

Challenges when Auditing e-Government

1. E-Government defined

As per the report on “Auditing e-Government” prepared by the INTOSAI Standing Committee on IT Audit, the definition of e-government is:

“E-Government is the online exchange of government information with, and the delivery of services to, citizens, businesses and other government agencies.”

The Gartner Group describe e-government as the continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationships through technology, the Internet, and new media

As per the World Bank: E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management.

Another succinct definition of e-government comes from OECD. The OECD defines “e-government” as “the use of information and communication technologies, and particularly the Internet, as a tool to achieve better government”. The impact of e-government at the broadest level is simply better government by enabling better policy outcomes, higher quality services, greater engagement with citizens and by improving other key outputs identified.

2. Objectives of e-government

As with the definition, the objectives of e-government also have been given different scope by different advocates.

The World Bank states that the objectives of e-government would be in providing the following benefits, which would fit into one of the five categories.

1. Better Service Delivery to Citizens:
2. Improved Services for Business:. E-Government can be used for Improving the interface with business and industry, while providing them with innovative services
3. Transparency & Anticorruption: E-government can be used to Reduce opportunities for petty corruption at the point of service delivery; and provide mechanisms to create more accountability and transparency in the public sector
4. Empowerment through Information: Information is a critical ingredient for development. The more information that the poor possess, the greater their sense of empowerment. Empowered citizens can more readily hold governments accountable. With greater information the poor also are better able to organize and take actions to improve their quality of life.

5. Efficient Government Purchasing: Governments are the largest purchasers in all economies, and for both moral and political reasons they should buy goods and services in the best way possible. E-government can lead to significant savings for the government by bringing in efficiency in government purchases, spurred by increased competition through transparency.

3. Factors impacting e-governance projects

The primary objective of e-governance is better governance. This is echoed uniformly in almost all definitions and literature on the subject. Whether it is the OECD definition of e-government as “the use of information and communication technologies, and particularly the Internet, as a tool to achieve better government”, or a statement by an IT Secretary of an Indian province that “Citizens expect the government to provide basic services. They don't bother if it came via e-mail or by bullock car.”, the inherent emphasis is on better governance.

The factors that will impact the status of e-governance in any country would broadly depend on the following factors:

- the IT readiness with old and new platforms coexisting and being implemented all the time, often independently from the e-Government projects;
- de facto independence and autonomy of the Ministries with little co-ordination between the various departments/ministries resulting in even lesser compatibility between the IT Systems.
- different practices in systems implementation; sometimes inappropriate user involvement and training; e-Government projects also may not have a central sponsor, leading to differences in implementation styles
- Inability to manage the change which comes with the new ways of working.

The most important shift in the culture which is required for e-government is the notion of citizens as customers. The notion of “customer” entails a number of market mechanisms, which cannot be completely transferred to a public administration possessing a monopoly of the service. Also, the mindset of Government servants may need to be changed to view citizens as customers, which can take some time.

4. Lessons from implementation of e-Government projects

4.1. Accenture Study

The key points from this study are worth mentioning:

- *E-Government matures through a series of plateaus*
- *Value and not cost savings drives e-Government vision*
- *CRM underpins e-Government with administrators increasingly applying the principles of CRM in their e-Government initiatives as a way to reorganize online service delivery around customer intentions.*
- *Increasing take-up is a priority*
- *New e-Government targets are needed*

The study also brought out that to deliver this added value service, governments must work through a four-step process:

- *Identify the right services for the right customers*
- *Implement services properly:*
- *Increase take-up*
- *Measure success*

4.2. A not-so-different perspective

The Working Group on E-Government in the Developing World in their report titled “Roadmap for E-government in the Developing World: 10 Questions E-Government Leaders should Ask Themselves” has also addressed these issues albeit in a different way. The 10 questions are

- *Why are we pursuing e-government?*
- *Do we have a clear vision and priorities for e-government?*
- *What kind of e-government are we ready for?*
- *Is there enough political will to lead the e-government effort?*
- *Are we selecting e-government projects in the best way?*
- *How should we plan and manage e-government projects?*
- *How will we overcome resistance from within the government?*
- *How will we measure and communicate progress? How will we know if we are failing?*
- *What should our relationship be with the private sector?*
- *How can e-government improve citizen participation in public affairs?*

5. Challenges in Auditing e-government

5.1. INTOSAI Survey Findings

In a comprehensive survey conducted by a Task Force of Intosai Standing Committee on IT Audit, SAIs of various countries were asked to identify the challenges and risks foreseen in auditing e-Government. Analysis of the responses revealed that the need for *special audit skill and knowledge* emerged as the most important special challenge, followed by *special audit approaches and methods for selecting audit objectives and criteria*. Other areas identified as challenges were: *gathering data and information, and unclear audit mandate*.

These challenges are specific to the SAIs maturity level in auditing, and indicate the uniqueness of IT audits in general, and of e-Government auditing in particular. Due to it being a new area, audit approach, skill, knowledge etc. are still evolving. Training in these areas both within and across SAIs could be of significant value. However, e-government has been correctly recognized by the SAIs as more than a technology implementation, as is evident by their identification of “*audit approaches and methods*”

for selecting audit objectives and criteria” as a challenge. One has to understand the driving force or philosophy behind e-government to assess the objective, and in the process, arrive at the audit objective.

5.2. Need for development of best practices in audit.

As e-government is still evolving, and the countries are grappling with the implementation issues, a normative approach based on the best practices observed in implementing e-government may be the ideal approach for reviewing and Auditing e-government projects by the various SAIs. Technology and system implementation issues are greatly similar and irrespective of maturity of nations in IT implementation, all nations are required to resolve very similar issues in handling e-governance projects. The outcome will vary as the take-up will depend on the maturity and confidence of the citizens in availing of electronic services. This is even more important in case of such services which involve web based payments through credit card or use of electronic signature in filing documents. While there is a need to develop a set of best practices of auditing e-governance projects to start with, there is even a greater need to refine such best practices keeping in mind the ground realities of each individual countries. This poses the greatest challenge.

6. SAI-India Experience

6.1 E-Government Audits by SAI-India.

Some of the Audits relating to e-Government conducted by us in the last few years are summarized below:

6.1.1 Example-1: eSeva Project in Andhra Pradesh:

The Andhra Pradesh Government, a Province of India, had embarked on a much publicized e-Government Project. The eSeva project aimed at providing one stop-shop facility to citizens to:

- (i) Allow easy payment of electricity and telephone bills, booking of bus tickets, obtaining birth certificates, filing tax returns, etc., at any counter and at any centre;
- (ii) Collect revenue relating to various departments/PSUs, etc. through eSeva and

While the service was initially to be provided through dedicated e-Seva centres, it was planned that later access to these services could also be made available over the internet. At the time of the Audit, negligible number of transactions were being done by the citizens over the internet.

Audt revealed serious risks in this e-Government project execution, viz:

- (a) No feasibility study was ever done;
- (b) The vendor selection for project execution was not transparent.
- (c) Access controls to the data was not appropriately maintained.

- (d) Documentation relating to the IT infrastructure, including the application source code was not available with the Government.
- (e) Though all Utility payments depended on eSeva centres, Business Continuity and Disaster Recovery Planning had not been done.
- (f) Security considerations of transmitting the transaction data over internet (encryption etc.) had not been taken into account. .
- (g) The software application package had many deficiencies and validation inadequacies
- (h) The linkage between eSeva, and the backend systems of the departmental applications which were specifically meant for a particular utility, like water charge payment, or electricity bill payment was not very strong. This led to discrepancies between the payments recorded at eSeva, and that acknowledged by the functional department.

All these issues are largely related to poor execution of an IT project. The other issue is that of incomplete linkage with the back-end systems, the problems from which are likely to arise in the days to come.

6.1.2 Example-2: Computerisation of Land Record in the Province 'X'*

In another Audit of a Provincial Government's implementation of a Project to Computerise the Land Record, a much needed document which would have helped the citizen's easy access to this important record, typical errors in implementation of IT Projects were seen. To name a few:

- (a) Project was started in 1990 and even after spending Rs130 million, benefit is yet to accrue to intended public and even the department.
- (b) Project was managed by Revenue Department but data was to come from another department (Registration Department). No centralized body was formed to co-ordinate the activities between the two departments.
- (c) The application, developed by the third party was found to be faulty, with documentation not available with the department.
- (d) At the end of 13 years, when the Kiosks, which were meant to be the public interface to allow access to data, was set up, only limited data could be made available, which was not of much use to the citizen.

6.1.3 Example-3: Web Enabled application for facilitating Exporters implemented by a Government aided Organisation responsible for export promotion*

On Audit of this e-Government project, similar IT Project management and implementation failures were seen. Specifically

- (a) Rs 3.11 crore was spent to create a web enabled service so that exporters can enter the required information through web and avail of the financial assistance. Several conditions were required to be fulfilled, in particular exporters were required to submit monthly party returns.
- (b) The project started with an idea of integrated database, which was essential. Somewhere on the way, in the name of upgradation of the application, the scope of the application was changed, and the database was disintegrated such that the financial assistance was delinked from the monthly party database. In the process, the basic objective of the web application was overlooked, and Financial Assistance was continued to be given even though the exporters did not submit the monthly party database. At the end, neither could the organisation obtain the full benefit from the use of ICT, nor could the exporters be provided with enhanced service.

6.1.4 Example-4: Implementation of EDI Systems by Customs Department:

Indian Customs Electronic Data Interchange System (ICES), a project implemented by the Customs Department of India, envisaged acceptance of Customs documents electronically and exchange of information electronically with other agencies involved in international trade.

The main objectives of ICES defined by the Department were:

- (i) respond more quickly to the needs of the trade,
- (ii) computerisation of customs related functions
- (iii) reduce interaction of the trade with Government agencies,
- (iv) Automate the internal procedures of Customs department as to ensure increased efficiency, while also providing management information system for policy making and its effective revenue and pendency monitoring

During Audit, it was seen that the project suffered similar IT Project management and implementation failures, as were seen in the audit of other e-Government applications. The specific issues seen were:

- The project ran into serious time and cost overruns due to poor planning, inadequate allocation of resources and not following the well established life cycle of a computerisation project such that even after nine years, the project was far from complete. Financial estimates both for the pilot and the All India projects had to be revised due to poor formulation of initial estimates, overlooking necessary ingredients of the project.
- No major gains in trade facilitation occurred since EDI connectivity had not been established and only a very small percentage of consignments were being cleared within the targeted three days.

- The department had not yet formulated a security policy or implemented an IT security regimen covering access controls etc., leading to fraudulent payment of drawback of Rs. 19.5 Million at one location.
- There were inefficiencies in procurement procedure leading to wasteful expenditure.
- The technology for connectivity, was imprudently selected leading to wasteful expenditure of Rs 1.03 Crores(Rs 10.3 Million)

6.2 Assessment:

Based on our experience of the above Audits, and other similar Audits, It is our assessment that:

1. e-Government projects vary in scope in a continuum from the simple Departmental IT Application for increased productivity and efficiency of a single unit(G for G), to an application shared by multiple departments of the Government (G to G), to an ICT project providing services to Business (G to B) and Citizens(G to C). All these forms of IT Implementation by Government fit the rudimentary definition of e-Government viz 'Use of Information and Communication Technology to achieve better government'. Additionally, the power of internet can be tapped, as this is the most amazing technological revolution of recent times, which at one stroke has increased the reach of the government from the confines of its office premises to the remotest corner of the country.
2. In the past few years, there appears to be an apparent shift in focus in the concept of e-governance from IT Automation within individual departments, to the notion of joined-up government, to e-services application. This has led to a situation wherein ICT is being used for e-services applications prior to IT automation in individual government departments and to integration of departmental functions. In our assessment, this attempt to bring in front-end applications such as to trigger more substantial back-end reforms within government is fraught with risks of failure.
3. It is best for Government to first harness the power of ICT for internal productivity increase. For this, competence needs to be built in conceptualizing and implementing IT Projects. Only when the backend systems are well computerised should one progress to the next stage of enabling value added service to the citizens, and the transformation of citizens to customers. To give an example, as brought out in the Accenture Report : *"Revenue agencies have historically been among the first in the public sector to deploy new technology, because of the relative ease of establishing a business case for faster revenue collection and increased compliance"* . However, the same project, when implemented in India seems to lose the business focus. The only apparent objective is service to

consumer, without much focus on the related benefit to the government in terms of increased efficiency leading to faster revenue collection and greater compliance. This happens because the back end systems within the government agencies are not equipped to deal with such transactions when done online.

4. In such a scenario, not only do we find poor linkages between the front-end application and back end operations, but also the typical problems found in the implementation of any IT Projects, namely: Design and Definition Failures, Decision Making Failures, Project Discipline Failures, Supplier Management Failures, and People failure(This has had been very well documented in the NAO Best Practice Report titled “Why IT Projects Fail”)
5. Government should try to follow the five stages of maturity as brought out in the Accenture report. One more stage of Maturity, Stage 2-A may be added to this maturity stage, that of using Information and Communicatoin Technology to maximize the productivity increase possible in the Government’s internal operations. This would also call for significant business Process Re-engineering. Developing countries may focus on reaching Stage 2A in the maturity stage, and proceed further, only when significant progress has been attained.

7. Challenges for the e-Government Auditor:

VFM audit is to primarily assure that the objectives have been achieved in an economic, efficient and effective manner. Normally the direct linkage in any VFM study would be between spending and attainment of objectives in a time frame, again usually a 3 to 5 year timeframe. The auditor seems to say, in a VFM Study: “Spend less, Spend well and Spend wisely” (NAO UK).

Any e-governance project will go much beyond this spending and objective paradigm of project management. This is because all e-governance projects are likely to display the following characteristics:

1. The Project would have two aspects or faces: one aspect covering interface with citizens/customers; and second aspect: the back end: Information System. Both aspects are equally critical for the success of the e-Government project, and would require focus from the auditor. Governments may be more interested in the interface with citizens, even if that involves crisis management on a day to day basis at the Information System level;
2. Increasingly in developing countries, e-governance project will be a private-public joint effort, opening up further areas for examination by the Auditor. Complex contracts like BOT, BOOT, BOLT etc may be involved if private-public Joint Venture is the implementation modality. Government may actually contribute more to the project than envisaged in the JV agreement, by means

of contributions for which costs are not recognized. E.g. Use of Government buildings;

3. Pricing of services will need to be taken into account, with the dilemma for the Auditor, should the cost be borne by the Government, or Priced, if Priced then at what level?
4. Privacy of data will become a major issue in the days to come as more and more citizens start transacting online with the government. This issue would become more pertinent particularly in cases of Public-Private partnership where data is handled by the Private party implementing and running the project/service on behalf of the Government.
5. E-governance projects are likely to have a propensity for cost escalation leading to it becoming a high cost projects due to “enhancement of commitment” as no Government will like to call it a failure with consequent loss of face. Government’s desire to make it a success at the shortest possible time may also lead to it turning a blind eye to short circuiting of procedures and in some cases even constitutional provisions.

8. The Way Forward

1. Since technology is going to be the cornerstone of all e-Government Projects, the auditor should ensure that he acquires the required ICT skills, particularly of Web Technologies and the related privacy and Security issues.
2. Audit should be involved during the system development stage, not only to ensure that necessary audit modules are developed, but also to ensure that proper system development methodologies are being followed. The auditor’s role should resemble more of a consultant raising the right issues for further examination and immediate corrective action, than a policeman, a form of concurrent VFM audit.
3. E-governance audit must be done within a transparent framework. It can be best practices developed by SAIs or an acceptable framework like COBIT or PRINCE II. Similarly, the Audit procedures must also be transparent and explained to the audited entity, so that it can appreciate the efforts of the auditor.
4. Audit procedures must include interim reporting. Very little point is served with the auditor issuing his observations pointing out the mistakes. when the project is completed . A more participative role by the Auditor will create the necessary trust and build respect for the Auditor. Audit institutions, the SAIs may consider postponing the Traditional reporting to the legislative bodies and report the interim observations to the senior management, Head of the Ministry or Department bringing to his notice the problems in the project.

9. Conclusion

E-government has the potential to transform governance. Governments can advance the agenda on Governance reform, transparency, and empowerment of the citizens, while making the interaction of the government with other bodies, more meaningful and productive. It is however, NOT a panacea, and developing countries need to advance on the path of e-governance with caution, taking the benefit of the projects implemented in developed countries. The initial focus should be on using ICT for increased effectiveness and efficiency in the internal Government operations, and later opening up to allow direct interaction with the citizens. While no one would dispute the potential of e-government, implementation can be difficult. Gains are real but risks need to be understood. Challenge is to promote wide spread use in areas where benefits outweigh risks.