Challenges and Issues in e-Government Project Assessment*

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ABSTRACT
Electronic Governance (e-Governance) has received a tremendous interest world over. Significant amount of money is being put into making e-Governance a reality. A number of Projects are being taken up at various levels, it therefore becomes important to make reasonable means of assessment to see whether the projects have achieved or are going to achieve their planned goals. Proper assessment of these projects gives us crucial learning on the kind of changes needed to be done to make them successful. This paper is based on the research work being done by the author. The paper puts across the key issues and challenges in assessing e-Gov projects and proposes a model which has been piloted in one of the assessment studies at the national level in India.

Categories and Subject Descriptors

Keywords
e-Government, assessment, framework, stakeholders, best practices, results, enablers.

1. INTRODUCTION
There are various assessment frameworks developed, especially with a focus to address e-Gov projects. These have been developed from different perspectives and mainly address the needs and objectives being important to the institutions undertaking the assessment study. An assessment exercise involves a tedious process, in terms of capacity, time, and resources; if the intention is to assess an e-Gov project thoroughly. e-Gov projects involve a number of stakeholders, whose expectations from the project needs to be addressed.

There are three kinds of situations that require evaluation in e-Gov. One is the environment; second is evaluating the performance of an e-Gov programme or project; and third is the overall impact of e-Gov on general government functioning, economic development and citizen servicing [1].

2. UNDERSTANDING STAKEHOLDERS
While looking at the challenges and issues, we need to be clear as to what is being assessed and toward what end. One of the prime objectives of assessment is to identify the success and failure factors of the project, for its various stakeholders. At this stage we
list potential key stakeholders and consider different dimensions of their perspectives and indicators for assessing the success factor of an e-Gov project.

a. Service users (i.e. the end customers) point of view:
   - Cost of availing the Govt. service; Time for delivery of service; Convenience of availing the service; Compliance of RTI (Right to Information) Act; Transparency in Govt. functioning
b. Government point of view:
   - ROI (Return on Investment); Immediate impact on service users; Internal efficiency – process reforms; Impact on internal employees; Sustainability and long term overall impact
c. Funding Agency point of view:
   - ROI and business model; Immediate impact on service users
d. Public Private Partner point of view:
   - ROI and business model; Compliance to Service Levels; Enhancement of service and reach
e. Others stakeholders point of view:
   - At National Government level from replication perspective; Academics (arriving at what is optimal assessment)

The IIM-Ahmedabad (India) in their study related to impact assessment has identified the following dimensions of outcome for the project [3]:

a. Client Stakeholder:
   - i) Economic (Direct & Indirect)
   - ii) Governance ( Corruption, Accountability, Transparency, Participation)
   - iii) Quality of Service (Decency, Fairness, Convenience, etc)
b. Agency (including Partners in implementation) Stakeholder:
   - i) Economic (Direct & Indirect)
   - ii) Governance ( Corruption, Accountability, Transparency, Participation)
   - iii) Performance on key non-economic objectives
   - iv) Process Improvements
c. Society (Government) Stakeholder:
   - i) Economic (Direct & Indirect)
   - ii) Governance ( Corruption, Accountability, Transparency, Participation, Responsiveness)
   - iii) Development Goals
   - iv) Attitude to computerization of Government agencies for service delivery

3. ISSUES AND CHALLENGES
Classification of the various expectations and views of assessment increases the challenge in targeting a holistic and comprehensive assessment. An interesting issue to look at would be to selectively choose some of the views/dimensions and focus exclusively on them while assessing projects, and achieve the desired objectives of assessment. This paper mainly discusses the key issues and challenges for performing the assessment.

3.1 Who should do the Assessment?
Presently it is being stressed that an external agency should do the assessment in order to get an unbiased view. This agency is primarily dependent on the project owners for all

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the project related information. The issue is, why not develop a self assessment framework? In fact, by providing a self-assessment tool the project owners shall be in a better position to assess the projects on an on-going basis. Moreover they have the assessment indicators and attributes as yardstick for assessing the projects right from the project conceptualization phase; thereby developing efficient and holistic e-Gov projects.

3.2 Constraints Driving Project Assessment

3.2.1 Adequate Time for Assessment
In order to get a really good and useful assessment of the project, sufficient time not being devoted for the assessment exercise is a challenge to be addressed. It is important to understand that a lot of data and information needs to be collected or provided for an assessment. However, in reality adequate seriousness is not given to this exercise by the top policy level officials; and junior officials are given the responsibility to coordinate the assessment exercise. In absence of quality data and information about the project, the assessment does not provide the correct view of project and thereby the whole assessment exercise merely becomes another routine chore.

3.2.2 Lack of a comprehensive assessment framework
One can look at various assessment models being adopted for the eGov projects, which are developed on basis of the objectives set for that specific assessment. Different assessment institutions identify indicators on different dimensions of the project and its stakeholders. Thus, one assessment study report would not give a complete understanding of the project. There is a need to develop an assessment maturity model, maybe based on the Gartner eGov maturity model, and identify only the basic level indicators.

3.2.3 Non-availability of base-line data
It is extremely important to have the data on the functioning of the services prior to implementing the new system, in order to see the improvements over previous systems. The base line data is basically the as-is processes studied at the project conceptualization phase. In most of the projects, it has been seen that the base-line data was not captured; hence it is taken as a perception of the stakeholder, thereby giving an in-correct assessment of the impact made by the project.

Lack of high visibility for assessment reports
It has been seen that most of the time the assessments are done as part of some mandatory requirement of the project and once the said task requirement is completed, the report is shelved and forgotten. In case there is high transparency and visibility given to the assessment report, it will provide sufficient learning for the project owners.

Funds required for holistic assessment
As we have seen earlier that a holistic and comprehensive assessment should require varied degree of expertise. This would also involve quite a lot of time resources for the surveys, travel, interviewing, study of secondary data, and analysis. Normally, an in-depth and holistic assessment study would require quite a lot of funding, which is normally unavailable.

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3.2.4 Other Challenges

There are some more similar issues and challenges pointed out in a study done by IIM, Ahmedabad [2] on impact assessment for e-Governance projects:

a. Often evaluation studies had been done by agencies that may be seen as having an interest in showing a positive outcome.

b. Different studies of the same project showed very different outcomes, thus indicating a lack of credibility of the results.

c. Part of the reason for different outcomes was the use of very small samples and lack of rigor in sampling in collecting data from clients of the systems. The results could therefore not be easily generated over the entire population of clients.

d. The studies evaluated the functioning of the computerized system but were not able to assess the difference made by ICT use, as the need for counterfactuals was ignored.

e. Finally, since different studies did not use a standard methodology, it was difficult to compare the outcome of a project with other projects.

4. EXISTING ASSESSMENT MODELS

The author studied various assessment models/frameworks related to e-Gov projects. Some of them are:

- E-Government Assessment Framework (EAF), India
- eGEP – The e-Government Economics Project, EU.
- Impact assessment model, IIM-Ahemdabad, India
- VAN-DAM model, Australia.
- A Public Value framework, UK.

As part of ongoing research work, the author studied best practice assessment models from the industry - the CII-EXIM Bank Award for Business Excellence [3]. This model is based on universally accepted standards and practices that are found in the European Quality Award, US Malcom Baldrige National Quality Award, Japan Quality Award and Australian Quality Award. The model conveys that excellent results with respect to Performance, customers, people and society are achieved through Enablers - leadership, policy & strategy, people, partnerships & resources, and processes. It might be difficult in the beginning to get used to seeing things in terms of Results and Enablers, that inculcates a structured way of looking at indicators and their attributes, so as to move towards a better assessment framework.

4.1 E-Government Assessment Framework (EAF), Government of India

The Department of Information Technology, Government of India along with IIM-Ahemdabad and NISG created the Framework for assessing e-Governance projects under various dimensions [4]. The projects were categorized into small, Medium and Large, based on the investments. The EAF broadly consists of the following attribute classes for evaluation:

a. Service-Orientation- class consisting of 3 sub-groups namely, Efficiency, User-convenience, and Citizen centricity.

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The Technology class consists of 5 sub-groups namely, Architecture, Standards, Security, Scalability, and Reliability.

The Sustainability class consists of 3 sub-groups namely, Organisational, Commercial, and Legal sustainability.

The Cost-effectiveness class.

The Replicability class consists of 3 subgroups namely, Functional, Technological, and Commercial Replicability.

4.2 eGEP – The e-Government Economics Project

The eGEP is an European Union initiative to research into new instruments that evaluate and monitor the costs, benefits and outcomes of e-government [5]. Since the project spans over five years (2005-10), the project has changing criterion for itself. eGEP will produce a general Measurement Framework for the analysis of e-Gov socioeconomic and governance impacts, with the strong scientific underpinning of the Economic Study. The framework is built on three drivers: efficiency, democracy, and effectiveness – henceforth includes giving value to the quantitative benefits as well as the qualitative ones. There are as many as 92 Impact indicators identified.

5. PROPOSED MODEL

The author has recommended a cyclic assessment framework model, which encompasses the need leading to improvements in the project. The key components of the model are briefly elaborated below:

- **STAKEHOLDERS**: An e-Gov project is meant to deliver benefits to its various stakeholders. There would be the internal and external, direct and indirect stakeholders. A stakeholder would be an individual or an organization that is impacted or associated with the said e-Gov project. In such case it becomes important

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to conduct a stakeholder consultation in the beginning while conceptualizing the project, in order to understand their needs/services from the Government. Similarly, the needs out of the project for the internal stakeholders are also consulted in the beginning.

- **EXPECTATIONS:** All projects are intended to meet the needs of its stakeholders; therefore, it becomes imperative to assess the project to meet their expectations. The new assessment framework model lays emphasis on listing the expectation indicators, which are measurable from the various stakeholders’ perspective. The expectations might differ even for similar category of project (e.g. G2C Rural or Urban, G2B), depending on the country and its geographical area of implementation.

- **PROJECT BENEFITS:** The expectations are taken into consideration for conceptualization of the service requirement and accordingly built into the e-Gov Project development to deliver the Benefits to its stakeholders. The benefits are the front end component of the project which are visible to the stakeholders, and could be in terms of impact, or return on investment.

- **RESULTS:** The project in terms of the benefits delivered to the stakeholders can be measured by specific Result indicators.
  a. The dotted lines in the model indicate the variation of expected results, depending on the category of project, country and its geographical area of implementation.
  b. The model emphasizes on assessing the result indicators, which will be required to be listed and prioritized based on its importance in the project. However, it is also important to understand that all the result indicators cannot be assessed while doing a specific focused assessment study on the project. This is so, as each indicator could require a different approach and methodology for measurement. The point of concern is to identify the result indicators which are specific to the study owner perspective, and which can be completed keeping into consideration the set of constraints.

- **ENABLERS:** The results are driven by Enablers at the back-end, which would indirectly be responsible for delivering the said outputs.
  a. The enablers push the project to deliver results, which pass onto the stakeholders.
  b. The enablers would not yield direct results. e.g. conducting a training course is an important enabler however, the result also depends on the environmental setup he/she is working in.
  c. The dotted lines in the model indicate the variation of enablers driving the results, depending on the category of project, country and its geographical area of implementation.
  d. There could be two approaches for identifying the enablers. One could be a set of enablers which are linked to each of the result indicator. The second approach would be to list the broad set of enablers which drive the project for delivering the results. These in turn are further divided into sub-attributes which are then measured on a particular scale.
  e. The new model illustrates the second approach and lists the key set of enabler indicators, which would further be measured through specific sub-attributes.
• **FEEDBACK**: The model further stresses on the Feedback mechanism as part of the outcome of the assessment. This should be supplemented by creating an awareness and communication strategy for all its stakeholders.

• **IMPROVEMENT DRIVERS**: It is crucial that the learning’s should flow back for project Improvements, and strengthen the week components. The assessment and feedback act as the important drivers for improving the existing project and build capacity for better conceptualization of new e-Gov projects.

The author applied the basic Result-Enabler model for one of the eGov project assessment exercise for Awards at the national level in India viz. CSI-Nihilent e-Governance Awards 2006-07. The broad set of generic indicators identified is listed below:

- Selected Result indicators include:
  - Key performance; Convenience to service users; Internal efficiency (to Government); Innovation and Replicability
- Selected Enabler indicators include:
  - Strategy and Policy; Technology; Partnership & Resources; People; Process; Leadership

Each of these indicators was further drilled down to arrive at a set of 3 to 5 attributes for the assessment. The set of indicators were identified keeping the time constraints and objectives of the Awards. Subsequently, we identified five experts in e-Governance domain and asked each one to give weights to the indicators and attributes. This was evaluated using AHP (Analytic Hierarchy Process) defined by Dr Thomas Saaty [6]. AHP is an advanced method for supporting decision makers in structuring decisions, quantifying intangible factors, and evaluating choices in a comprehensive and rational framework. The AHP provides a structured framework for setting priorities on each level of the hierarchy using relative comparisons, a process of comparing each pair of decision factors at a given level of the model for their relative importance with respect to their parent.

After application of the AHP model the final set of weightages were arrived for the indicators and attributes. This Result-Enabler framework was used for assessment of the projects and sent to the project owners in advance so that they could do a self assessment under the identified indicators and attributes, prior to the assessment teams. However, at this point it can be shared that the feedback of the approach was appreciated by both the assessment teams and the project owners, since the model gave them a focused assessment of the project.

6. CONCLUSION

e-Gov projects at present are being assessed from varied dimensions, mainly from the point of view of the owner of the study. It is quite challenging to under take an assessment study in a holistic manner which could address the expectations of all the project stakeholders. Therefore, there is a need to develop a broad assessment framework model which could give a direction to the assessment and learning’s which can go back into the project. At the same time it is very important to develop self-assessment models,

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which could be used at the conceptualization level itself, of the project. This paper shares the experience as part of the on-going research by the author and its present status.

7. REFERENCES

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