

CRITICAL ISSUES IN e-GOVERNANCE

Summary of Discussion using Issue Process Methodology
Panel discussion
in
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1 INTRODUCTION

There has been a felt need that a set of critical issues responsible for the success of e-Governance projects in India are identified and addressed in the 5th International Conference on e-Governance (ICEG 2007) and based on the inputs from various stake holders, a set of recommendations and action plan should emerge to be shared with various stake holders. A structured *Issue Process Methodology* has been followed for this purpose; a brief overview of the methodology used is given below:

2 ISSUE PROCESS METHODOLOGY

- Seek suggestions from all the Stake Holders covering Academic, Industry & Government to identify set of critical issues need to be addressed for ensuring success of e-Governance Projects in India.
- Shortlist a set of critical issues to be considered during the conference ICEG 2007.
- Identify one “Issue Champion” for each of the critical issues identified and request him/her to prepare a white paper on this particular issue with the support of an Issue Owner, in consultation with various stakeholders.
- At the end of this process, Issue Champion / Issue Owner will come out with a *white paper* for discussion and presentation during the conference.
- A Panel discussion with Eminent Panelists will be organized during the conference. Where in each Issue Champion / Issue Owner will make a presentation covering the context of the issue, its strength, Weaknesses, and recommended action plan for the future for effecting the implementation in a positive direction.
- Based on deliberations of the Panel and the delegates, a set of recommendations and plan of action will be arrived at and shared with various Stake holders on completion of the conference.

3 ACTIVITIES BEFORE THE CONFERENCE

Based on the above methodology, a request to identify a set of *Critical issues* deserving attention was sent to large number of stake holders covering all sectors. A set of four critical Issues have been identified based on the responses received as listed below.

- Building Capacity for implementation.
- Management of the Complete Project Lifecycle.
- Enterprise Architecture Model, Integration and Interoperability.
- Socio-Political Implications of e-Governance.

4 ISSUE PROCESS GROUP

The core group, Issue Champions, and Issue Owners involved in this process have been the following

Issue Core Group:

Issue Chair : Dr. Jaijit Bhattacharya – Director, Sun Microsystems

Issue Co-Chairs :

Mr. K. Sriram, Managing Director, V A Solutions (P) Ltd
 Dr. Sita Vanka, Reader, School of Management Studies, University of Hyderabad.

Advisors:

Prof. M P Gupta, DMS IIT Delhi
 Prof. V Venkataramana, Dean SMS, University of Hyderabad
 Prof. Ashok Agarwal, Convener CSI-SIGeGov and Director ACS Technologies Ltd.

ISSUES	ISSUE OWNER	ISSUE CHAMPION
• Building Capacity for implementation.	Mr. Piyush. Gupta NISG	Mr. R Chandrasekhar, Add. Secretary MCIT / Mr. D Krishnan Advisor MCIT
• Management of the complete project lifecycle.	Mr. Mohan Datar, Gov3 Ltd.	Dr. Rajneesh Das, IIM-A
• Enterprise Architecture Model, Integration and Interoperability.	Mr. Ajay Ahuja, Sun Microsystems	Prof. S Sadagopan, Director IIIT Bangalore
• Socio Political Implications of e-Governance.	Prof. R. K. Mishra, Director, IPE	Mr. Jaya Prakash Narayan Chairman (Lok Satta)

5 ISSUES; NATIONAL CONTEXT, ISSUES AS IDENTIFIED BY THE RESPONDENTS & GIST OF THE DISCUSSION

5.1 Issue 1 - Building Capacity for implementation

There are several dimensions for capacity building which had emerged during a discovery process used for identifying issues:-

5.1.1 The National Context as defined by the government

E-Government is a fairly complex process of creating and harnessing the right environment that consists of People who are committed to the cause and who have the right knowledge, skill sets, and attitude. Taking note of the potential of e-Governance in improving the quality of life of the masses and the learning associated with earlier initiatives, the Government of India has come up with a national program - National e-Governance Plan (NeGP), which has been approved. E-Governance is also a part of the Government's agenda of governance as mentioned in its National Common Minimum Program. In this context, the national program has identified several e-Governance projects called Mission Mode Projects (MMP) at the Centre and State level, which are to be implemented by the respective Line Ministries. The National E-Governance Action Plan comprises of core components and 27 Mission Mode Projects to be executed across the country. Certain mission mode projects (MMP) are to be implemented by the line ministries at the National Level, some by the State Governments and certain integrated projects. Major activities proposed in NeGP include:

- a) Core Policies
- b) Core Projects – Mission Mode Projects (MMP)
- c) Core Infrastructure
- d) Support Infrastructure
- e) Human Resource Development/Training
- f) Technical Assistance

- g) Awareness & Assessment
- h) Organisational Structures
- i) R&D

These are the key areas identified for capacity building initiatives by the government

Considering the nature and scale of e-governance initiatives planned under NeGP, the central and state governments typically do not presently have enough **committed manpower** and **supporting infrastructure** to manage the e-Governance projects. Keeping in view the enormous task of driving NeGP in line with the overall spirit of service orientation most of the ministries and states are inadequately equipped in terms of personnel and the skill-sets needed to handle the host of issues involved.

NeGP has an integral component of “Capacity Building”, in which the State Governments are required to build capacity (in terms of resources of people, process and tools) for conceptualizing, developing and managing the e-Government projects. Through this capacity building the state governments would be better placed to envision and steer the NeGP program in a “projectized mode”. Hence the capacity building in the states would build a strong base for the state governments for developing sustainable e-Government projects. To accomplish this need in an appropriate way, each of the states has developed an e-Government Roadmap (EGRM) and their capacity building roadmap (CBRM) during 2006-07, which will represent a state-wide approach to the realization of the NeGP in reality. The core competencies of e-Government Human resource may be described as being: Knowledgeable (technical and professional skills and combinations thereof), with Communication skills (ability to share that knowledge), and with Interpersonal skills (motivation in a Group leadership and teamwork environment) to produce the technical skills, aptitude, and attitude. Therefore, for implementing an e-Government plan in a sustainable manner, it will be essential to fill the e-readiness gap between the capacities needed for pervasive e-Governance and the capacities actually present.

Under NeGP capacity building guidelines an institutional framework has been suggested for the policy and implementation levels. The framework suggests setting up of various focused groups at the level of :

- i) **Apex level : A Program Steering Council** should be set up ideally under the Chairmanship of the State Chief Minister in the State to provide overall vision, broad policy direction and guidance to the **State e-Governance Program - SeGP** (i.e. state specific project areas under NeGP)
- ii) **Programme Level: A State e-Governance Mission Team (SeMT)** needs to be formed to support the Program Steering Council & SeGP Apex Committee and function as the secretariat and full time

internal advisory body in undertaking e-Governance projects. This team would be responsible for undertaking the groundwork for providing for an overall direction, standardization and consistency through program management of the e-Governance initiatives in the State. All interdependencies, overlaps, conflicts, standards, overarching architecture, security, legal aspects, etc. across projects as well as core and support infrastructure shared across several projects would fall under the purview of this group.

- iii) **Project Level:** Various departments of the State Government taking up e-Governance projects would require a full time dedicated **Project e-Governance Mission Team (PeMT)**. This team would function as the secretariat reporting to the project leader. This team would oversee project execution and would manage implementation and deal with technology, process & change management related issues

Most of the states have the Apex level groups in place, however the program and project level teams are still to be set up across the identified MMPs. The situation with the Central Government Ministries and Departments is more or less in the same. The Building blocks for capacity building are as depicted below in Fig: 1.

Capacity Building :Building Blocks

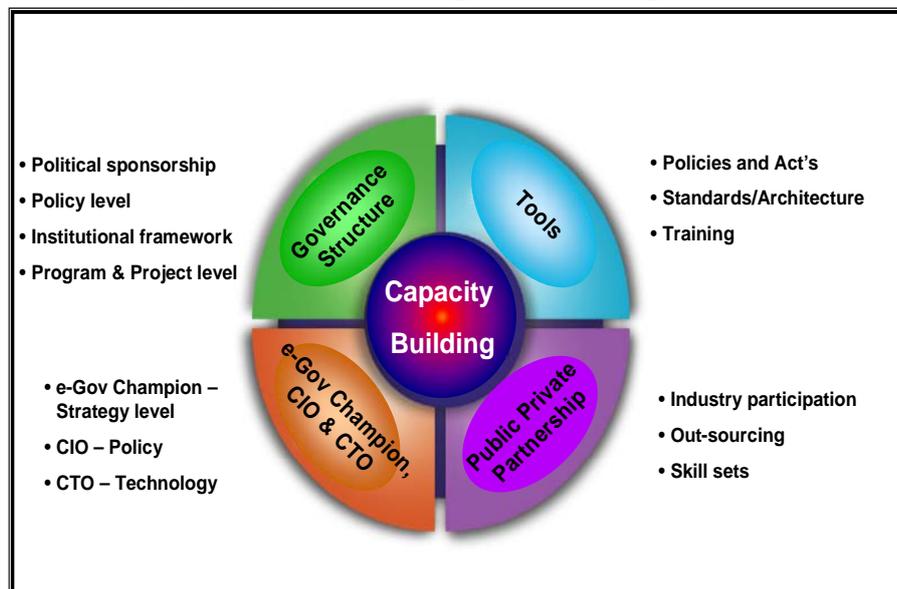


Figure 1

Specific gaps that are being seen are:

- i. Lack of correct understanding of capacity building requirements.
- ii. Lack of information on the Human resource requirements to support the central and state e-Governance mission
- iii. Lack of personnel with appropriate background and aptitude
- iv. Inadequate skill sets of personnel already deployed

- v. Lack of appropriate institutional framework to handle the capacity building
- vi. Lack of proper policy to fill the gap through sourcing from private sector
- vii. In-adequate expertise and skills within the state training institutions to lead training programs at the policy maker level.
- viii. Lack of thrust on institutional capacity building in the domain of e-Governance.
- ix. Non-availability of specific standards, policy guidelines for e-Governance

5.1.2 Dimensions of the Issue generated by the respondents

a. Building a body of professionals for implementation and research on e-Governance

- Consolidation of Research, Knowledge and Capacity Building, setting up of e-Governance centers at IIT's
- Creation of reference and Knowledge sharing on e-Governance in educational Institutions including Schools and colleges; developing a curriculum with specific studies and topics on e-Governance. This will lead to wider awareness and a strong foundation enabling the future citizens of the country to be e-savvy.

b. Educating Users

- Incentives to Citizens for using e-Services - Citizens (majority) think this to be liability; there is a need for policies to motivate the citizens and make them passionate to use e-services
- The e-government strategies adopted by municipal, county (district) and state governments worldwide tend to neglect citizen participation. To enable the internet to foster e-democracy, government web portals need to adopt various initiatives to engage the public in online decision-making. Contrary to popular belief, many proponents of wide-scale citizen participation do not automatically shun technology. Moreover, the government web portal is, however, a technological tool that has yet not been utilized up to its potential to empower citizens. For e-government to significantly enhance citizen participation, web portals need to be sufficiently equipped with tools like bulletin boards, feedback forms, policy forums, and performance reporting systems.
- The continued study of e-governance worldwide, with the third Rutgers-SKKU Global E-Governance Survey currently in session, will further provide insight into the direction of e-governance in general and online citizen participation in particular throughout regions of the world

c. Building Facilities and Infrastructure

- For efficient operation
- Data Maintenance
- Dealing with public and for Accuracy of Data
- Proper Power Supply
- In networking related areas
- Proper Hardware & Software installation
- Maintenance of Hardware
- Developing a census of computing infrastructure across government offices
- Defining unified policies

d. Institution building and organization

- Capacity Building, not just regular training, change management, learning's from assessment studies, governance structure. Institutionalization is required for success
- There are a large number of distributed systems that are coming up with similar solutions. An example of such a system is the e-district project. It would be extremely non-prudent to set up separate digital infrastructure for each one of them. There should be policies in place to ensure that such wastage of national resources does not happen. A classic example of such cooperation leading to enormous savings for the government is the VAT implementation for the North-Eastern states.
- There is also a need to address inter-departmental rivalries as they may be detrimental to the success of any project

e. Developing Process Capabilities and Policy

- Developing evaluation processes for solutions: Open Tender focused more on commercials ignoring technology and expertise. Many times technically superior solutions are rejected because of being more expensive in an open tender environment.
- Developing procurement processes: It has been noticed that one of the key issues hindering widespread adoption of e-governance is the complexity of procurement of IT equipment, software and services that is compounded by lack of clear procurement policies by CVC and DGS&D.
- Need for additional e-Governance Act because e-Governance projects require a different procurement policy since here it is the services in addition to equipment

f. Resource Deployment; Track-back and Audit

- The CB Roadmaps prepared by all the States/UTs are lying on the shelf for over 18 months now, as the CB scheme is not yet approved by GOI. This has watered down many enthusiasts at the State level from proceeding further.

- Rapid adoption of e-governance by citizens of India is one of the most critical issues that need to be considered and addressed during all the phases of the design and implementation of e-government services for citizens.
- Adopting the following paradigm for e-governance may help in addressing the above mentioned issue:
- This issue calls for devising methods to find out the success: of e-governance initiatives. Therefore, the first question that needs to be asked is:
- What are the criteria of success of the e-governance projects/initiatives?
- How to measure this success? When to measure (At which stages to measure?) And how often to measure?

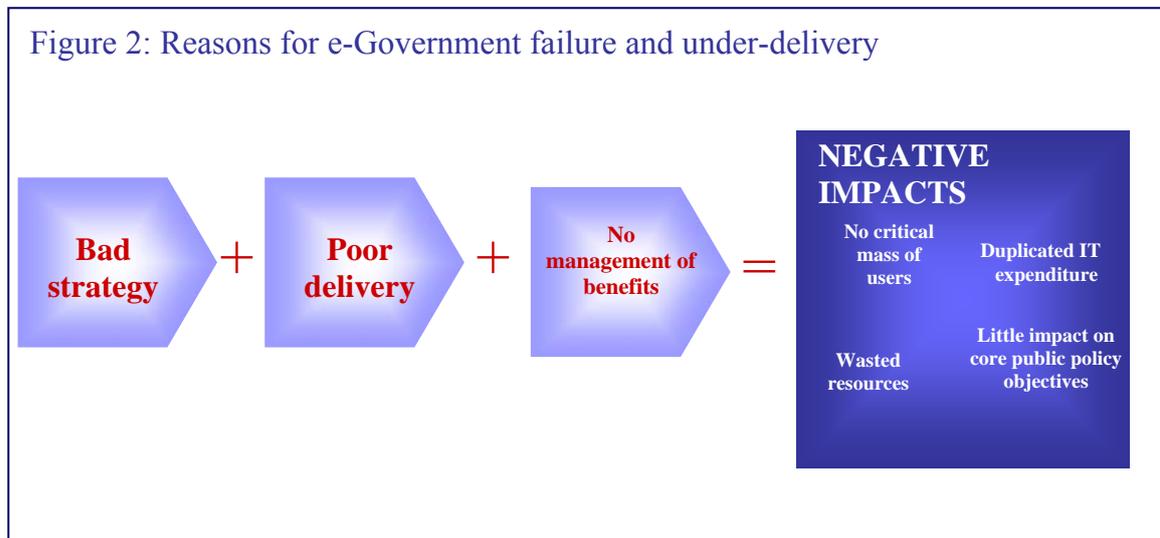
5.2 Issue 2 - Management of the complete project lifecycle

It was felt that there is serious need to take relook at the complete project lifecycle and Management of e-Governance programs.

5.2.1 The Practitioner’s Perspective

Core Reasons of e-Governance failure in developed countries

Almost all early e-Government initiatives in the developed world cost too much and delivered too little; many still do today. The reasons for this are many, but they boil down to the three core failures illustrated in Figure 2 below, each of which is then discussed in more detail.



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Figure 2

The United Kingdom government had commissioned a research in to the Issues affecting the project life cycle of e-Government projects. It then published a paper titled “common Causes of Project failure” in 2005. The Gov3 analysts have defined 7 classic causes of failure, based on this paper

and other research. These seven “Sins” are¹:

- i) **Lack of strategic clarity:** Many projects fail because the project team and its key stakeholders do not have a common view, with shared measures of success, of what the project is trying to do. A strong business case, driven by a clear set of benefits owned by the key stakeholders, should be an essential pre-condition of any public sector ICT investment. Unfortunately this is not always the case, and too many projects are driven by “what the technology can do”, not “what the organisation needs”.
- ii) **Lack of sustained leadership at political and senior management level:** Significant ICT projects require significant change, and significant change requires leadership. Yet often this is not forthcoming: either because projects fail to achieve the sustained leadership attention they need at the highest levels in government, or because those in leadership positions do not have the skills they need to exercise effective leadership of ICT-enabled change.
- iii) **Poor understanding and segmentation of user needs:** failure to engage closely with users – whether citizens in the case of external services, or public employees in the case of internal services – is a common cause of project failure. So too is a failure to understand user needs on a sufficiently segmented basis – every service will have very different users, each with different attitudes to and requirements from the service.
- iv) **Lack of effective engagement with stakeholders:** most ICT-enabled change projects in the public sector involve complex sets of stakeholders – users, suppliers, delivery partners elsewhere in the public, private and voluntary sector, politician and the media. Failure to manage this complexity significantly increases risk of failure, and yet stakeholder management is typically an activity which gets squeezed when project timescales or budgets get tight.
- v) **Lack of skills:** In addition to standard IT delivery and programme/project management skills, transformational e-Government programmes require a rich mix of broader skills: for example, in change management, process mapping and redesign, channel management and marketing and communications. Failure to identify and manage these skill requirements is a key programme risk.
- vi) **Poor supplier management:** strong partnership relationships with suppliers are essential. Yet many common supplier management practices militate against this, leading to high risks of failure. Common mistakes include:
 - Evaluating proposals primarily on immediate price rather than long-term value for money (and in particular the degree of confidence that the chosen supplier will secure delivery of the expected business benefits)

¹ Source: Gov3 analysis, drawing on research published by the UK government (“Successful IT: Modernizing Government in Action”, Cabinet Office, 2000; “Common Causes of Project Failure”, OGC, 2005) and by the European Commission (through its Breaking Barriers to e-Government research programme <http://www.egovbarriers.org/>)

- Management of the supplier relationship being undertaken at too junior a level within the organisation – on major projects, this should be an issue for the very top levels of management
 - Lack of effective project team integration between client, supplier and the supply chain
- vii) **“Big Bang” implementation:** finally, many projects fail because they seek to deliver too much technological and organisational change at once. Success is much more likely in a programme with initial deliverables which create as much customer value as possible for as low a level of technology expenditure and delivery risk as possible; which learns from that experience and then moves on to more sophisticated technological and organizational changes.

Current Challenges in India.

It has been strongly felt that the above challenges as had been found by the developed nations do play a very important role in India as well, more because India has started emphasizing more and more as technology enabled channels for delivery of services. Appreciating the fact that there have been a number of studies that discuss about the major challenges in successful project implementation, the authors thought to restrict the focus in this white paper to raise those pertinent issues, addressing which may facilitate successful project implementation.

For example disjointed & unsynchronized efforts in major programs: The SWAN/ CSC and SDC schemes, which are announced at different points by GOI, are required to be implemented in each state in a synchronized manner. However, by virtue of the fact that they have been announced at different points of time and that the uptake of the states has not been uniform for these 3 programs, we are likely to end up with a situation where we have only one or 2 of the 3 components in any state. This is likely to result in sub-optimal utilization or non-utilization of such expensive assets. To compound the situation, there is a further dimension of asynchronous implementation of the MMPs, which are supposed to feed these three elements of IT Infrastructure with content. This will result in further under-utilization of the infrastructure. Necessary correctives have to be applied at the national and State levels urgently.

In the Indian Context Some specific challenges are discussed below. They are not in any specific order of priority. Many of them have emerged as a result of the ‘Issue Process’ undertaken as part of the ICEG-2007.

a. Change in Policy to provide adequate funding support for Project Preparation & Planning.

“Starting from conceptualization to ultimate delivery of services to Stakeholders; generally, time distribution for various activities involved in a Project Cycle is skewed in favor of Implementation and fire fighting rather than planning. This is majorly because of pressures from distortions in governments funding mechanism. There is hardly any support to departments and implementing agencies for Project Preparation and Planning. This activity starts with sanction of money for the project, which is done on the basis of a skimpy Project Document (Expenditure and Finance Committee Memo) which hardly talks about governance issues, services and services levels, expected outcomes for the project”.

b. Objectivity in Selection and Scoping of Projects

Many Frameworks and models exist today, for assessing an e-Governance project, after it is implemented. Using these frameworks like EAF 2.0, one can determine the success and impact of the project. However, this amounts to a post mortem exercise. What is needed is a tool or framework which will enable the decision makers to determine what is most required and what is most likely to succeed. Replication of a successful pilot may not always deliver a similar successful outcome, since, either the priorities of the local citizens may be a little different, or the organizational capabilities may be different or both. If a framework or a model can be built which can help the decision maker to assess the success rate of a future project, based on real time parameters, it will serve a better purpose than an assessment framework.

There needs to be a priority list of government departments for automation based on size and spread of the departments, as all departments need not be automated at the same time.

c. Change in Government's Transfer Policies to ensure sustained leadership throughout Project Life cycle.

“A host of initiatives in the country have fallen by the wayside due to arbitrary change in leadership. A prime example is the initiatives of the government. The issue has been plaguing IT adoption in governments in the country since the time governments in India have started adopting IT. Unlike non-IT activities of the government, IT has the peculiarity of being extremely intense and requiring focused implementation at a speed that is more than the speed of obsolescence of the systems as well as the requirements. Hence regular transfer policies of the government is highly damaging for a proper roll out of government systems. There is a need to have clear policies on the continuity of the personnel involved with IT so that systems get implemented fast, before they get obsolete”.

d. Emphasis on Redesigning Services with citizen Focus

Although this principle is now widely known and accepted, in practice it is rarely followed. The in depth study and re-engineering of existing business processes should be made an intrinsic part of the Project Preparation and Planning phase. The current practice is to load this responsibility on the application software vendor. The vendor's approach is driven by the dual constraints of tight delivery schedules and achieving user acceptance for his software. The vendor thus is tempted or forced to accept the path of least resistance. On the other hand the business process re-engineering, actually is a path of maximum resistance and the only mitigation strategy is Change management. The application vendor's role should be to automate and implement the re-engineered processes which are already debated and approved by the customer organization.

e. Policy and Process changes in Government's Project Procurements.

“The current requirement for all MMPs to follow the age-old procedures of approval through SFC, EFC, CNE, etc is causing interminable delays. The system of Empowered Committees, though established in several MMPs, is not yielding the desired result, as they are not really empowered with the financial approval powers. ECs have to be made all-powerful in respect of the MMPs”

“Hardware life cycle management in Government projects is very poor with the utilization of the infrastructure below 20%. There are no policies for up gradation. The AMC contracts are never signed and if signed the payments are inordinately delayed. It is also necessary to design policies for the emerging problems of e-Waste”,

As stated in the paragraph ‘Seven Deadly sins’, strong partnership relationships with suppliers are essential. Yet many common supplier management practices militate against this, leading to high risks of failure.

It is necessary to devise policy to enable procurement of “Product and Services”. The current policies can only handle ‘Bespoke’ software development and delivery. It is thus depriving e-Government projects the advantages offered by Proven Products and their implementation by similarly proven Implementation vendors.

f. Avoiding poor estimation of project scope and completion schedule

Most e-Government projects are started with improper effort estimates and unrealistic project schedules. While the ‘poor estimation’ is a result of lack of detailed project scoping, understanding end-user requirements and identification of mandatory BPRs, the ‘unrealistic schedule’ is the result of combination of a) the attempt to cover up the delays in initial decision making process leading to award of contract, and b) lack of understanding of the importance of ‘Organisational change management’ in implementation of any e-Government project. The project schedules invariably do not have any provision for this important activity. Inefficient handling of the change management, leads to impeding silos for project execution.

It is therefore necessary to invest substantial time, effort and money at the project planning stage. Thereafter, the project execution should be supported by well planned and well executed programme of ‘Capacity Building and change management’. The project schedule should be comprehensive to include both these components.

g. Evolution from project management to program management for MMPs

“The Government of India is making huge investments in e-Government projects. Large funds are being set aside under NeGP for Mission Mode Projects. Many large and complex organization structures have been created to facilitate the change, speedily, albeit in an orderly and planned manner. In spite of these steps, the current scenario in India, especially with respect to MMP projects is not very promising. For example: “NeGP is composed of 27 MMPs. Barring a few, none of the programs deserve to be called MMPs because there is no sense of urgency or missionary zeal in the respective ministries. It is necessary to prescribe calendar deadlines for each MMP and review the same rigorously at the level of CS (Chief Secretary). The current system of PMU (Project Management Unit) making a peripheral attempt to monitor progress of MMPs has to be replaced with a system that is more proactive. Clear responsibilities have to be fixed on the Secretaries of the respective Ministries with respect to the timelines”.

What is required is evolving an organization structure and framework for effective 'Program Management'. According to Wikipedia "Program Management" is the process of [[management |managing]] multiple ongoing inter-dependent [[project]]s. Program management provides a layer above [[project management]] focusing on selecting the best group of programs, defining them in terms of their constituent projects and providing an infrastructure where projects can be run successfully but leaving project management to the project management community. "Governance:" Programs need a more robust structure and control because of the larger impact their failure can have. The [[Government of the United Kingdom, UK government]] has invested heavily in program management.

h. Technology to be seen from the services perspective and not from the point of commodity to be purchased: Thinking on PPP models

Looking at majority of the e-governance projects it actually seems to confuse a third party observer. The basic intent of these projects, whether they are intended to deliver services to the doorsteps of common man and/or increase efficiency of the governmental processes or if they are meant as a competition to purchase hardware comes in question. As has happened cutting across majority of the projects, majority of these projects have dedicated resources and made RFPs to the finest details of specifying hardware capabilities needed for project execution, happily shifting their focus from the service delivery aspect. It becomes crucial for the decision makers to understand the effects of technology obsolescence. It is important that the decision makers are made aware looking at technology as a commodity to be purchased but rather focus on technology projects as modes of services to be delivered. In fact, it would make much more sense to seriously consider different PPP models work for ensuring project delivery and execution.

i. Understanding road map for effective change management – effective intra-organization communication channels to be set up.

"No e-Government Project should be carried out without BPRs". This principle is widely accepted in theory, but rarely practiced in reality. The identification of the BPRs and "emerging Citizen Services" should be the two main prerequisites for an e-Government project. They also lay the foundation for drawing a road map for effective change management. At present, the trend or common practice is to make the application software vendor responsible for defining these prerequisites. Ideally, this activity should be carried out by the 'inside Government' stakeholders, since the activity requires a deep understanding of government functions, rules and regulations, and domain knowledge of the department or organisation. If that is not feasible, then the second best option is to entrust the task to those consultants who possess similar quality professionals in their ranks.

Once the roadmap for change management is defined, the next stage is planning for its execution. The National Institute of Smart Governance (NISG) has evolved and exhaustively documented methodologies for this

purpose. It has also been entrusted with the responsibility of passing on this knowledge and methodology to selected individuals from the project implementing organisation. NISG calls such individuals as ‘e-Champions’. However, its experience so far is not very encouraging, at least with respect to MMPs.

Another neglected aspect is creation of formal intra organisational communication channels. By the nature of governance and established practices, all formal communications inside a department, moves only within a narrow pre defined hierarchy. But the Change management, which essentially aims at breaking these barriers, requires establishment of new yet formal channels of communications. There is a need for institutionalisation of such channels.

j. Skills updating and focus reorientation of employees: capacity building of skills

As has been mentioned earlier, the whole intent of using tax payer’s money for automating service delivery and enhancing government processes is not under question. The question ultimately comes in the silo structure that the government departments operate and the capability of the departments to absorb the complexity of managing these technology decision making and execution.

“Long, never ending project implementation cycles. Projects get started with enthusiasm but are stuck in between due to many issues. Some of them are lack of reward, motivation incentive to Government employees”

This actually calls for a major re-look at the reorientation and capability building of the skillsets of the employees in different government departments to ensure an easier change management. In a scenario where a large number of government employees still think that computerization will snatch away their jobs, discussing successful roll-out of e-governance programs are but a major challenge.

k. Vendor Relationship Management

Strong partnership relationships with suppliers are essential. Yet many common supplier management practices militate against this, leading to high risks of failure. Common mistakes include:

- Evaluating proposals primarily on immediate price rather than long-term value for money (and in particular the degree of confidence that the chosen supplier will secure delivery of the expected business benefits)
- Management of the supplier relationship being undertaken at too junior a level within the organisation – on major projects, this should be an issue for the very top levels of management
- Lack of effective project team integration between client, supplier and the supply chain

The above issues, noticed by the UK Government, are also applicable to the current Indian situation. Besides these, some additional challenges in terms of Vendor relationship management are:

- Lack of clarity on the role and responsibility of the customer / tenderer in the tender or RFP document.
- Lack of standard payment terms which would remunerate vendors proportionate to their initial investments / deliveries / efforts at every stage of project life cycle.
- Continuation of the use of MB books- a methodology used for civil works projects, also for IT projects due to lack of any other standard methodology. Why cant an 'e-Certification' methodology is defined, using e-signatures, for all sign-offs?
- A lack of understanding of the concept of 'Change Request' and hence mitigation of associated risks and conflicts.

5.2.2 Dimensions of the Issue generated by the respondents

a. Identifying appropriate projects and rationalizing them

- The need to create a priority list of government departments for automation based on size and spread of the departments, as all departments need not be automated at the same time
- A methodology which can be used for identifying an area of intervention. Various government departments just conceive a project without giving a thought to ""WHY"" of a project. They just start with introducing PCs and Networks without identifying governance issues which ought to be addressed by using ICT along with host of other interventions. This has been a major challenge and is evident from a recent marathon of meetings that we had with 27 major departments which are implementing National e-governance projects in the country.
- Many Frameworks and models exist today, for assessing an e-Governance project, after it is implemented. Using these frameworks like EAF 2.0, one can determine the success and impact of the project. However, this amounts to a post mortem exercise. What is needed is a tool or framework which will enable the decision makers to determine what is most required and what is most likely to succeed. Replication of a successful pilot may not always deliver a similar successful outcome, since, either the priorities of the local citizens may be a little different, or the organizational capabilities may be different or both. If a framework or a model can be built which can help the decision maker to assess the success rate of a future project, based on real time parameters, it will serve a better purpose than an assessment framework.
- Rationalizing across departments – for example, there are a host of identity solutions that is being conceptualized or already implemented in the country. Such systems include the BPL, Universal Identity, Multipurpose National Identity Card, Passports, PAN card, Voter's ID card, Ration card etc. A unique identity system will have a tremendous impact of the economy of the country and in driving a more inclusive growth.
- Disjointed & unsynchronized efforts in major programs: The SWAN/ CSC and SDC schemes, which are announced at different points by GOI, are required to be implemented in each state in a

synchronized manner. However, by virtue of the fact that they have been announced at different points of time and that the uptake of the states has not been uniform for these 3 programs, we are likely to end up with a situation where we have only one or 2 of the 3 components in any state. This is likely to result in sub-optimal utilization or non-utilization of such expensive assets. To compound the situation, there is a further dimension of asynchronous implementation of the MMPs, which are supposed to feed the 3 elements of IT Infrastructure with? Content? This will result in further under-utilization of the infrastructure. Necessary correctives have to be applied at the national and State levels urgently.

b. Planning Process

- From conceptualization to ultimate delivery of services to Stakeholders. Generally Time distribution for various activities involved in a Project Cycle is also skewed in favor of Implementation and fire fighting rather than planning. This is mainly because of pressures from distortions in governments funding mechanism. There is hardly any support to departments and implementing agencies for Project Preparation and Planning. This activity starts with sanction of money for the project, which is done on the basis of a skimpy Project Document (Expenditure and Finance Committee Memo) which hardly talks about governance issues, services and services levels, expected outcomes for the project.
- The planning process needs to adequately address the assessment and planning government process reengineering, depth of transformation seeking in e-Gov projects
- Life cycle management in Government projects:
- When to procure the hardware - stage of procurement e.g. Hardware is not put to use until the application is ready.
- How to define the specifications :
 - Sizing of the infrastructure
 - Assessment of requirements - frequently utilization of the infrastructure is Below 20%
- Up gradation: scaling up of Infrastructure
- Up gradation is very rare in government, but the procurement will be done for up gradation of CPU etc.
- Maintenance of the Hardware
- Most of the cases the AMC is not existing
- Disposal of the e-waste? models
- There is no model for the disposal of the obsolete computer hardware"

c. Budgeting & SLAs

- A number of e-governance projects are getting implemented through a PPP model. This is especially useful where governments do not have funds and implementation capacities to roll out such projects. It is very important to structure the financial arrangements in such projects to correctly reflect the "Risk-Return" relationship of the government and the private partner.

- Such projects include the MCA21, CSC, SDC's etc. However, the PPP contracts are borrowed from physical infrastructure contracts and therefore have severe drawbacks such as need for strict service level agreements by the government in order to ensure the success of the projects. The Master Service Agreements appear to be one sided with all risks loaded on the private player with minimal commitment from the Government and with enormous discretionary power that can be misused to bring in the so called inspector raj.
- India is a role model for implementation of e-Governance projects on PPP model. However, there is a poor understanding of SLA's at the top policy level

d. Motivation for implementation, empowerment and coordination and continuity

At the current stage of maturity of e-Governance there is a need to motivate and coordinate:-

- Projects get started with enthusiasm but are stuck in between due to many issues
- Lack of reward, motivation incentive to Government employees
- NeGP is composed of 27 MMPs. barring a few; none of the programs deserve to be called MMPs because there is no sense of urgency or missionary zeal in the respective ministries. It is necessary to prescribe calendar deadlines for each MMP and review the same rigorously at the level of CS. The current system of PMU making a peripheral attempt to monitor progress of MMPs has to be replaced with a system that is more proactive. Clear responsibilities have to be fixed on the Secretaries of the respective Ministries w.r.t. the timelines.
- Lack of patronage for e-Champions programs: Go AP and NISG have been running 10-14 week e-champions programs. There is a lack of patronage for these programs, which aim to build capacities at the right level for NeGP.
- A host of initiatives in the country have fallen by the wayside due to arbitrary change in leadership. A prime example is the initiatives of the government. The issue has been plaguing IT adoption in governments in the country since the time governments in India have started adopting IT. Unlike non-IT activities of the government, IT has the peculiarity of being extremely intense and requiring focused implementation at a speed that is more than the speed of obsolescence of the systems as well as the requirements. Hence regular transfer policies of the government is highly damaging for a proper roll out of government systems. There is a need to have clear policies on the continuity of the personnel involved with IT so that systems get implemented fast, before they get obsolete.
- The current requirement for all MMPs to follow the age-old procedures of approval through SFC, EFC, CNE, etc is causing interminable delays. The system of Empowered Committees, though established in several MMPs, is not yielding the desired result, as they are not really empowered with the financial approval powers. ECs have to be made all-powerful in respect of the MMPs.

- Extremely slow in giving shape to core set of policies under NEGP

e. Clear Success Parameters, Assessment and Audit

- There is a need to define Value Realization / ROI in e -Governance Projects:
- E-Governance projects to be effective and useful for a country like India, where there exists extreme poverty, want and lack of basic amenities, coupled with Digital Divide, need to be efficient (in terms of cost), effective (in terms of meeting targets and objectives), and timely. Mere monitoring and pre/post implementation reviews may not be enough. What is needed is a structured Value / ROI based approach that demonstrates the effectiveness and sets pre set performance standards and benchmarks that enable proper evaluation and appraisal of such projects using the common denominator of value / finance.
- Measures like Balance Score Card, ROI, and Val IT can be effectively used.
- Generally, the internal reviews based on Project objectives are biased and learning's are not documented to improve the planning and execution forthcoming Projects.
- Scope changes and some times change in the objectives itself
- Post completion Audit (PCA) for learning.
- Projects need to be audited/ verified for the Objectives of the project were met or not?
- Learning's need to be recorded as the project is concluded, to prevent the next project from carrying the same mistakes/ erroneous process
- The significance of Post Completion Audit (PCA) in IT Governance Projects.
- How PCA can be used as a learning process and also highlights the methods & model for conducting PCA for the IT governance Projects in Government sector.
- Who can conduct the audit? Suggestive qualifications for the team to conduct Audits.
- Deliverables of the PCA

5.2.1 Issue 3 - Enterprise Architecture Model, Integration and Interoperability

The Key factors are Security, Interoperability and Scalable Architecture:-

5.3.1 View from a technical Standpoint

Lack of well defined and understandable Enterprise Architecture for Government is a road block in the success of e-Governance initiatives in the country. There is a lack of awareness of Enterprise Architecture concepts and its advantages. Standards based Architectures are a must for Integration and interoperability of various Citizen Services, within and across the state and the central Government. Described below is an approach to e-Governance based on enterprise architecture.

Enterprise Architecture is the description of the current and/or future structure and behaviour of an organization's processes, information systems, personnel and organizational sub-units, aligned with the organization's core goals and strategic direction. Although often associated strictly with information technology, it relates more broadly to the practice of business optimization in that it addresses

business architecture, performance management, organizational structure and process architecture as well.

As a part of National e-Governance plan, Government of India has a clear vision of making all Government services accessible to the common man in his locality. As a part of this initiative Government of India and Department of Information Technology is promoting and guiding various states across the country, to setup and design State Wide Area Networks, Citizen Service Centers and State Data Centers to host Citizen Services.

Most of these projects are designed and implemented in silos. There is lack of well defined standards, processes, and architectures for Services and data or at least there is lack of awareness at various levels. Based on their immediate needs, different State Governments are coming up with different requirements, different architectures, and different technologies. There seems to be no long term vision of interoperability and integration of these services across states and the center. There is no one Standard being followed by all. This has been leading to many administrative, Manageability and Security issues.

Listed below are typical issues followed by recommendation of a standards Based Enterprise Architecture to resolve and avoid such issues. The aim is to approach for Enterprise Architecture for the Government that is Citizen Centric, Open, Standards Based, Interoperable, Transparent, Flexible, Secure, Result Oriented and Dynamic.

a) Architectural Issues

Most of e-Government projects face one or more of the following issues. These issues have been collated from the feedback and inputs received from various stake holders from the Government departments, academia and Vendor community, who are directly or indirectly involved in these projects.

b) Integration and Interoperability Issues:

Lack of Integration of various applications within or across various Government departments lead to silos, with each department having their own set of data, administrators, management procedures and related issues. These applications and projects, which are not based on standards, create use of varied technologies which may not interoperate. This leads to duplication of work, increasing cost of ownership and complexity.

c) Lack of Knowledge Sharing:

A Successful implementation in one department is rarely shared with other departments. This leads to duplication of effort and resources.

d) Security Issues:

Data security, authenticity, integrity and reliability are generally left to the discretion of the Government employees or private partner staff who operate the systems. Many systems lack traceability mechanisms. IT Security, controls the access to Government's sensitive applications and data, it enables secure online transactions between the Government and its Citizens and protects the intellectual property. Ensuring Security of sensitive Citizen Information and maintaining Compliance are amongst the most critical challenges faced by the Governments.

e) Lack of Standards:

There is a lack of adopted policy on key issues such as Open Standards and Open Source, leading to issues related to sustainability, costs, security, independence and e-Governance standards. These issues will have a deep impact on not just the cost of the systems but also the sustainability of the solutions as well as impact on wider IT adoption in India.

To overcome these issues, there is a need for a Standard based Enterprise Architecture framework with appropriate knowledge and awareness amongst the key stakeholders. Enterprise Architecture for the Government that is Citizen Centric, Open, Standards Based, Interoperable, Transparent, Flexible, Secure and Result Oriented and Dynamic is the need of the hour.

f) Enterprise Architecture:

Enterprise architecture is a comprehensive framework used to manage and align an organization's Information Technology (IT) assets, people, operations, and projects with its operational characteristics.

A Well Defined Enterprise Architecture can lead to many benefits including:

- Open and Interoperable
- Built-in Security and Compliance
- Accelerate Network Service Deployment
- Simplify and Standardize
- Technology Architecture:
 - Service Oriented Architectures
 - Technology Simplicity
 - Technology Reuse
 - Secure Access
 - Mobility
- IT Enterprise Architecture Policies and standards
- Primacy Of Principles
- Shared Business Responsibility

Government of India is a complex organization with many tiers, starting from the center, going to States and further to projects or sub departments within each state. The Government of India's initiative to enable citizen services across the country using IT enabled resources is huge and complex. With the diversity of people, cultures, incomes, background and expectations across various demography's, this task becomes even more complex. Unless there are standards and well defined guidelines, this complexity can lead to confusion.

Although Government of India through its NeGP initiative, is laying down standards and rules and a broad framework to achieve this goal, lot of effort and thinking needs to be put in to arrive at a standard based rules leading to an enterprise architectural framework.

A Well defined Enterprise Architecture can help the Government to align its IT resources to its Strategic plan of enabling Citizen Services using these IT resources. It helps cut costs and complexity and also enabling business flexibility and process optimization.

An Enterprise Architecture can improve IT agility by standardization, consistency and scalability at the same time increasing security and supporting compliance.

E-Government Enterprise Architecture generally consists of following components (See Figure 3):

- Business Process Architecture
- Services Architecture
- Technology Architecture
- Data and Information Architecture

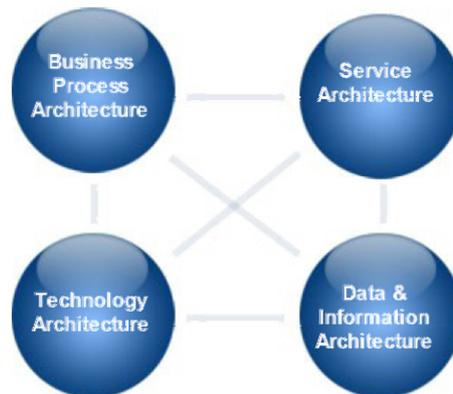


Figure 3

g) Business Process Architecture

A business architecture helps us enable communication across business units within the enterprise. This Architecture lists various processes to be followed for doing various services, independent of their association with one or more services. The Business Process Architecture defines the business operations of the Government, independent of agencies that perform them. These processes are further grouped into categories and detailed rules are defined for executing each of these processes. This standardizes the process leading to interoperability and reuse. Examples of these processes can be IT enabled flexible, transparent, dynamic, efficient and effective Citizen Services. A well defined process architecture enables communication across various departments.

There should be a well defined framework describing the Government processes, communication process across various departments and the center, and, means and channels of communication and implementation.

h) Service Architecture:

This defines the set of services offered by the Government, processes to be followed for each service, relationship and dependencies of services. The examples of these services could be like Web Enabled Services like Vehicle registration, License registration, passport issuance etc. The Application Architecture is also defined here, which separates the Data logic, Business logic, Presentation layer in different tiers. Each tier is a Separate module, with standards based interface to interact with the other tier.

Defining service architecture standards, with recommendations on the Platform, open systems and open standards can be useful.

i) Data and Information Architecture:

This defines the data associated with various services, as defined in the services architecture. In Data Architecture, we enlist all the data elements needed/associated with above service and then define metadata about each data element. This metadata information includes the standard Nomenclature for each data elements, their type, size, format, default value, valid value range, owner etc. Use of such a standard definition by all government applications shall facilitate interoperability among various applications as well their integration which shall go long way in delivery of integrated/ one stop services to the citizens and businesses. It is strongly recommended to have standards based open data systems. This will enable easy integration and interoperability across departments and states.

j) Technology Architecture:

Technology Architecture forms the foundation of the overall Enterprise Architecture and defines the software and hardware technology platforms based on standards for interoperability, security, flexibility and modularity. The Technology Architecture consists of many subcomponents, including the ones listed below (Figure 4). A Well defined set of specifications should be defined against each of these parameters to achieve standardization, interoperability, integration and flexibility. The Technology Architecture is shown in Figure 4.0:

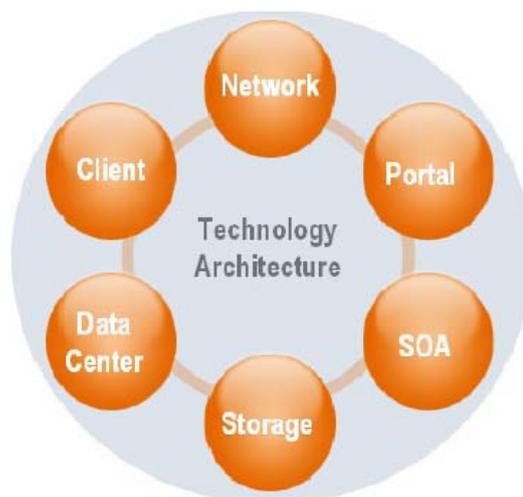


Figure 4

technology is supporting the delivery of service components, including relevant standards for implementing the technology. Together, the architectures are intended to facilitate government wide improvement through cross-agency analysis and the identification of duplicative investments, gaps, and opportunities for collaboration, interoperability, and integration within and across government agencies.

The Technology vision should be to provide secure access to data and services on the enterprise network, giving access of information, to Any Authorized person, from Any Device, Anywhere and at Any Time.

This could be achieved using

- end-to-end authentication and encryption of data and the network
- using an integrated user view with portal services delivery
- enabling mobile computing
- Using the single operational data store
- leveraging of open standards and open source

Each component of the Technology Architecture should be designed and chosen with the above objective in mind.

- (i) Client: The goal of the client element is to provide access that is both open and secure. The client devices should be easy to maintain and administer, should not require frequent upgrades and should be cost effective. There should be standards defined so that all States and departments have similar looks and feels at the client end. The Client devices should be based on Java which is platform independent. They should have provision for a secure web enabled access, based on standards.
- (ii) Network: The Network Architecture and design should be well defined and standardized. It should provide secure access of resources to the authorized clients.
- (iii) Portal: The Access of Citizen Services should be through a Secure Portal. The Portal's looks and feel should be same across all secure access devices. The Portal server should provide secure, role-based access to information from anywhere, at any time, on any device.
- (iv) Service Oriented Architecture: Application and service delivery through the dynamic portal is made possible, in part, by Services Oriented Architecture. By implementing a pragmatic SOA, one seeks to extensively leverage the core business logic using and re-using it to achieve greater enterprise flexibility and business capabilities. By decoupling business logic from applications and then re-combining those components to create new applications and systems, one can take greater advantage of and more easily share existing information assets, as well as more rapidly integrate new assets.

A Service Oriented Architecture approach will resolve most of the present day issues. SOA helps design Services that are combined to create reusable business components accessible from a variety of client devices. The Business logic is separated from presentation logic and delivered via services. This leads to increased end user productivity and flexibility, reduces costs, enables seamless integration with portal and roles based access control leading to overall better return on assets.

(v) Storage: Ubiquitous storage area network and network-attached storage instead of device-attached storage using hierarchical Storage Manager is recommended. This Storage should be Standards based, Modular, Flexible and Scalable. It is also recommended to have a storage architecture which Classifies, manages, and moves information to the most cost effective data repository based on the value of each piece of information at that exact point in time. This helps

- Reduced complexity through automation
- Reduced costs from matching data value to protection options and performance needs to storage options
- Achieve compliance by archiving data according to its regulatory requirements

(vi) Data Center: A Data Center should provide a secure, scalable, cost-effective infrastructure for the deployment of infrastructure for enabling Citizen Services. The data center architecture should be scalable, modular service delivery network design, which enables one to deploy multi-tier applications.

At the foundation of the service delivery network should be services, established as resource enclaves. The Layer 2 switches in the distribution layer enable services access governed by access control lists (ACLs). A little further up the stack, load balancers balance network load and provide service virtualization, SSL (secure sockets layer) capabilities, and TCP (transmission control protocol) termination.

The service delivery network design is critical to implementing a services oriented architecture, enabling, as it does, the necessary network scalability. Additionally, this design, with its protected resource enclaves, allows client devices access only to those resources to which they are entitled.

Another recommendation for data center architecture is the appropriate provisioning of both stateful and stateless systems for services. This provisioning can help drive down costs and result in performance benefits.

The Data Center infrastructure components should have secure foundation, with security built-in not bolt-on. The Operating System for the server components should be open source, robust, highly available, Secure with Multi Level Security and

Cryptographic framework, should be binary and source compatible, and should have provision for auto correction of hardware resources. The infrastructure components should be based on standards.

Virtualization is strongly recommended as a part of Data Center Design. The Virtual Data Center should hide the hardware and software components behind an abstraction layer and present computing environment as a collection of managed services rather than a collection of hardware.

Conclusion:

The Government of India's e-Governance projects should be based on Enterprise Architecture, which defines a set of business processes and Technology standards to be followed throughout the Government enterprise, providing services which are Citizen Centric, Open, Standards Based, Interoperable, Transparent, Flexible, Secure, Result Oriented and Dynamic.

Enterprise Architecture addresses most of the architectural issues and leads to following benefits:

- improves business flexibility, and at the same time, business process and system optimization
- It helps reduce process, system, and infrastructure costs and complexity
- It helps ensure enterprise security and compliance
- And it drives standardization, consistency, and scalability

5.3.2 Dimensions of the Issue generated by the respondents

1) Security

Most of us fear to use the online services, fearing security or privacy issues.

- Access Control:
- When the state provides services to an individual / citizen it must authenticate that the person receiving is eligible to such services. Advanced biometrics based technologies such as digital signatures, iris recognition (used in the case of issue of ration cards in the case of Andhra Pradesh) can have a role in authenticating service recipients
- With the centralization of data and information that is easily available, there are very serious issues of potential misuse of demographic information, personally identifiable information and general misuse of the information systems for
- Data Security
- With the fast paced growth of e-Governance, a large amount of data is being created by digitization. While every one is busy in thrashing out issues which will lead to faster growth of e-Governance and sustainable implementations, the basic issue of Data ownership and accountability is not getting the due attention it deserves. Data security, authenticity, integrity and reliability are generally left to the discretion of the Government employees or private partner staff that operates the systems. Many systems lack traceability

mechanisms. The only exception that comes to mind is that of land records, and that is because of the inbuilt traceability procedures in the manual system. A citizen is today exposed to maximum loss and trouble, due to this vulnerability of his/her digital identity. The onus for proving the Government records wrong, still vests with the citizen. This calls for a revamp and the need to bring in the necessary reforms for fixing Data Ownership and Accountability in all e-Governance initiatives.

- Governance and especially e-Governance involves collection, aggregation, storage, transfer, dissemination and use of sensitive personal often confidential information concerning the various stakeholders - citizens, govt. departments, commercial establishments and organizations. The information ranges from land records, income and expense details, assets and financial position to business processes and trade secrets.
- General Security Issues
- Activities such as spamming, identity theft, phishing etc. Also, the information systems are increasingly leading to a gender digital divide besides the existing digital divide.

2) Interoperability & Standards

- Integration of technology across the e-government application spectrum especially in the case of G2G applications thereby eliminating duplication of work and reducing cost by ensuring common databases are used (e.g. using the same database to authenticate issue of passport).
- There is a lack of adopted policy on key issues such as Open Standards, Open Source, and Indian Sourced in terms of sustainability, costs, security and independence and e-Governance standards. These issues will have a deep impact on not just the cost of the systems but also the sustainability of the solutions as well as impact on wider IT adoption in India.

3) Enterprise Architecture and Computing Strategies

- Requirement of an Enterprise Architecture Model: There is no focus group working in NIC and/or PMU of DIT on the all-important aspect of EA for e-Governance. In the absence of the same, the MMP implementations are likely to go forward in divergent technological architectures, resulting in lack of fundamental requirements of interoperability, security, business-focus, etc.
- Grids computing has come a long way abroad especially in some of the well developed countries like Australia etc. It has unfortunately not developed much in a country like India where it can be of great value. Grid Computing will not only unlock hitherto under / un- utilized Computing resources but will also help to bridge the digital divide. This concept can be implemented across community projects and in e-governance."
- Use of existing business domain applications where applicable:
 - Adoption of Enterprise Applications (ERP, SCM, CRM etc.) in the Public Sector in India has now got established, particularly in the PSUs / PSEs, and to some extent in the

Government Organizations at the Central, State and Local Bodies levels.

- Notwithstanding the significance of such developments over the years, there is very little understanding of the value that has been brought to these Organizations and its stakeholders/beneficiaries due to adoption of Enterprise Applications. The limited understanding that is available is mostly through a handful of case studies which are focused more on the implementation and its benefits, rather than an attempt to understand the process of deriving such benefits in the context of the entire organization. Hence, it would be extremely useful to analyze and discuss the impact of Enterprise Applications on the Capabilities, Performance and Value of the Public Sector and Government Organizations. Such discussions could have a directional impact on various E-Governance initiatives.
- This issue would benefit:
- Existing Users/Organizations to focus on constructs/processes that will help them derive greater Value from their implementations.
- Prospective Users/Organizations to understand the merits of Enterprise Applications and the Process of its impact on Value. This would lead to larger number of successful adoptions and have a directional impact on various E-Governance initiatives.
- Solution Providers (both the Implementation Agencies as well as software vendors) in successful and impacting implementations of enterprise applications as an efficient mechanism for e-Governance.

5.4 Issue 4 - Sociopolitical implications of e-Governance

1) Some of the important points that emerged are implications on demographic, economic, and technologically diverse groups

Recognize senior citizens as an increasingly significant segment that can contribute for good governance and also good governance implies concern (the harrowing tales of their becoming disposed are on the increase) for them. Remedy misalignments between economic reforms and political reforms for good governance

2) "Digital Divide"

- Half of our family members (in most of the families) still do not use IT enabled services using internet. They may not have that knowledge and do not want to break the barrier."
- The Rutgers-SKKU Global e-Governance Survey is conducted every two years since 2003. Based on the results of the 2003 and 2005 surveys, there is a growing gap between developed and developing nations that needs to be bridged. Although both categories of nations showed progress in their average scores, the gap between them significantly increased. We

recommend developing a comprehensive policy for bridging this divide. That comprehensive policy should include capacity building for municipalities, counties (districts), and states including information infrastructure, content, and applications and access for individuals.

5 The issues framed for discussion

The following key issues for discussion here identified in panel discussion.

1. Procurement of e-governance projects :
 - Can we formalize a common decision making process
 - How do we set e-government road maps and how do we leverage the capacities
 - Why not to have a power committee which can delegate the power
 - Tendering and valuation. How do you look at both technical and commercial in terms of the open tender system

2. Common infrastructure and inter departmental co-ordination:
 - The first issue concern was on the infrastructure, the networks, the data center, and the disaster recovery plan -- Can infrastructure be shared? This is already happening under the national e-governance plan to an extent.
 - Inter departmental coordination is still a challenge. How do we consolidate?
 - In NGEF also, e-procurement is one of the MMPs (mission mode project). How do you bridge these national and state initiatives? Can we share human capital and have a program or project management office in project departments.
 - Who would be the owner of those projects where many services are coming from different departments within one particular mission mode project? Who leads that?

3. Institutional capacity building:
 - The challenge is not just training but much beyond. There is a need for new e-governance structures which are not there right now. Currently we have single person driven projects.
 - Standards and guidelines need to be consolidated. With everybody picking up their own standards and guidelines there will be issues later on.
 - Management of change and change agents. Can we bring up some incentive schemes as one of the MMP's which has not been attempted. It is important to build competencies within the existing government institutions and long term e-government courses in educational institutes.
 - For the last one year roadmaps for each state have been formulated and in existence. There is a blue print. These need to be easily accessible to: The industry; the citizens; and other stakeholders who need to be precisely identified? Can we have a national inventory of

- the e-governance projects? Can IITs and IIMs play a major role in building this knowledge repository?
4. Which are the top issues in the project life cycle management and what kind of institutional mechanism to be adopted to ensure that desired out comes are clearly specified during project conceptualization and how do we ensure that the project is managed effectively to ensure that the desired outcomes are indeed delivered
 5. What are the key Technical issues to be considered for e-Governance to ensure that the Security, Scalability, Modularity and Ease of use parameters are addresses
 6. Sociopolitical Issues in e-Governance
 - How can we take the benefits of IT to Micro Communities such as organizations, blocks etc,
 - Should we treat digital divide as a national issue and formulate a national plan on the lines of Sarvashiksha Abhiyaan.
 - With the villages getting a window to the larger world through IT, what is the impact of such an initiative?

7 Panel Discussion

7.1 Capacity and Complete Project Lifecycle Issues

The emerging points by the panelists are

- There is a need for clear and well defined objectives / purpose for the e-Governance projects. This requires political will and an agreed commonality of purpose.
- Through initiatives in the past, a monitoring framework has been created by means of which we are able to make individual ministries / departments aware that there are certain things which need to be done in certain way and also the gaps in the capacities to be fulfilled.
- The major job is to explore the capacity gaps and once this is done we have to identify the skills required. As an example, today if we need a core team within a Government department, the skills that are required need to be identified and a plan needs to be drawn up to source them. In other words the following questions need to be answered. Are we going to get the required resources in the government or are we going to supplement them from outside? If they are supplemented from outside, the issue of market salaries needs to be addressed. This aspect is not simple at all. Even though the government has worked with the most prominent IT and consulting firms, the required talent with both technical skill domain and knowledge of government are in very short supply. This implies that there is a very pressing need for developing a network of academic institutes and relevant syllabuses to train and produce the required talent pool and provide career roadmaps for such trained persons.
- It is necessary to provide financial support for the project planning phase so that the project begins on a sound footing. Standard templates of DPRs,

RFPs etc. will help in ensuring that the minimum requirements of inputs and details at the planning stage are known in advance; but government departments and agencies will require to appoint consultants to carry out these exercises professionally

- A key point to address is the methodology by which e-governance projects are implemented in such a way (perhaps through public private partnerships) so that irrespective of the mode of implementation, strategic control is retained within the government.
- Another key challenge according to the panel is the ability to retain the motivation levels of the e-government professionals - to address the issue of maintaining interest even when priorities and processes are changed based on political compulsions.
- There is a need to study failures in implementation to avoid repetition of ineffective actions

7.2 Enterprise Architecture Model, Integration and Interoperability

Some of the Key observations are:

- There is feeling that government creates parallel structures when faced with a problem of implementation without a fundamental rethinking of whether this will lead to additional confusion and ineffectiveness. The panel also explored the possibilities of augmenting capacities within the original structures rather than create parallel structures within the government.
- We need to check if the technology is flexible enough to have process optimization; have standard architecture. Can we have standards based on scalable consistent modular systems, which can be regulatory and compliant with various compliances.
- Enterprise architecture: We have to define the most appropriate strategies - the model is in fact from the corporate world but translated some how to government. This model is divided into four components - business architecture, business system architecture, data information architecture and technology architecture. The recommendation is that the service or the infrastructure which has got these parameters, the infrastructure should be reliable, scalable, and easily manageable. Visualization, consolidation and security should be standard desired parameters of the architecture.

7.3 Socio Political Implications

Key observations are:

- We should empower the people and see that they express their wishes. There is a need to create a situation thereby social economic activities can be taken up and the social divide can be removed.
- Social level e-governance should lead us to achieve social inclusion. For instance 14%-20% of tribals are not any where within the e-governance

Activities. e-Governance must help us in answering the most vital questions that the society is facing at any time.

- The biggest problem is to resolve unemployment problem and we need to explore how governance can help in this.
- Health is another area of importance and e-Governance using models like Tele-medicine need to expand
- A good example is the electronic voting machines which have become indispensable in a short span.

Summing up, we need tools for social version, social inclusion, social harmony, political harmony, political integrity and a great political focus.

- The reach of technology to cover all the sections of society should be taken up in the same manner as the social movements. This movement should cover the awareness generation and educating the people on the usability and the benefits of the usage. All the necessary precautions have to be taken to curb the resistance from certain quarters and also simultaneously educating / spreading the technology use. Only a social movement can make this possible for a social transformation in the use of technology.

The second most important which is more complementary to the social movement is the political movement. India has pockets of technology and its use especially in the area of e-Governance. Political will does play an important role in bringing a political movement.

Digital divide in the nature of the widening gap between the developed and the developing nations and also between states within the Indian nation is another issue of E-Governance. In India the states are on either end of the two extremes. Bridging this divide through policy support, infrastructure and capacity building is the need of the hour. There is an immense possibility of bridging this divide in our country. In the rural sector, for instance, the prices of agriculture produce like tomatoes, onions etc., can be made available to the farmers. The middle men continue to get the maximum out of the agriculture products even today, which can be corrected through the use of technology. Secondly, input procurement through bulk marketing, bulk purchase, the impact of corruption and red tapism can be avoided. Educating the rural masses through social and political movements can certainly bridge the digital divide.

- The setting up of kiosks – 1 lakh in number – is at the advanced stage of implementation across the country. It's a combination of many services which breaks down the barriers of technology access and reach. This should take care of the digital divide and the political will as well.
- Invest in people rather in technology and processes and create political will through intense work in terms of integration