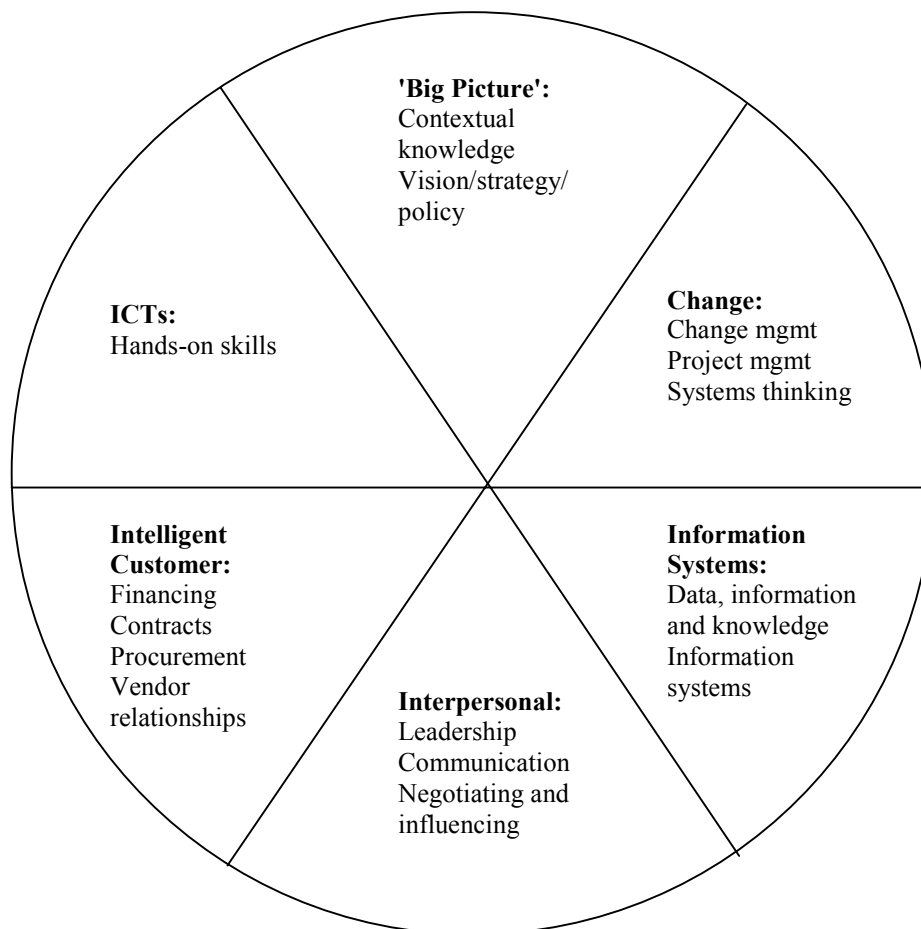
- Accountability Law: will hold the Public Servants including the elected representatives accountable for non-functioning / mal-functioning of their departments.
- Law for Privacy: will ensure that the information about the Citizens is not misused.
- A law like the US Government Paper Elimination Act (GPEA) to promote use of Electronic media.
- Freedom of Information Act allowing access to citizen to Government data.
- Amendments to Consumer Protection Law, Tariffs and Taxation Laws, Intellectual Property Regulations etc are required.
- Further guidelines for Content, Technological Standards, Electronic payments are also necessary.
- Standards for Electronic publishing, archiving, E-Mails etc

2.3 Building Commitment for e-Governance

In addition to awareness-/commitment-raising activities for top-level leaders, there is also a need to train others who will take a leading role. Training activities to be provided by the Academies could include:

- e-Governance training for second-tier government and civil society leaders, focusing on building awareness, confidence and commitment to the e-governance process, allowing them to provide high-level inputs and support for e-governance.
- Leadership training for current e-governance leaders, focusing on their abilities such as leadership, interpersonal skills, strategic planning, and awareness of best practice.

The proposed School of E-Governance is a step in this direction. For immediate action the six months diploma in E-Governance should be made compulsory for all IAS probationers at the Lal Bhadur Shastri Academy at Massouri. Training is required in following areas :



The curriculum design for the School of E-Governance incorporates all areas mentioned above.

Given the centrality of government to e-governance, current (and future) leaders are likely to be principally drawn from within government. Other institutions, though, should not be excluded:

- *Unions:* though often politicized, these may play an important role in either blocking or facilitating e-governance initiatives. Bringing union leaders onside will help progress with e-governance.
- *Civil society:* leaders from the other institutions of civil society can also be usefully included in activities to build leadership and commitment for e-governance.

2.4 Building e-Governance Strategy

Any national drive for e-governance must be directed if it is not to become fragmented. Therefore, the MIT should support the development of a National e-Governance Strategy. This could combine the priorities set by any e-Governance Summit with knowledge of particular national priorities and capacities, including other national ICT initiatives and policies. The document is step 1 in the direction.

Drivers for the E-Governance Strategy

- The maximum impact of IT in Government will be felt for those citizen services, which have direct interface with the public.
- A Government intranet for G2G transactions should be given preference and be made mandatory for all Ministries.

2.5 Information Obligation

The Government needs to be transparent in its functioning and for the same it needs to introduce a legislation if required. The Right to Information should become the fundamental right of the citizens.

Information Government . . . WISHES TO DISSEMINATE

- press notices
- consultation papers
- policies
- White Papers
- news
- health and safety advice
- benefits and entitlements
- applicable regulations

Information Government . . . MAY MAKE AVAILABLE

- geographical data
- demographic data
- economic data
- information collected
- information generated routinely
- value added services

Information Government . . . WILL BE REQUIRED TO SUPPLY (Right to Information)

- performance indicators
- environmental indicators
- audited accounts
- personal data
- internal policy documents
- correspondence
- management reports

Stage 3: Building e-Governance Implementation Capacity

There is a huge e-readiness gap between the capacities needed for pervasive e-governance and the capacities actually present in most developing countries. Completely closing that gap would be a mammoth undertaking. Therefore a suggested priority is to focus on those institutions involved in any e-Governance Pilot Projects.

3.1 Building Human Capacities for e-Governance Implementation

Training

In general terms, priority human capacities for e-governance are 'hybrids': those who understand the technology *and* the business of governance *and* the role of information in governance. It is they – as individuals or small teams – who can most successfully champion e-governance in the target organizations.

Key implementation capacities to be developed for pilot projects would be likely to include:

- Capacity to develop information systems.
- Capacity to manage projects and to manage change.
- Capacity to be an 'intelligent customer': able to raise project finance, specify needs, manage procurement, and manage vendors.
- Capacity to operate and maintain information systems.

Training should also give a high priority to attitude change since a key stumbling block to e-governance is the lack of motivation amongst those involved. Such training should aim to speak to both 'hearts and minds'.

School of e-Governance or its equivalent, would be likely to play a lead role in the training to develop human capacities.

Further the following changes need to be brought in:

Changing recruitment qualifications: Certain changes in the qualifications for recruitment of employees can be made so as to employ persons with keyboard skills combined with the required levels of computer training. A system of incentives would go a long way in ensuring that employees have the requisite skills for effectively using computers.

Changing Civil Services Subjects: IT as a subject should be introduced in civil services. It is a pity that the IAS curriculum does not have IT/E-Governance/Computer Science as a qualifying subject. It will also not be too high a demand if a new branch *Indian Information Services* is established.

Identifying mentors: Secretaries of ministries must identify persons with an aptitude for computers and an ability to perform the role of leaders and mentors in spreading the IT culture not only in the ministry but also in subordinate organization.

3.2 Building Data Systems for e-Governance Implementation

e-Governance projects will rely to a significant degree on existing data, existing systems and existing processes. Where these are already in a mess, addition of ICTs just creates a faster, more expensive mess. Alongside – or even preceding – introduction of ICTs for the e-Governance Pilot Projects, there may therefore need to be moves to reconstruct and renew the underlying data systems.

Existing and planned good governance reforms ought to address this problem. In some ways, they can, through their work to reconstruct work systems and work processes. Unfortunately, they frequently pay too little attention to data issues, and they regularly fall foul of garbage in, garbage out data quality problems. This may well point to the need for support for existing data-centered initiatives, and also data sensitization of existing governance projects. This means, for example, strengthening the information systems component of existing public sector reforms, and ensuring that information systems are not just equated with ICTs, so that an integrated approach is followed. Part of that integrated approach should be a recognition of the 'humanity of data' – the fact that data quality, data security and data sharing depend, at root, on human motivations and values.

The new application areas need to be connected to the old systems and databases to develop comprehensive information systems. These databases should integrate into a data warehouse for analytical data mining to support decision-making. Given the fact that different applications may work with different languages, a coherent data integration policy need to be developed.

3.3 Financial Dimension of E-Governance

COST SAVING:

The main revenue model of implementing an integrated platform, joining all the functions of government, exists in terms of saving immense costs, which are involved in maintaining existing channels of functioning of government, and in distribution of information. The platform provides a platform for communication that would drastically cut down the current costs incurred on activities like,

- Manual transfer of information, which involves huge manpower, time loss, paperwork and probability of human error.
- Performing government functions, e.g., citizens' grievances fulfillment, bill payments, etc.
- Dissemination of government info needs a lot of expensive media coverage to reach the people. With e-governance, the access is wider and information is always available.
- Cutting Administrative cost
- Cutting cost of Corruption due to increased transparency

REVENUE GENERATION

The other revenues that could be generated from the e-governance are:

- Advertising revenues through the portal.
- Additional services can be made available at a premium.

- Industry sponsorships on specific sections; in return, industry would get coverage and can reach out to a common man and target customers more efficiently.
- Increase in overall awareness amongst people and thus creating self-employment that will create revenues for the government.

With these long term financial advantages private parties and government agencies can be brought to fund these projects.

4. Building Infrastructure for e-Governance Implementation

4.1 Institution for Infrastructure: NIC

Institutionally, it could well be valuable to explicitly separate out responsibility for the technical infrastructure underlying e-governance to a national ICT Infrastructure body which would have infrastructural responsibilities across all areas of ICT application, not just e-governance. NIC already exist to carry out the above task. The intention is to ensure that the MIT is not distracted from its work on strategy, structures and processes, and that it retains the understanding that technology is the servant of good governance. The ICT Infrastructure body, as well as planning and overseeing the rollout of technology, would also need to focus on the standards and policies (for example on public key infrastructure, on interoperability, etc.) needed to make the technology usable.

4.2 Backbone Infrastructure

Creation of the infrastructure for Information Technology in the entire country by building NII, SII and LII. The backbone infrastructure will constitute infrastructure for communication, networking, data servers etc. It will include infrastructure for linking of blocks with districts, districts with state capitals and state capitals with National Capital.

It will also constitute the leased lines, satellite links, copper links etc for connectivity. The backbone infrastructure will consist of Local LAN, servers etc.

What Is the NII/ SII/LII?

National Information Infrastructure is more than just the physical facilities used to transmit, store, process, and display voice, data, and images. It encompasses:

- A wide range and ever-expanding range of equipment including cameras, scanners, keyboards, telephones, fax machines, computers, switches, compact disks, video and audio tape, cable, wire, satellites, optical fiber transmission lines, microwave nets, switches, televisions, monitors, printers, and much more. The NII will integrate and interconnect these physical components in a technologically neutral manner so that no one industry will be favored over any other. Most importantly, the NII requires building foundations for living in the Information Age and for making these technological advances useful to the public, business, libraries, and other nongovernmental entities.
- Information is another major component of NII. The information may be in the form of video programming, scientific or business databases, images, sound recordings, library archives, and other media. Vast quantities of that information exist today in government agencies and even more valuable information is produced every day in our laboratories, studios, publishing houses, and elsewhere.
- Applications and software that allow users to access, manipulate, organize, and digest the proliferating mass of information that the NII's facilities will put at their fingertips.
- The network standards and transmission codes that facilitate interconnection and interoperation between networks, and ensure the privacy of persons and the security of the information carried, as well as the security and reliability of the networks.

- The people who create the information, develop applications and services, construct the facilities, and train others to tap its potential. Many of these people will be vendors, operators, and service providers working for private industry.

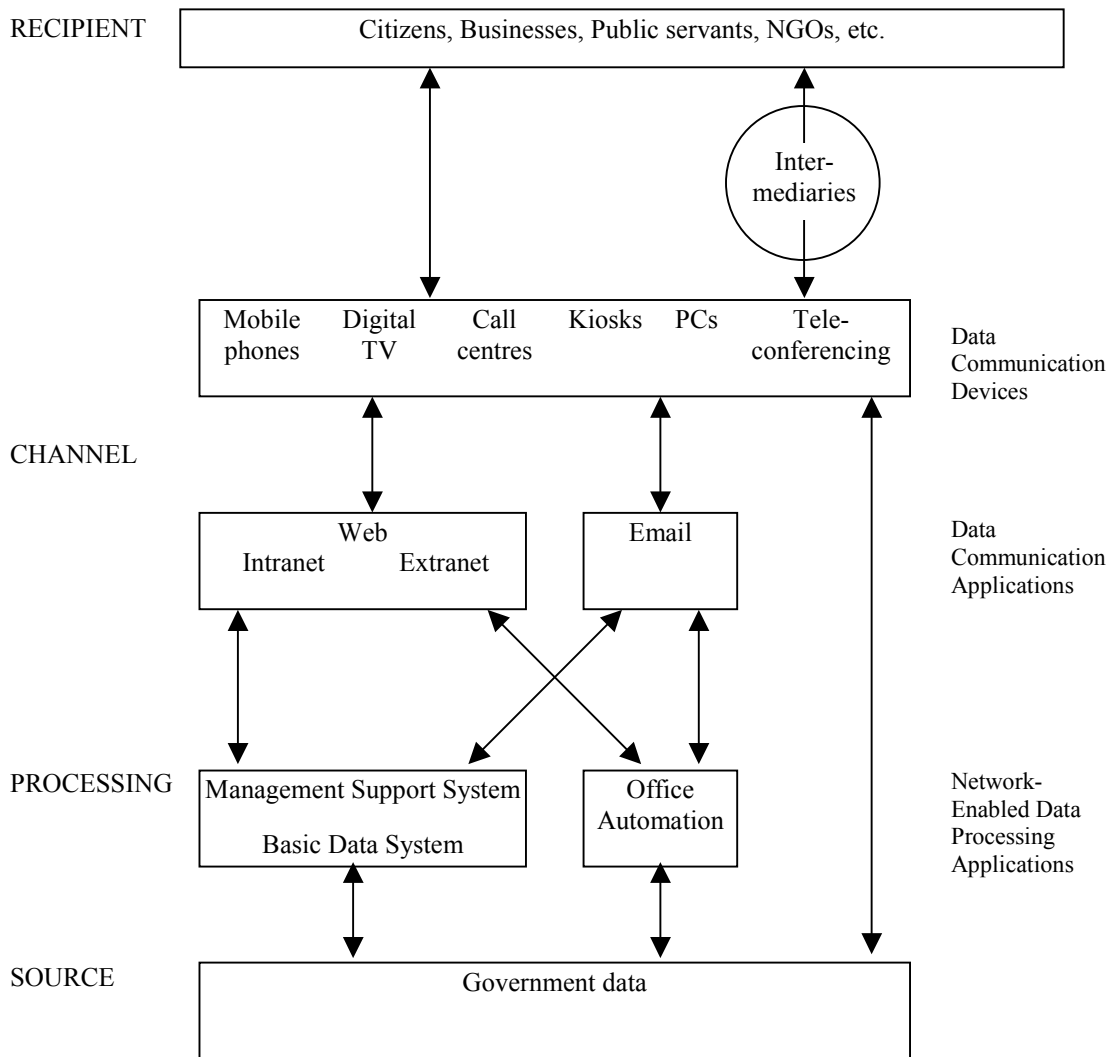
Tier type	Units	Activities
Upper tier	The state government and its planning and decision-making bodies	<ul style="list-style-type: none"> • Receives information from the sub-governmental intermediaries for analysis and tracking. • Uses the application as a decision support system to focus and further development work.
Middle tier	Zilla and Taluk administrations	<ul style="list-style-type: none"> • Approving and downloading the state and central government sponsored projects. • Budgeting, revenue/expenditure tracking. • Collecting survey results.
Lower tier	Gram panchayath	<ul style="list-style-type: none"> • Gather and update database at grass-root levels.

4.3 Delivery Infrastructure

The delivery points will be the Information Kiosks in most cases. These points can be connected to the nearest server at either district or block. These will serve as information disseminator and feedback/ grievances capture points. These can be used as mail or web browsing facilities as well. The infrastructure required will constitute PC's, modem, UPS, Printer, Dial-up / leased line. Information Kiosks need to be established in Public Places such as shopping centers, post office, railway station, libraries. PCOs. The delivery infrastructure will include :

- Telephone call centers, using 'intelligent' telephone networks and computer databases to allow operators to access all relevant data from a single console;
- Kiosks equipped to issue licenses and permits, allow payments of benefits and grants, etc.;
- The ability to submit forms and other information on-line, either on the Internet or using 'closed' network dial-in lines;
- Digital Television (DTV) interactive services in the home;
- Eliminating the need to submit the same information more than once using front-end systems to direct information to the appropriate departments from a single form;
- 'One stop shops' in government offices or third party offices (e.g. citizens organizations for the unemployed, accountants for tax, etc.);
- Integrating government functions with infrastructure of other businesses - bank ATMs, supermarket checkouts and National Lottery terminals have all been suggested as possible outlets for government services.

The Architecture of e-Governance



Stage 5: Government Process Reengineering

5.1 Study of existing processes

Government Process Reengineering (GPR) is the process of rethinking and the radical redesign of Government processes to achieve dramatic improvements in critical measures of performance, such as cost, quality, service and speed. The reengineering in a Government department can be carried out from within or the consultants can be brought from outside.

This phase includes examining the health of each Department and analyzing its ability to accept change, constructing an inventory of the processes involved and determining the critically important core processes, assessing the effectiveness and efficiency of the existing processes in order to determine improvement priorities. The decisions on priorities in a GPR should be on based on three factors - importance, opportunity and feasibility.

Further the most important aspect is whether the existing processes are required or not. It is also important to get employee and customer feedback, to understand what is the real requirement of the system and its greatest priority.

5.2 Recommendations for Reengineering

Consultants/experts should be consulted about the findings and then the scope and expectations should be clearly described. Also, Executive support, sponsorship and required resources should be ensured. Appoint full-time members who have the skills and knowledge of the process and reengineering. Examine both internal and external environmental forces. Document the plan in a charter with clearly defined scope, expectations, measures of success and estimated resource requirements. Appoint a full time cross functional reengineering team to manage change. Reassess the organization's readiness for change.

Start with a clean sheet of paper, break all the rules and define an ideal process. Then develop alternatives and use process benchmarking to find the best practices currently employed by others. Test the consequences of adopting radical designs and trim them back step-by-step as little as possible. Invent an idealized design, expand possibilities and then select best design

Communicate recommended plans to all stakeholders and sponsors. Reflect the improvements anticipated through the reengineering project within the organization's goals and objectives. Communicate the results and revise goals and objectives.

Stage 6: Building e-Governance Pilot Projects

6.1 Identifying e-Governance Pilot Projects

This would be a negotiated activity between key stakeholders such as donors, national ministries and institutions of civil society. These negotiations could usefully be undertaken at the national Strategy-Making Workshops proposed earlier.

Efforts should be taken to take into priority the Government Departments with maximum citizen interface. An ABC analysis of the various Government services should be carried out to arrive at the most important functions of Government.

Listed below are a few such departments that can be considered:

Public Grievances:

Electricity, Water, Telephone, Ration Card, Sanitation, Public Transport, Police

Rural Services:

Land Records, Below Poverty Line (BPL) /EWS Families

Police:

FIR Registration, Lost and Found

- Valuables, Persons, Dead Bodies

Social Services:

- Pension
- Old Age, Widows, Exgratia Scheme
- Acquisition / Rehabilitation & Compensation
- Registration of Licences and Certificates
- Ration Cards, Birth Certificates, Death Certificate, Domicile Certificate, Caste / Tribe Certificate, Arms Renewal, Registration of Documents, School Registration, University Registration, Motor Vehicle Registration, Driving License

Public Information:

- Employment Exchange Registration, Employment Opportunities, Examination Results, Hospitals / Beds Availability / Services, Railway Time Tables, Airline Time Tables, Road Transport Time Tables, Charitable Trusts, Government Notifications, Government Forms, Government Schemes

EWS Services:

- Civil supplies, Old Age Pension, Widow Pension, Handicapped Pension / Services, Ex Gratia Payment

Agriculture Sector:

- Speeds Information, Pesticides, Fertilizers, Crop disease, Weather Forecast - short range / District wise, Market Price

Utility Payments / Billing

- Electricity, Water, Telephone

Commercial

- Taxation & Return Filing, Income Tax, Corporate Tax, Custom Duty, Central / State Excise Duty, Sales Tax, House Tax, Property Tax, Octroi, Road Tax, Company Returns

Government:

- Electronic Procurement, Education University Model for E-Governance

6.2 Implementing e-Governance Pilot Projects

MIT would be likely to take the lead on project implementation. Donor/cross-national inputs could include:

- Funding or co-funding for pilot projects.
- Advisory inputs to support various stages of the project lifecycle, including monitoring and evaluation
- Dissemination of best practice lessons from the pilots.
- Advisory inputs on scaling-up through replication of successful pilot projects.

Guidelines for e-Governance Projects

1. Strengthening the Pressure Points

Governments seem to change more often due to external than internal drivers. Strengthening those local external drivers by helping them gain maximum benefits from ICTs could be a priority. In practice, this could mean three target sectors:

- the independent mass media,
- local NGOs, and
- public libraries, community centres, post offices and other access points to information for citizens

2. Hitting the Bull's Eye: Networked Government

As noted elsewhere, too many current ICT projects seem to take an 'anywhere but government' approach. They focus on telecentres, telemedicine, schools, and e-commerce but not on the core activities of government. Yet government remains at the heart of the development process. Unless it can be reformed – and e-governance has much to offer – then progress will be limited. Therefore use of ICTs to support government reform can be seen as a priority for e-governance.

3. e-Governance Replicators

A priority could be funding projects that would aim to be used as demonstrators/replicators and as ways of building the knowledge base on e-governance best practice. Benchmarking and strong monitoring and evaluation components would be built into such projects.

4. e-Business and e-Commerce Projects

e-Business should be given priority by encouragement of g2b (government-to-business) projects such as e-procurement or electronic delivery of government services to business.

Stage 7: Evaluation of e-Projects

7.1 Study of causes of success or failure

The pilot projects undertaken should be classified as success or failure according to the desired output written down before implementation of the projects. The study should be carried out by an independent agency for the donor agency or the implementation agency will never classify its project as a failure and broadcast the same. The study should be carried out at each stage of implementation. Bottlenecks and causes of delays should be documented, even though they are removed later.

7.2 Replicating the successful projects

The successful projects should be replicated over the nation with members drawn from the implementing team.

7.3 Bridging the gaps for failure

The projects, which could not achieve the desired outcome, should be documented for possible causes of failure. Various bottlenecks and causes of delay should be identified.

Stage 8: Identifying projects with long term prospective

8.1 Citizen Card

Whatever method of electronic communication is used, of equal importance is a means of **electronic identification and authorisation**, and the Government has already indicated a preference for 'smart cards'.

POSSIBLE CONTENTS OF A CITIZEN'S CARD

- Digital signature
 - Voter ID Number
 - Unique Bank Account Number
 - Health Information
 - Date of Birth
 - Address
 - Telephone
 - Place of work
 - Blood Group
 - Driving License Number
 - Passport Number
 - Organ donor wishes
 - PAN Number
 - Electronic Cash
- Travel: Identity cards could replace passports when you travel in Europe and possibly elsewhere.
 - Commercial transactions: You could use them to support cheques worth more than 50 pounds when you open a bank account and as proof of your identity for other business purposes.
 - Proof of your age: Young adults could find identity cards useful as proof of age when buying cigarettes and alcohol.
 - Senior citizens would no longer need to produce their pension books to prove their eligibility for certain concessions.
 - Emergency medical information: Identity cards could include details of your blood group, allergies, medical conditions needing special treatment, who to contact in the case of an accident and whether you want to be an organ donor.
 - Crime prevention: Cards could help the police find out who people are more quickly and would make crimes such as fraud involving impersonation harder to get away with. Credit card fraud cost the country 100 million pounds in 1994.
 - They might also help householders to check a caller's identity, making it more difficult for bogus officials to trick their way into people's homes.

Public services: People often get annoyed when asked for the same information over and over again by public officials. Identity cards could help speed access to public services whilst at the same time making it harder for people to make duplicate claims or use fake identities

This Smart Card will become an index of all activities of an individual. Further the fake transactions can be checked for each transaction will be valid only if it is committed to smart card of a citizen.

8.2 Establishment of National Networks:

Networks for Education, Health services, Police, Posts, Tourism, etc will be the next step in the direction. These national networks will ensure the development in an integrated manner and will lead to national policy dissemination in the areas in a planned and integrated manner.

Stage 9: Global Vision

9.1 Design of policy based on global interoperability

While designing the e-governance policy special emphasis will be given on the interoperability of the services to the international networks. This will require following

- Global standards
- Support to an international PKI
- Recognition to international E-Payments etc

Further following policies and guidelines need to be worked out for interoperability with international agencies:

- Government policy for networks
- Government policy for network security
- Government policy for e-mail
- Government policy for Directory
- Government policy for Domain Naming
- Government policy for File Transfer Systems
- Government policy on Data Integration
- Government policy on Metadata Standards
- Government policy on Data presentation

9.2 Networking National networks with global Networks

The international networks will be of great help in areas where global interaction is required. Areas like fighting terrorism will get a boost through it. The national Police network will be linked to organizations like Interpol thereby ensuring Global policing.

Health Services, Tourism, Posts will be accessible globally and so will be education and other facilities.

Stage 10: Popularizing e-Governance:

10.1 Marketing and promotion

Marketing and publicity are integral parts of successful electronic government initiatives.

Marketing efforts should focus on creating brand awareness of the online presence. Using traditional media methods and outlets to create the right image for this new delivery channel can accomplish this kind of "branding." One branding strategy is to use an advertising agency, such as those employed by many states for lottery advertising. The customer would learn to identify a particular slogan or message with e-government activities.

Another important strategy is for agencies across the enterprise to present a unified front. All collateral materials sent to "traditional" customers should stipulate the source and location of the alternative electronic way of doing business. For example, on a tax form there should be the location of its source like a website address.

Agencies should encourage front-line employees to promote to customers going online next time they wish to transact business. Community outreach programs, including seminars, educational programs and speakers' bureaus, offer other potential channels to reach the public.

Another customers are the Government employees. Unless they are convinced, they will not communicate the message to the citizen. Therefore they should be specifically targeted.

Business Groups for E-Commerce can be specifically targeted.

E. Conclusion

Thus from above discussions we conclude that a long term and a short-term strategy for E-Governance implementation is the need of the hour. For successful implementation Standards, Infrastructure, Legislations, Strategy all needs to be in place. It also requires establishment of various institutions under the Ministry of Information Technology. It requires a Global Vision and local implementation. And above all it requires e-readiness in the minds of citizens and the Government employees. The paper will be incomplete without giving a direction to our Strategy and this direction comes in words of Mahatama Gandhi ,

*“ ...Whether what we are
doing benefits the common man in anyway... ”*