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e-Governance News:

- Nirman 2006 at Ahmedabad
- Gujarat Stall at TELECOMM India 2006

Twenty Five Steps to Successful e-Governance

INTRODUCTION

E-Governance is said to be pill of all ills of Governance. However many e-Governance projects are not succeeding or are facing bottlenecks. There is resistance to change or duplication of efforts in many initiatives. There are local language issues in some cases and lack of planning in others. Lack of infrastructure is a bottleneck in some countries while in others Universal Access is an issue. In some countries the lack of Process and Legal Reforms is hindering the projects, while in others the lack of technology and architecture is leading to slow implementation.

In our earlier News letter, we have covered Twenty Five Steps towards e-Governance Failure.

This News letter analyzes the various essentials for successes of e-Governance from the prospective of developing nations. It emphasizes that the first step towards e-governance is understanding governance. It looks into Vision and Objectives of various successful countries and suggests guidelines for same. It suggests that an e-Governance Roadmap must answer the questions of what, when, who and how for e-Governance implementation. It further suggests a strategy for identification and prioritization of the key initiatives. It highlights the role of leadership in driving the e-governance projects. The News letter underlines an institutional framework for successful implementation.

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The News letter also suggests the importance of Process Reforms before computerization. It identifies that some processes need to be eliminated or reformed rather than automated. In areas of legal reforms it looks into international laws like IT Act, e-Governance Act, Right to Information Act, Government Paperwork Elimination Act, Right to Privacy Act and importance of each in success of e-Governance. Apart from Institutional Capacity Building the News letter identifies the need of Human capacity Building and how the awareness campaigns like Workshops, Seminars and Trainings can play an important role. It also identifies content as a king in any e-governance project.

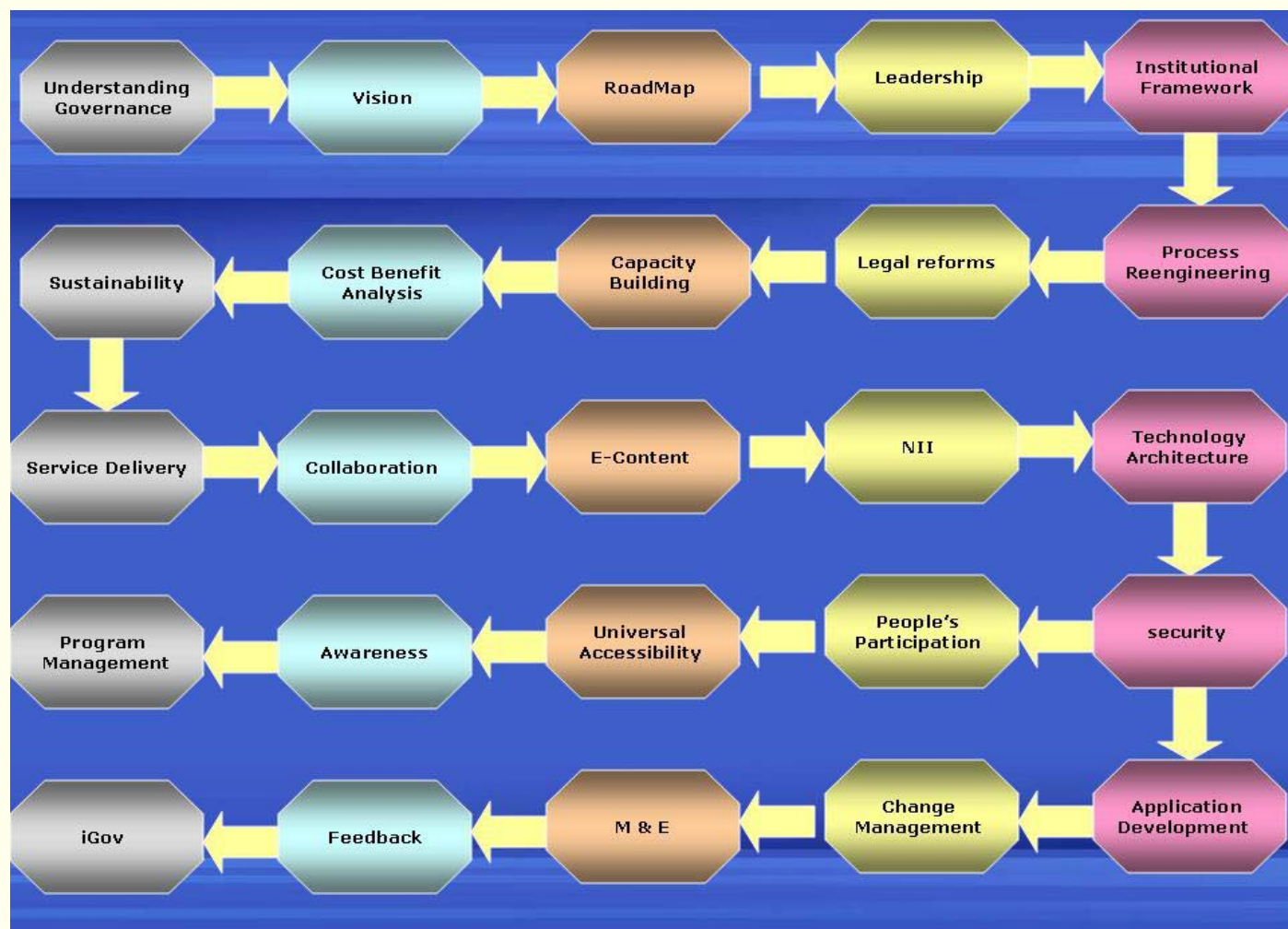


Figure 1: Twenty Five Steps to successful e-Governance

Twenty Five steps to Successful e-Governance

1. Understanding Governance

Understanding Government and the process of Governance is the first step in e-Governance. In majority of the cases e-Governance is visualized to be an IT initiative but in reality it is a Governance issue. In a holistic view e-Governance consists of Change Management, Resource Management, Process Reforms, Administrative Reforms, Organization Re-structuring, Information Management, Knowledge Management, Legal Reforms, Technology Management and many more component. IT is just a part of the Technology Component and therefore just a fraction of what the complete picture of e-Governance is. E-Governance is not about translation of existing processes in computerized form but it is more of transformation of processes. E-Governance is not a job of IT experts but of domain experts. Therefore in order to be successful in e-Governance we need experts who are skilled in Governance.

2. Definition of Vision & Strategic Objectives

e-Governance vision of the country must be driven from the development vision and objective of the country. For true results of e-governance the development impact is the key. Any e-Governance project will be mission less if there is no improvement in governance process. It will be called pointless if there is improvement in governance process but no development impact. It will be truly meaningful if it has a development impact. Further if an e-Governance application is closely linked to the priority development needs of the society than it brings with it broad support and overcomes the resistance.

However a closer analysis of Vision for e-Governance for various countries it was observed that many counties made statements like Complete Government Services Online by Year 2010, etc. Such statements in the vision statement lead to just making information online to a small community of netizens. With online features the complexity of dealing with Governments increased rather than getting decreased. It was thought that e-Governance can resolve all the problems of Governance. However later it was realized that e-Governance is just a tool that is applied to meet various challenges of Government. Soon the reality came to the e-Governance implementers and the statement changed to,

“Think Big, Start Small and Scale Fast”. The various essentials for a good vision and objectives for e-Governance are as follows:

- 1. Citizen should be center of the e-Governance vision of the country**
- 2. The Vision should be close to reality and not rhetoric**
- 3. Even though the citizen is at the center the other stakeholders should not be forgotten.**
- 4. Citizen should have access to various delivery channels and should not be limited to being online.**
- 5. Service improvement and process efficiency are key objectives of e-Governance**
- 6. The objective should be of collaboration of various organs of the Government**
- 7. The outcomes must be clearly defined and the performance should be measured against those outcomes.**
- 8. Partnerships with the private sector may also be highlighted in the objectives.**
- 9. One of the objectives must also recognize citizens as customers of the Government and the customer relationship programs may be evolved further.**

A few of the Visions of countries that capture a part of the above objectives are given as under. The important aspects of the Vision are highlighted in bold:

Vision for Government of Australia,

“The Federal Government’s aim is to develop more and better online, integrated services that break down the barriers of Government structure and jurisdiction, and meet the real needs of individuals and business.”

Vision for Government of Germany

“To ensure that citizen and industry are able to use the services of the Federal administration more simply, faster and cheaper. “

Vision for Government of Italy

“To create a structure whereby citizens can receive services, by any front office regardless of territorial jurisdiction; citizens will not need to supply any information already in possession of other State administrations; services are citizen-centred; citizens need notify the administration once only.”

Vision for Government of Mexico

“The vision is focussed on three key elements - content, connectivity and services, the services encompassing health, education, science and technology, government and trade.”

Vision for Government of South Africa

“To leverage e-Government to structure and render services around life episodes of the South African people, following a series of events, from cradle to grave. Such services must be accessible to all citizens anytime, anywhere, and through different access devices and media. “

Vision for Government of United States

“To accelerate and streamline service delivery to citizens, reduce paperwork burdens on business, improve management and responsiveness of joint Federal-State-Local programs, and apply commercial best practices to improve government operating efficiency. “

3. Formulation of e-Governance Roadmap

The e-Governance Roadmap for a country should answer the questions of Why, What, How, Who, When and Where of e-Governance.

The first step in e-Governance is identifying the areas for e-Governance intervention and prioritize e-governance in those areas. The various points that can be of help in prioritizing the initiatives include the following:

- Strengthen the pressure points (which will have maximum impact)
- Choose projects which can be easily replicated
- Identify projects which have a scope for Public Private Partnerships (PPP)
- Choose projects which will get citizen and leadership support
- The chosen projects must evolve from the development agenda of the country
- The Projects should have a sustainable business model can be evolved
- The identified projects should be and based on standards
- The selected projects should have low cost of development and less opportunity cost.

S.No.	Questions	Answers will be found in
1	Why e-Governance?	Policy
2	What to e-Govern?	Strategy
3	How to e-Govern?	Plan
4	Who should do it?	Capacity Building
5	If not e-Governance – what could have been done ?	Opportunity Cost
6	Where	Area

4. Leadership for e-Governance

Leadership is an important aspect of e-governance. The commitment of top leadership is important for e-governance. Leadership commitment is not only important at Political and Bureaucratic level but at the project implementation level as well. The leadership provides the role of reformers who will help the e-Governance Initiatives sail through. The leadership may as well come from the private sector wherein the Private partners may drive the whole initiative for the Government.

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.

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.

“The Roadmap for e-Government in the Developing World – 10 Questions e-Government leaders should ask themselves” by Pacific Council on International Policy identifies a few questions for the e-Government leadership

1. Why are we pursuing e-Government?
2. Do you have clear Vision and Priorities for e-Government?
3. What kind of e-Government are we ready for?
4. Is there enough political will to lead e-Government effort?
5. Are we selecting e-Government Projects in best ways?
6. How should we plan and manage e-Government Projects?
7. How will we overcome resistance from within the Government?
8. How will we measure and communicate progress?
9. What should be our relationship with the Private Sector?
10. How can e-Government improve citizen participation in public affairs?

The above questions must be answered in order to achieve true e-Governance.

Specifically for success of e-Governance the country should create an office for e-Governance and designate a senior officer assisted by a complete team in charge for planning e-Governance initiatives. Direct support should be solicited from the office of President, Prime Minister or the Head of state as the case may be.

5. Institutional Framework for e-Governance

The various Organization structures that will be required for the successful implementation of e-Governance include the following:

- e-Cooperation Commission (to ensure cooperation amongst different Departments and different levels of Government)
- Interoperability Commission
- Information Security Commission
- Data Protection and Privacy Commission
- e-Governance Audit Commission
- Legal and Administrative reform Commission
- Internet Consumer Rights Commission
- National e-Governance Planning Commission
- Local Language Commission
- Telecom Commission
- e-Governance Implementation Commission
- National Infrastructure Commission
- National Commission for Internet Content
- Online Quality Assurance Commission
- National Commission for International Cooperation

6. Government Process Re-engineering

Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in performance -cost, quality, service, and speed. E-Governance is distinct from computerization as automation by itself will not eliminate all sources of errors, avoidable costs delays. It may even add its share of errors and costs. Therefore process re-engineering must precede the computerization

The various steps in the Process Re-engineering may include the following:

- Identify candidate Processes
- Understand the processes
- Document the process
- Decompose the process in smaller processes
- Analyse the processes
- Eliminate the processes which are of low criticality but difficult to implement
- Reform the process which are of high criticality but difficult to implement
- Continue the processes which are of high criticality but easy to implement
- Integrate the processes
- Automate the Process Steps
- Ensure Change management

GPR study 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.

The e-Government Handbook for developing Countries published by Infodev highlights the following recommendations for Process Reforms

- Plan carefully -streamline and consolidate offline processes before putting them online.
- Don't automate inefficiencies - eliminate them.
- Respond to local needs - draw on the ideas of those who will use the system and enlist the support.
- Try to focus projects from the user perspective.
- Dispel resistance of civil servants by training and incentives to support reform.
- Ensure commitment of resources for the long term.

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.

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.

7. Legal Reforms

A successful implementation of e-governance requires the following to be achieved:

E-Governance legislation: A comprehensive legislation which may facilitate for closer cooperation between all authorities providing e-Governance services. It may facilitate the electronic service of documents, recognition to electronic signature, and a freedom of choice between means of communication for submissions of documents, forms to the public

administration. The legislation may cover the rights and duties of bodies involved in the development of information systems for public administration.

Right to Information: A legislation that may that contains provisions on access to public information for the Government Agencies. It will put a legal obligation on the Government Servants to answer questions regarding their areas of responsibility.

Data Protection: Data Protection Legislation may regulate the pre-conditions for the lawful use sharing and transfer of data. The Act may stipulate that the data must be processed lawfully, used for specified lawful purpose only , Accurate and is updated, Kept secure, kept for no longer than necessary and transferred to countries where similar protections are there.

Privacy legislation: This legislation may provide a right to privacy with respect to the processing of personal data which entails the right to information, rectification of incorrect data and erasure of unlawfully processed data. It may more be related to individual right for protection of personal data and its illegal use.

E-Commerce legislation: A legislation that deals with certain aspects of information society services, i.e., commercial online-services like online-distribution, online-information, online-advertisement, access services and search engines. The Act may be applicable to virtually all services provided over the Internet.

E-Communications legislation: A legislation that may regulate the bandwidth and communication networks and may regulate the inter operator / inter-network communication. It may as well have a framework for interoperability etc.

E-identity legislation: The legislation may legally recognizes electronic signatures satisfying certain security requirements.

E-procurement legislation: The e-Procurement-Regulation may govern the electronically based creation and delivery of offers in the area of public procurement. It may specify the rules applicable to communication, storage of data and use of specific procedures, e.g. e-auctions and dynamic purchasing systems.

Databases legislation: The legislation may regulate the creation and maintenance of electronic databases by public sector bodies and creates a state register of databases. The Act may as well mandate the establishment of a state register of databases that registers state and local government databases, as well as databases containing sensitive personal data maintained by persons in private law.

8. Human Capacity Building

The human capacity building involves not only IT skill building but also skill sets in management, change management and communications. There should be clear plans for human capacity development. Gap areas may be identified and possible interventions may be suggested. 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, may be established which may likely play a lead role in the training to develop human capacities.

9. Cost Benefit Analysis

Any e-Governance initiative must start with a clear understanding of the various costs involved in the project. We must also look into the Cost-Benefit-Analysis of the project. The investments in a project must look forward to the returns on the investments. Short term and long term plans with expected expenditures, income streams and deadlines may be worked out. 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. Further the Government may save costs because of following:

- 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
- More Investment due to corruption free environment
- Increased collections due to real-time monitoring.
- Part of initial investment borne by Private partner

The benefits of e-governance range from improvement in service delivery and social welfare of citizens.

The various net benefits arising out of e-Governance are as listed below:

1. Net Financial Benefit to the Government Agency = Operation Cost Reductions + Revenue Increased – Costs of development of the application
2. Net Financial Benefit to the Citizen = Cost reduction (Less Delivery Charges) + Increased Citizen revenue (due to efficiency) – Cost of deployment of new system
3. Social Benefit = Increased Health, Education, Employment, Social Uplift-ment benefits
4. Governance Benefit = Increased transparency, accountability, efficiency and participation in Government

The projects may be evaluated for all above benefits and corresponding costs.

10. Sustainable Business Model

The various business models as operating in the e-governance area are described below. For the success of the project it is necessary that a sustainable business model is chosen from amongst the following referred below.

Government Owned :

In a Government Owned business model the Government, or its Agency or a PSU is involved in designing, building, funding, owning and operating the project. The project is built on public money and Government may charge a transaction fee from Citizens or subsidize it from public funding.

Private Partners:

In a private partner model the Government funds and owns the project but the designing, building and operation of the project is vested with a private partner. At time the Government may take the operations to itself after initially getting the project developed by private party.

BOO (Built-own-operate):

With the build-own-operate model, a private company is granted the right to develop, finance, design, build, own, operate, and maintain a transportation project. The private sector partner owns the project outright and retains the operating revenue risk and all of the surplus operating revenue in perpetuity.

BOOT (Built-own-operate-transfer) :

A BOOT funding model involves a single organisation, or consortium (BOOT provider) designing, building, funding, owning and operating the scheme for a defined period of time and then transferring this ownership across to an agreed party.

SPV Model:

In a Special Purpose Vehicle model the Government in collaboration with a private agency or Government Agency or International Agency or itself forms a special purpose vehicle to fund the project.

Externally Funded Projects:

In externally funded projects the international donor agencies funds the various projects by giving grants to the Government or its agencies and the project is executed as a mutually agreed methodology.

11. Service Delivery Paradigm

The Government Service Delivery paradigm is facing tough challenges. On one hand there is a challenge of regulatory compliance and cost cutting on other there is a challenge of service improvement.

In corporate world the world's best companies have done it, and the Governments are now following the suit in 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.

Clearly, governments are putting the foundations in place for multi-channel, inter-connected government and they are starting to adopt many of the customer relationship management capabilities more commonly seen in world-class customer service organizations.

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.

With e-Governance the service delivery paradigm in Government is fast changing. The table on next page compares the past and present paradigms

Integrated Service Delivery is another service delivery mechanism which may further be explored. 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 may be delivery of the same through the Government Post Offices, establishing of Common Service Centres, Providing services at Village Panchayats.

12. Collaboration for e-Governance

Collaboration is must for e-Governance. The collaboration may include the collaboration with following stakeholders:

- Centre, State and Local Government Collaboration
- Collaboration with NGO's
- Collaboration with Businesses / private sector
- Inter-Government Agency Collaboration
- Citizen- Government Collaboration
- Government – Employee Collaboration
- Government – Academics Collaboration (for capacity building)

First step in any e-Governance project is to establish a consultative process with all stakeholders that may be directly or indirectly affected by the initiative. The Project team may have discussions with Government Employees, Businesses, NGO's and other agencies. Collaboration with private sector will help to get the expertise of private sector as applied to Government sector. Cooperation between various agencies of Government is also necessary. There must be efforts to create business opportunities so that the private sector may be attracted to invest in e-Governance Projects. Create local leadership and ownership wherever the project is implemented.

13. e-Content

People today are using maximum e-Governance services for online search for information. People look for information that will help resolve their problems of daily dealing with Government. 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.

The Government needs to be transparent in its functioning and for the same it needs to introduce 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

14. Building National Information Infrastructure

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.
- 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.
- Data Centers are another component of the e-Governance impemataion. The data centers will store the various databases etc at National, State and Local Level. The key databases may include databases for citizens, property, vehicles and companies.

15. e-Governance Technology Architecture

e-Governance Architecture is a set of guidelines, concepts, principles, rules, patterns interfaces and standards to follow when building a new IT capability. It is a description of a complex system, its purpose, structure, components, as well as how these interrelate, at one point in time. A good e-Governance Architecture

- Allows for a multitude of different technologies
- Is based on open Standards
- Provides adequate security and data protection
- Is Accessible to all stakeholders
- Is interoperable
- Can be Scaled for future

One of the Components of the Architecture are the e-Governance Standards. E-Gove 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.

The standards will facilitate the clear guidelines for achieving interoperability across various organs of the Government and across various agencies with regards to management of information. The Architecture will ensure the interoperability in following areas:

- Technical - concerned with networking, interfaces, data formats etc
- Semantic - means that the precise meaning of exchanged information is understandable by any other application not initially developed for this purpose
- Organizational - concerned with modeling business processes, aligning information architectures etc

Interoperability, Security, Openness, Flexibility and Scalability are the foundations of an e-Governance Architecture.

16. Privacy and Security

The e-Governance application needs to build the trust of citizens in the system . It needs to ensure that the data and transactions of the citizen are secure. The information shared by the citizens should also remain safe and the privacy of the citizen needs to be protected. 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 and anti-social elements. Thus, the citizen should be ensured that the information flow would pass through reliable channels and seamless network.

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.

The various security concerns that may be there for an e-Government System are listed as under:

- Virus Attacks
- Outside and Inside Attacks
- User Frauds
- False identity / Impersonation
- Unauthorized disclosure
- Theft / Duplication of access token
- Denial of service attack
- Misinformation and propaganda
- Breach of anonymity
- Breach of accountability
- Failure to recover business information
- Loss or theft of monetary value

Secured ways of transactions for the Government services are another issue of concern. The various levels of security that are important are:

Physical security which may extend from a locked computer room to access control systems, to closed circuit cameras, to key lock to power supply. Physical security is must for environmental dangers like fire, smoke, earthquake, etc The security features may range from locks to tagging.

Information security: is security to protect information from unwanted exposure, tampering or destruction. various mathematical techniques called cryptography are used to protect data. The process of using cryptography to scrambling data is called encryption and unscrambling is called decryption.

Authentication is establishing the validity of an identity and the rights and privileges attached to it. This may include physical identification, password based identification, biometrics, digital signatures, digital certificates and network based authentication

Server Security is the security of servers which may include mail servers, file servers, web servers, database servers, name servers etc. There are various security tools available for enhancing security of the servers. Apart from that Tools like network scanning programs, intrusion detecting systems, virus scanners, firewalls may be added

17. People's Participation / Civic Engagement

All Governments work for people and therefore people's participation is very crucial for any e-Governance initiative. People's Participation can be ensured by the following methods.

E-inform: The government informs its citizens about its policies and programme, budgets, laws and regulations etc with use of e-participation tools like websites. The various tools that may be included for people's participation particularly informing them are the use of web forums, e-mail lists, news-groups and chat rooms.

E-consult: Here in the Government takes feedback from the citizens about various legislatures, proposed policies etc. The web tools offer a choice of public policy topics on line for discussion with real-time and archived access to audios and videos of public meetings.

E-decisions: The government indicates it will take citizen input into decision-making and provides actual feedback on the outcome of specific issues.

Local Language Content and Local Language Interface is important for success of e-Governance Initiative.

18. Universal Accessibility

All citizens of the country bear the opportunity of introducing a e-Governance initiative. However amongst the complete population there is only a fraction of population who have access to internet; there is still a smaller fraction that is skilled to use internet; there is further a smaller fraction which is using are using internet for Government services. We must bear in mind that any e-Governance application is not for this small fraction of population and therefore we need to ensure such delivery channels which are universally accessible.

There are many causes of the digital divide. This may include the linguistic barriers wherein the content may be created in language for the majority population but the content for the minority population may not be there. Further the online services which are deigned are made so sophisticated that they become inaccessible to the common man. Further a few services are now charged online which are available free offline.

The population in villages may be provided with the Internet Kiosks for community access to e-Governance. The access needs to be combined with the training.

19. Awareness and Communication Strategy

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-Governance 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. Develop publicity campaigns and training material that will engage people in e-Government efforts.

The digital Governance Models as defined by Sh. Vikas Nath in his paper Digital Governance Models: moving towards good governance in developing countries. Innovation Journal. April 2003 may be further help in defining the communication strategy. The same can be referred at <http://www.innovation.cc/volumes-issues/nath-digital.pdf>

20. E-Governance Program Management

An effective e-Governance Program management will be in control of scope, time, quality, scope, human resources, communications and risks.

Effective program management has also to ensure that the stated goals are accomplished. The program includes multiple projects and project scoping include scoping the deliverables of the projects and incorporating, documenting and communicating change

requests of stakeholders.

The time required for a project is total of the time for completion of various components, which may be broken down and estimated on time. A project schedule based on project scoping is worked out in the beginning of project. The cost is calculated based on cost of various resources including cost of services. The effort is to ensure that the project is completed on time and within budget. Multiple projects in an integrated manner will contribute to an effective program.

Quality Management ensures that the e-Governance program will satisfy the needs for which it was undertaken. In order to achieve quality a quality plan is necessary and controls over the activities need to be carried out. Quality standards have significant impact on time and cost. Some tasks may become exceptionally good if given more time. As part of HR Management the Program Management ensures that the most effective use of the people involved within the program takes place. Therefore the Human resource planning and development is an essential part of program management.

A communication plan is necessary to ensure effective communication between the team members and key stakeholders

The Program Management Team needs to ensure that project risks are identified, analyzed, and responded to. Most risks or potential failures can be overcome or resolved, given enough time and resources. The risks mitigation plans can be put in place so that the necessary action is taken on time.

The various activities of Program Management may include:

- Scope Definition
- Cost Estimation

- Project Planning
- Assessing Risks
- Estimating resources
- Organizing the work
- Acquiring human and material resources
- Assigning tasks
- Directing activities
- Controlling project execution
- Reporting progress
- Analyzing the results based on the facts achieved
- Quality Assurance
- Monitoring and Evaluation
- Feedback and Improvement

21. E-Governance Application Development

Software Development is an important aspect of Project Management. It is a phase beyond conceptualization and architecture. At the Government end if the project is outsourced then it starts with bid process management which includes call for Expression of Interest, Release of Request for Proposal (RFP), Call for bids, their evaluation and selection of successful bidder. If the project is developed In-house all above steps are curtailed.

The various steps in software development lifecycle include the following:

Requirement Analysis:

In this phase the development team visits the Client and understands the requirement. The team studies the systems with in the new scenario of Business Process Re-engineering being already implemented. In this face the requirement analysis is focused specially on software.

System Analysis and Design

In this phase the overall structure is designed. This may include preference in terms of say the client/server technology, the package architecture, the database design, the data structure design etc. At this stage a software development model is created which becomes basis of code generation.

Code Generation

Generation of code is the next step in SDLC and uses programming tools like Compilers, Interpreters, and Debuggers to generate the code. Various high level programming languages like C, C++, Pascal, Java are used for coding.

Testing

Testing is the next step in after code generation. The various testing methodologies are used to locate the bugs in the system.

Maintenance

Any software delivered to customer will undergo changes due to various reasons. The software should be developed to accommodate such changes.

22. Change Management in Government

The delivery of Government services through the e-Governance will lead to administrative, process and legal changes. Therefore e-Governance demands fundamental changes in the way Government works. It may necessitate empowerment of employees, De-layering of decision making levels. 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.

There will also be a loss of vested interests and power amongst the legislature and the executive, which may lead, to resistance to change. Therefore a Change Management Strategy is a beginning point of e-Governance. The various components of Change management are:

- Define and identify the various areas of reforms
- Identify Champion of Change
- Ensure Commitment to Change
- Facilitate the Participation of Stakeholders
- Device a Communication Strategy
- Enable a IT Training
- Set up a Mechanism for Continuous Learning
- Monitor, Evaluate and Analyze the Change Process
- Provide Support whenever required

23. Evaluating e-Governance Projects

Clear project objectives need to be set and projects need to be evaluated based on those objectives. The success of the project will depend on how far the stated objectives have been met. Another parameters which may define project success is the sustainability of projects over a long period and return on investments.

The e-Governance project successes may also be studied on service delivery, technology, reliability and replicability attributes. The projects need to be evaluated as a constant improvement model even while implementation is underway. The interventions may be carried out at each stage of implementation. Bottlenecks and causes of delays should be documented, even though they may be removed later.

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

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.

24. Continuous Feedback

Feedback is the process of gathering the inputs of others. In e-Governance scenario it will be the perception of various stakeholders towards performance of project and achievement of various outcomes. The feedback process actually starts at the conceptualization of project or at the vision state itself. Initially, it will be comments / observations on documents / reports as prepared. At a later stage it will be actual experience on the e-governance application and at final stage it will be citizen satisfaction on the same. The feedback cycle once started has to be maintained throughout the project for success. The purpose of feedback is improvement. This whole process of improvement requires reviewing, communications, discussions, observations, brainstorming, listening, testing and more.

e-Governance Feedback impact also depends on maturity levels of stakeholders. In most cases the feedback is taken from the Project In charge at the Department implementing the project without realizing that feedback obtained will be limited. This feedback will serve only individual interest or in best cases the interests of the Department. It may not satisfy all the stakeholders. However another issue is that how many stakeholders actually know with clarity what they should expect from the Department and what is the process of selecting right set of stakeholders. Citizen surveys are a good method of getting feedback. However such surveys would be analyzed qualitatively and not quantitatively. The responses which are non serious should be discarded straight away. However the process of feedback has to be continuous.

25. Integrated Government (iGov)

Integrated Government or iGov is evolving concept wherein an integrated approach to Government is achieved. It is integration of services across Federal, State and Local Government. It is also integration of Government across various Departments. In short it may be defined as a single window for Government transactions. The foundation of Integrated Government is a single identity to all citizens through which they can access all services. The backend integration of various Departments / levels of Governments is necessary for achievement of Integrated Government. However in a country where the constitution provides the distribution of powers with Centre and States, it may be a big challenge to achieve such integration of services. Nevertheless a few states in India have started such initiatives with limited services. E-Seva of Andhara Pradesh and Bangalore One of Karnataka are a few examples which have started with limited services and are scaling fast.

Another important issue in integration of services is that it cannot be spearheaded from a Department like IT. It has to be specifically spearheaded from a unit under the Prime Minister so that it has an authority across all Departments at Centre and parallel units need to be created under the Chief Ministers of the states. A complete national consensus needs to be built for the concept. Various projects which are implemented separately will be made interoperable and integration achieved.

eGovernance News

NIRMAN 2006 at Ahmedabad

GICEA (The Gujarat Institute of Civil Engineers & Architects), a unique professional organization, established in 1947 is as premier institute of Civil Engineers and Architects.

Four day (14th-17th October, 2006) exhibition was organized at Ahmedabad. It was inaugurated by Hon'ble Chief Minister of Gujarat State Shri Narendra Modi.

On 14th October, 2006, there was track on IT Sector – Catalyst to City Development. Dr. T.H.Chaudhary, Advisor, Information Technology, Govt. of Andhra Pradesh had praised new draft IT policy (2006-2010) of Govt. of Gujarat. He also talked about IT Technology changing the face of Gujarat and Andhra Pradesh hving the potential to emerge as the new IT hub. He said “ NRGs can contribute a lot in bringing IT revolution in the state. One should harness their resources and pool the talent for future IT growth in the state.

Dr. Neeta Shah, Director (e-Governance), Gujarat Informatics Limited during her speech at the seminar at Nirman 2006 said “ We have not missed the IT bus but we are at right time in the right bus”. She has also made presentation on IT Sector – Catalyst to City Development.

Gujarat Stall at TELECOMM India 2006

Gujarat has set up Pavilion plot for Guest State exhibit-display at TELECOMM India 2006 – 5th International Exhibition and Conference at Mumbai during 5th – 7th October, 2006, to highlight various infrastructure development activities conducted by Gujarat State. Screenshots of Gujarat State's Stall as follows on next page:

eGovernance News

1. Gujarat Stall – front view



2. Dr. Shakeel Ahmad, Minister of State for Communications & IT, Govt. of India along with Mr. Indra Mohan, President, India Tech Foundation interacting with Dr. Neeta Shah, Director (e-Governance), GIL and Mr. Pankaj Kotak, OSD-Promotion, GIL during his visit of Gujarat Stall at TELECOMM India 2006 in Mumbai. Gujarat was Guest State at TELECOMM India 2006.



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