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Impact Assessment of e-Governance Projects: A Benchmark for the Future

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KEY WORDS

e-Enabled Service Delivery

National e-Governance Plan (NeGP)

Bhoomi Project

Computerization of Land Records

Property Registration

Transport

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INTRODUCTION

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In recent years, a large number of countries have launched "e-government" programmes, and several development agencies and governments have identified e-government implementation as a key policy priority. So, when the Centre for Electronic Governance at the Indian Institute of Management, Ahmedabad (IIMA) announced a joint workshop with the Department of IT, Government of India, on Impact Assessment of e-Governance Projects, *Vikalpa* seized the opportunity to organize a colloquium on the topic based on the proceedings of the workshop.

During the workshop held at IIMA on 19-20th November, 2008, results from an impact assessment study of three state-level e-government projects – vehicle registration, property registration, and land records across twelve states, and three national-level projects implemented by the Income Tax Department, the Ministry of Corporate Affairs, and Regional Passport Offices were shared. An overall report drafted by IIMA for all state and national projects covered in the study was released in the workshop. The study indicated that although almost all the projects had delivered some benefits to citizens, there were large variations in the performance of computerized systems across states. One of the key purposes of the workshop was to discuss how future projects can be designed to harness the full potential of technology, process reform, and integration of data across the concerned agencies.

The workshop was attended by senior officials from state and central government agencies. This colloquium highlights the key issues discussed during the workshop and presents the viewpoints of experts who have either championed e-government projects or researched extensively in this area.

Genesis of the Study

In view of the proposed roll-out of the ambitious National e-Governance Programme (NeGP), the Government of India was keen to understand the nature and quantum of the impact created by the e-government projects that had already been implemented by the state and national agencies. The Department of IT as the nodal agency for the NeGP therefore decided to carry out an impact assessment study of the mature state and national projects that have been implemented in India. The study was carried out under the overall guidance of a team from IIMA. The DIT empanelled eleven agencies to undertake field research involving user surveys using professional staff, and analyse the data to report on impacts. The purpose for which DIT commissioned these studies was:

- To ensure that funds/efforts deployed in e-government projects provide commensurate value to citizens
- To use the results of the study to create a benchmark for service delivery for future projects to target
- To use the results to make mid-course correction for projects under implementation
- To carry out follow-up studies of successful and not-so-successful projects that could help enhance understanding of the key determinants of the impact on citizens.

As a part of the first phase of the NeGP's three-phase impact assessment schedule, the impact of electronically-enabled (e-enabled) service delivery by the following three departments was studied:

- Issue of an RTC (among other uses, this document is required for availing crop loans from banks and as surety for bail) and filing of a request for mutation for affecting changes in land record.
- Three key services delivered by the Sub-Registrars' offices: online registration of property sale/purchase deeds; issue of non-encumbrance certificate; and issue of copies of previously registered deeds.
- Two key services delivered by transport offices: issue of driver's license on plastic cards with data and photograph captured on magnetic strip/chip and photo captured digitally; and on-line registration of vehicles with a plastic card registration book.

Assessment studies of impact on citizens/businesses of three national projects focused on collection and processing of income tax, registration of new companies, and issue of passport.

Results of Client Impact Assessment

A comparative analysis of the three state and three national projects from the perspective of their impacts on clients in terms of the key dimensions of cost, quality, governance, and overall satisfaction reveals the following:

State Projects

Results indicate an abysmal state of delivery of services in the existing manual system in all the three types of projects. Users need to make 3-4 trips to government offices on an average (up to eight trips in some cases), wait two hours or more (up to 6 hours in some cases) in each trip, and pay frequent bribes (20 to 50% of all transactions) to get services. Even in a simple service such as issue of a copy of land record, the elapsed time (submission of application to receipt of document) averaged five days. For property registration and drivers' license, the average elapsed time was 32 and 23 days respectively. In some states, the elapsed time was as high as 2-3 months.

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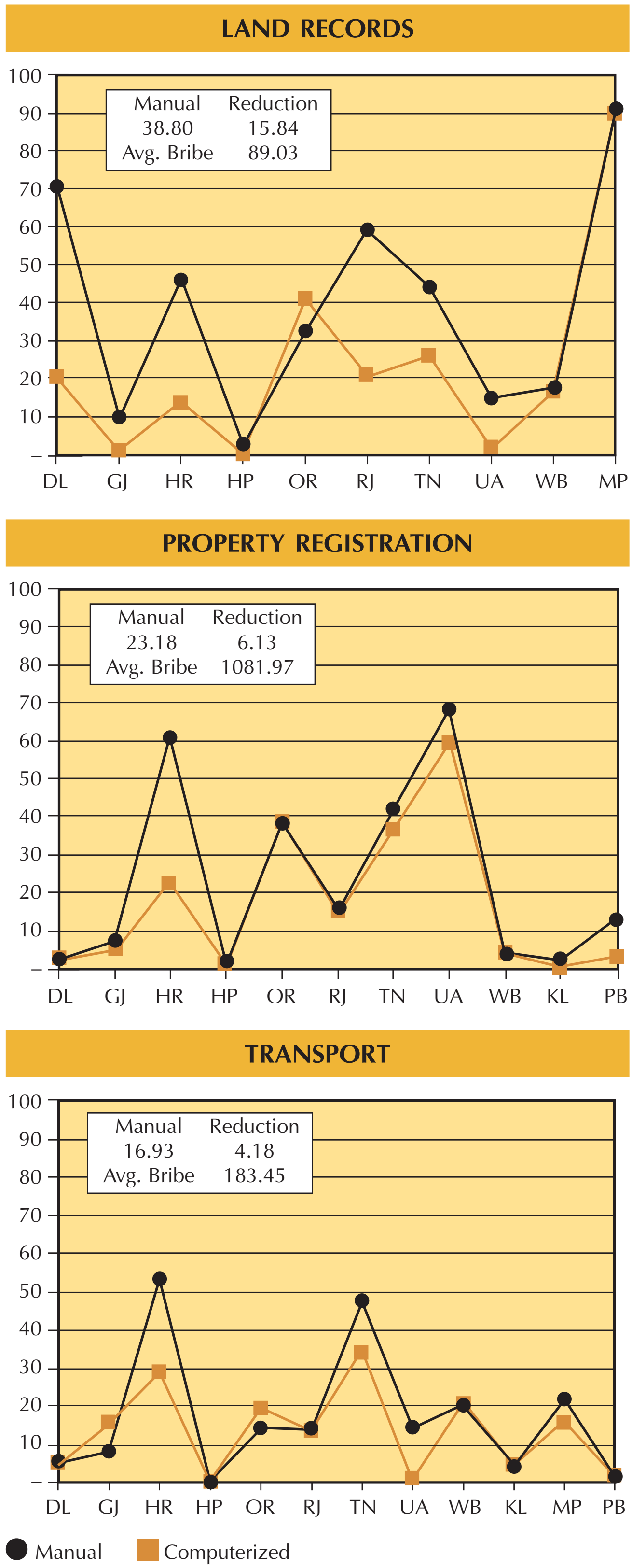
Citizens indicated an overwhelming preference for computerized systems (91% in land records; 96% in property registration; and 88% in transport) when asked to choose between computerized and manual modes of delivery. Only in case of land records in Delhi and transport in case of West Bengal, an overwhelming majority preferred the manual system. Preference for computerized service delivery was supported by specific areas where concrete benefits have accrued to them. Overall, in all the three types of services, the number of trips to offices reduced significantly (by 1-2 trips) after computerization. Waiting time has been reduced by 20-40 per cent by computerization. Direct cost savings to citizens averaged around Rs 60-Rs 110 in the three projects across all states. Impact on bribes is uneven as can be seen in Figure I. In land record computerization, reduction in the payment of bribes is significant. In property registration and transport, there is hardly any impact on bribery and a large number of users continue to go through agents to get the service.

Amongst the three projects, land record computerization seems to have resulted in the most positive impact

Figure 1: Proportion Paying Bribes (Percentage)



DL: Delhi; GJ: Gujarat; HR: Haryana; HP: Himachal Pradesh; KL: Kerala; MP: Madhya Pradesh; OR: Orissa; PB: Punjab; RJ: Rajasthan; TN: Tamil Nadu; UA: Uttarakhand; WB: West Bengal

on citizens. Computerization reduced the number of trips in almost all the states by one. In the manual mode, average number of trips of all users in all the ten states was 3.2 which reduced to 2 in the computerized mode. Waiting time reduced by 30 per cent from an average of 130 minutes in the manual mode. Bribes, which had to be earlier paid in nine out of the ten states, were either eliminated or significantly reduced in five states. However, in most states, users reported an increase in travel costs (in spite of a reduction in number of trips) because of the centralization of the delivery of RTCs to the *taluka* (sub-district) level from the village level in the manual mode.

In the case of property registration, computerization reduced the number of trips from an average of 4.0 to 2.3. Elapsed time and waiting time was also reduced significantly as nearly one hour has been shaved off from a 2-hour wait in the manual system. Significant gains were also reported in the elapsed time (days elapsed from application to final registration). However, the impact of computerization on payment of bribes was very marginal.

In transport agencies, computerization reduced the number of trips by 1.0 on an average across 12 states. There was a marginal impact on waiting time. Half an hour was reduced from a 2-hour wait in the manual system. Only one of the 12 states reported a significant impact on bribes. Impact on elapsed time was also marginal.

In overall citizens' perception, Himachal Pradesh (HP), Rajasthan, Uttarakhand, and Tamil Nadu (TN) ranked high whereas Orissa, Haryana, Madhya Pradesh (MP), and West Bengal (WB) ranked low based on a composite score (that rated improvement on 20 dimensions of service delivery) in all the three types of projects.

National Projects

Among the three national projects, MCA21 (implemented by the Ministry of Corporate Affairs) appears to have had the most positive impact on users on the key dimensions covered in this study. The passport project has had virtually no impact. Results of the Income Tax survey indicate that while corporate users have benefited on some aspects, individual filers have not benefited significantly. In the case of MCA21, even users accessing the services from a public access point reported a saving of nearly one trip. The waiting time at the service delivery centre during each trip was reduced to 25 minutes in comparison to 75 minutes in the manual system. The project had a significant positive impact on corruption with the proportion of bribes having reduced from 20 per cent to less than 5 per cent in the case of the virtual front office (VFO) and citizen facilitation centre (CFC) users. Users reported a significant improvement in both the quality of service and the quality of governance.

Users of the Income Tax portal have reportedly had to make multiple visits to the Income Tax Office to file their returns. Waiting time reduced by about one-thirds (from 38 minutes to 27 minutes in the case of individual filers and from 26 minutes to 17 minutes in the case of corporate users) besides a significant reduction in total elapsed time for corporate users from 10 to 6 days. Chartered Accountants (CAs) filing on behalf of corporations failed to report data on corruption. Individual filers reported a marginal reduction in bribes. Although individual filers perceived very little improvement in the quality of service and the quality of governance, corporate users experienced a significant improvement in both.

In the case of passport, the reduction in number of trips and waiting time was marginal as only submission of application was partially computerized, leaving most of the back-end processes in their old inefficient form. Incidence of bribery was high for police verification (as much as 44 %) and small (a little over 4 %) in the case of passport office, but the impact in both the cases was not significant. Very little or no improvement in service quality or quality of governance was perceived by respondents.

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An overall assessment based on a composite rating suggests that MCA21 has been significantly more successful in terms of the value delivered to the users. In all the three projects, users preferred the online service, even though composite scores show hardly any improvement in income tax and passport.

Implementing NeGP: Importance of Impact Assessment

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e-governance opens up the door to a vast opportunity for transforming governance. It goes beyond the computerization of government processes and into the realms of good governance which include issues of efficiency of service delivery, empowerment of citizens, transparency, and accountability. Individual e-governance efforts at district, state, and individual ministry level have been going on for many years. However, the National e-Governance Plan (NeGP) in India has provided an important platform to upscale and integrate various initiatives and to aid large scale roll-out projects.

I would like to first talk about the genesis—the background and the context in which the study was undertaken. For a long time, people thought that in e-governance, there was only one stakeholder, that is, the government itself. It was the government which decided what was to be done, what needed to be the outcome of the project and so on. But over a period of time, it is now very clearly understood that a large number of people are impacted by these projects. It is not just the government or the citizens. There are institutions, organizations, financial institutions, and a whole spectrum of people who are getting the impact. Whether we like it or not, each of them has certain expectations and needs. Again, whether intended or unintended, planned or not planned, each of them is feeling the impact to a significant extent. Finally, we now have a clear understanding—within the country as a whole and across the government—of the scale of the possible impact of e-governance. Perhaps the time has come to make a proper assessment of projects which have been undertaken and also to create a virtual feedback cycle by which the findings are looped back into project conceptualization so that we do not have to follow trial and error to see what has worked and what has not and then try and keep improving it. Once we know what the trick is, the idea is to plug it into the winning project formulation and conceptualization process. A lot of times, in the government, 'assessment' is a dreaded word. It is a bit like the commission of enquiry—usually along the broad 'find a fault and fix somebody' concept. Very rarely is an assessment made on an ongoing, constructive basis and looked at simply as a way of describing a glass that is neither completely full nor completely empty—just stating something that exists. One thing that the NeGP has changed substantially is to convey clearly that while there may be many impacts, there may be many goals as well for implementing an e-governance project. Some organizations look at revenue maximization as one of the goals; some might look at optimization in terms of reducing the overheads on managing that particular department; others may look at efficiency. But what the NeGP has laid out clearly is that every department is certainly entitled to lay down whatever goals they feel are necessary.

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The key mantra of e-governace is 'citizens first.' It was therefore vital that the existing projects are assessed with the focus on the nature and quantum of impact on users. Whatever else we do, what the citizens, in this context, also the businesses, or the end customers are looking for, is central to the whole conceptualization. Once that is done, obviously, the process of measurement does become very important because in the past what we have seen is that most of the documentation related to assessment of projects was impressionistic or based on papers, quite often written either by the implementer of the scheme or by an agency which is involved in implementation and not based on any rigorous study and much less based on a statistically validated model. So, again there was really a dearth of reliable information, on what was succeeding and what was not. But what was known was that most projects did not succeed and many projects which succeeded did not last. And, therefore, again the bottom line is that we do need to figure out some way of understanding exactly what is happening and exactly how to do things right at least as best as we can. The assessment exercise is not to be seen as a one off exercise. Every project, once it reaches a mature stage of service delivery, will be constantly monitored and subjected to assessment such that it can be further improved and evolved to deliver greater benefit.

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At the programme level, the apprehension that the government has is that of the multiplicity of objectives—the moment there are four-five different objectives, there is a possibility of a little dilution of focus on these services to the end user. Even if other objectives are to be added, they should be incorporated as a part of the supplementary report and given in a direct feedback to the department, and not as a part of the programme level feedback. Distinction needs to be maintained to preserve the programmatic orientation of the NeGP.

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There are two kinds of assessment. From a purist point of view, there are many aspects of an e-governance project which need to be assessed in a technical or professional sense. The technology choices and the process changes that are made, their legal sustainability, and the change management practices that have been adopted etc. are largely an assessment in an internal sense — a self-assessment by the management of the implementation of e-governance projects. But what is now being talked about is an entirely different kind of assessment. It does not matter how you have gone about it, what methods you have used, how professional or unprofessional you have been, what matters is what finally came out of it from the perspective of the beholder, in this case, the citizen. That is the empirical way of looking at the same thing. Both are important. It provides a very good cross-check to the other kind of assessment, the kind of assessment which is made by organizations like STQC — see whether it is scalable, or is meeting the functional requirements or not and maybe certify if the application is well designed. So, there are a whole lot of dimensions which are tested. But, in the empirical test, again we are getting feedback from a large number of people. One way of looking at these assessments is to see it as a way of understanding what people are trying to tell us. It does not matter what we had in mind. And, if somewhere we have not factored in something that needed a serious attention, it may well be argued that the assessment is unfair. It is unfair because projects are being tested on parameters which they may never have been designed for. It is quite true and, I think, it is a valid point of view. However, the fact of the matter is that it is being assessed against factors which people consider important. Maybe it was not a part of the original calculus. Even if we did not intend some of those benefits and had not planned for them, those benefits would have occurred. In some of the cases, for instance, reduction in the number of trips or reduction in corruption may not have been very explicit project objectives when the project was designed. But they have happened. So, the fact again is that whether it was intended or not, this feedback would be extremely useful to all the people who are involved in the implementation.

I would strongly urge that these assessments should be looked at more like a thermometer which tells you the temperature; that is the fact of life. The participants from the government may say it is viral, typhoid, or something else—they understand their domain much better than anybody else. Therefore, they can probably make much more sense out of these reports than maybe even the people who have prepared them. They are intended to provide that kind of feedback to people who are involved in the implementation. I would also like to mention that it has been decided at the Apex Committee and Cabinet Secretary levels that such assessments are not going to be a one time affair. So, the project may be measured again and again, probably at an interval of one or two years. It is not necessary that a project which is doing well will continue to do well. So, that is another element of this process which we intend to put in place.

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Finally, in the conclusion, I would like to mention that there are three key participants in making this assessment move forward and, of course, most of the government departments which have very happily come forward to have their projects assessed.

Initially, there was an apprehension that people would not like to be assessed. On the contrary, we found quite a lot of eagerness in the various projects to be assessed. The professional market research agencies did provide their own expertise. It is not easy to get feedback from the field and inputs from thousands of people on very sensitive kinds of questions like bribery. Trying to compare the past and the present across a different set of clientele may add to the complexity. Market research agencies being professional organizations, perhaps had a sense about how to deal with this complexity. From the DIT, we have tried our best not to influence the outcome in any way so that it can be seen as a government funded assessment that is completely independent and impartial. I must also mention that there have been a few assessments that have come up with some astonishing conclusions. For example, some of them said that the whole of e-governance is a complex plot by the multinational financial institutions and vested interests in the country to weaken those who have no power and capacity and that it strengthens the hold of vested interests on such a system. That is one point of view. According to that study, it was using some well-established methodologies, not necessarily a statistical one. There are other points of view, but I think, having a proper study with a proper methodology has no substitute. The question is: What are the issues that we are going to measure? What would be the challenges in measuring them? What are the limitations of the current measurement and how can we overcome those limitations in the next round? What are the challenges in designing a survey for the projects to be taken up for assessment in the future? All these need proper answers as a result of these deliberations.

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What Drives e-Governance Projects?

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Good governance is critical for development. e-governance has the potential to address some of the ills plaguing the governance in our country. But agonizing wait in the queues to make payments of utilities or just getting the information on the pending issues has left citizens baffled and scornful. Attempts have been made through e-governance initiatives by governments, individuals, and officials to give succor to citizens. Despite the promised ease and help at the doorstep of the user, most of them stopped short of it. They, in more than one occasion, were mere tinkering with the existing system and were limited in scope. Of late, we have also witnessed a mad scramble for computerization of front-end operations of governments and categorizing them as e-government projects. Despite several of such failed efforts, there are some shining examples that have survived the test of time and captured the imagination of citizens. In these circumstances, it has become imperative to develop touch stones to assess, analyse, and segregate these projects. What then could be the distinguishing feature of all such initiatives, to categorize them into successful and not so successful projects? Can there be some yardstick or index to help us evaluate? Unfortunately, so far, we have failed to evolve a consensus on the mechanism and mode of evaluation of these e-governance initiatives so as to ensure that only those proje-cts that have the potential of benefiting

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the masses get to see the light of the day. Prime reason for such a conundrum is that each of these indices has its shortcomings and their measurement is fraught with difficulties, when faced with the inconsistency of data across different agencies for the same variable. Thus, one cannot zero in on any single 'gold standard' that can help us differentiate between projects.

> In the zeal to develop the 'mother of all programmes,' we tend to increase its scope manifold, forgetting that e-governance projects should be the force multiplier, rather than the drain on resource. This tendency on the part of implementer makes projects demanding and unsustainable and ensures that the programme falls into early disuse.

Despite the insurmountable difficulties, one needs to try and evolve a consensus on whether an e-governance project is driven by the individual's zeal or is more systemic in nature? More often than not, we have seen the projects run on the individual's energy and commitment and once the officer is changed, the project dies its natural death. This could be either because of reluctance on the part of the successor and subordinate officials to own up the projects, or because little or no attention is paid to involve officials. While the first situation is inherent in the government system as no premium is placed on the successful and continued running of the programme by the successor, the second situation is more to do with the implementer himself, as without preparing the mindset and capacity building of one's team, one tends to jump on the bandwagon of being christened as an innovator.

In my opinion, the second test of usefulness of the project is whether the system so developed is for the enhancement of internal efficiency or is it for the benefit of the masses? The major challenge is to provide a citizen-centric solution by offering hassle-free, easy-to-use, round-the-clock services to the consumers. However, on several occasions, it is witnessed that, one tends to forget the actual users' requirements. This simple mistake costs us all our efforts and time, because, however well-designed a system may be, if there are no takers, it is not worth the effort. The reasons for committing this error may be more than one, yet the foremost being the brief tenures of officials and hurry to do 'something' during one's tenure.

> Development of e-governance projects should be taken as an opportunity to minimize procedural delays, simplify forms, and reduce the chances of corruption.

"Technology for the masses" is the constant endeavour and commitment of the government. Technology should not only have to be proven and easy to maintain, but also be low on initial cost and resource requirement. Thus, the third test for projects could be the resource requirement. In government, we tend to assume manpower availability as given, whose requirement at times is so heavy that the project becomes unsustainable since its inception. In the zeal to develop the 'mother of all programmes,' we tend to increase its scope manifold, forgetting that e-governance projects should be the force multiplier, rather than a drain on resource. This tendency on the part of implementer makes projects demanding and unsustainable and ensures that the programme falls into early disuse. In addition to this, at times our failure to assess memory and space requirement for our project and a lack of proper advice on the application software and platform reduces the probability of its acceptance.

At times we tend to lay too much stress on electronic presentation of contents rather than on solving the governance issues by the application of information technology. Mere presentation of information on electronic medium while keeping the cumbersome and complicated procedures unchanged, increases citizen's dependence on yet another type of intermediary, i.e., computer literate person. Thus, the fourth test could be to see whether the project has reduced the number of intermediaries and middlemen or whether it had any impact on minimizing the face-to-face interaction of government functionaries with citizens. Has it in any way reduced the drudgery of citizens and their multiple rounds to the corridors of power? Development of e-governance projects should be taken as an opportunity to minimize procedural delays, simplify forms, and reduce the chances of corruption.

In essence, the indicators for categorizing the e-governance projects should include both the subjective (qualitative) and objective (quantitative) criteria. Since the e-governance initiatives are still at the nascent stage, the indicators developed for the categorization of the projects should also capture both the 'efforts made' and the 'results' achieved. Thus even if our progress is tardy and slow, we need not worry as much as when we are not in the right direction. Derailment from the right track should call for immediate steps for mid-term corrections.

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Computerization of Land Records: The Karnataka Experience

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Maintenance of land records is one of the key issues facing governance today. In Karnataka, land records were earlier maintained through a manual system involving 9,000 village accountants, each serving a cluster of three-four villages. Eight registers were maintained to record the information on (a) current ownership of each parcel of land, its area and cropping pattern, dispute, mutations and (b) village maps that reflected the boundaries of each parcel.

Computerization of land records in Karnataka goes back to 1991 when the 1st pilot study was initiated under the Ministry of Rural Development's Computerization of Land Records (CoLR) Project, fully funded by the Government of India. By 1996, projects for computerization of land records were sanctioned for all districts in the state of Karnataka. However, no provision was made to install computers at the *taluka* level where manual records were actually updated. The breakthrough came when the state government mandated the project, Bhoomi, in which computerization of land records was undertaken and completed in all sub-districts by March 2002.

The major objectives of the Bhoomi project were to:

- facilitate easy maintenance and prompt updating of land records
- make land records tamper-proof
- allow farmers easy access to their records
- collate the information to construct database regarding land revenue, cropping pattern, land use, etc.
- utilize data for planning and formulating development programmes.

The Karnataka Government's Department of Revenue set up computerized land record kiosks (Bhoomi centres) across 177 *taluka* offices. These kiosks provided farmers with the Record of Rights, Tenancy, and Cultivation (RTC)—a document needed for obtaining

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The first and foremost step in kick-starting the Bhoomi system was to capture legacy data records in the possession of village accountants, numbering about 20 million.

The manual and computerized sets of records on the starting day now serves as the original record and are kept in the safe custody of the *taluka* office. When a change of ownership takes place through sale or inheritance, farmers can file an application for a mutation of the land record at the Bhoomi centre at a separate operator-assisted counter that handles mutation.

The unamended Kanataka Land Revenue Act did not provide for a computerized system. Therefore, the Act had to be amended. Maintenance of equipment at 177 centres, many of which are located in far-flung rural areas, dealing with isolated incidences of fraudulent certificates being presented at banks, mitigating problems of farmers who have to travel long distances to reach Bhoomi kiosks, lack of currency and poor quality of crop survey data, and problems of illiterate farmers in filing mutation forms are some of the challenges that the project team has grappled with.

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An evaluation conducted by the Public Affairs Council, Bangalore, 2002, showed significant impact on efficiency in delivery and corruption:

- Ease in use of Bhoomi kiosks—79 per cent users could use Bhoomi without having to meet any official except the counter staff.
- Bhoomi kiosks provided error-free documents to 74 per cent users *vis-à-vis* 63 per cent in the case of manual system. In case of error, Bhoomi users could complain and seek rectification—58 per cent got timely response against 4 per cent in the manual system.
- Hard copy of RTC and receipt could be obtained at Rs 15.
- Hidden costs of time and effort for securing these certificates were eliminated.
- 79 per cent of the Bhoomi users reported a minimal waiting time of 10 minutes or less in the queue. 27 per cent could meet the concerned official in such a short time. While 72 per cent got RTC after one visit to Bhoomi-kiosk, only 5 per cent got it that fast in the manual system.
- Corruption was the most serious issue—66 per cent of the users of manual system paid a bribe against 3 per cent in the case of Bhoomi users.

The Bhoomi project of online delivery of land records demonstrated the benefits of making government records more open so as to empower the citizens to challenge arbitrary action. The assessment of land record computerization done by the recent DIT/IIMA study also showed similar improvements in half of the 10 states that were studied. However, it is very important for the nodal agencies to understand why there are differences in the performance levels of different states after computerization. For this, it would be necessary to send appropriate persons to closely examine the different projects, identify the good points, and then have a couple of sessions for disseminating the information collected and discuss in detail the problems of the projects and see how they can be mitigated.

For example, the study indicates that in the land records project of Gujarat, the corruption level is zero and the elapsed time is less than one day compared to some other states where elapsed time is three to four days. It is very important for us to understand as to what those features are which are making Gujarat so efficient. This obviously cannot be done unless and until we get into details. Consultants who are good in land records can be engaged. They can study and make a very critical report and somehow or the other impress upon the state governments that there is scope for improvement. Similarly, in other projects, we have to analyse, for example, why, on an average, individuals spend about 25 minutes waiting in queues to submit the acknowledged receipts of their Income Tax. But there has to be further investigation to understand as to how the waiting time can be reduced. Otherwise the study will end up being like the thermometer which just shows the temperature. For analysing why the temperature is high, it would obviously require further enquiry.

Secondly, in the case of mutation system, even after 10 years of computerization in land records and registration, mutation is still not achieved. What is more disturbing is that even in places where mutation has been achieved, corruption is still high. How do we make mutation simpler? I am told that Tamil Nadu has a presumptive system. Can our IT-enabled system have presumption that if no objection comes in 15 days then the mutation shall be self-certified? In Bhoomi, a 'first in first out' (FIFO) system has been implemented. Now people need not pay bribes because they know their work will anyway be done. Other states can implement similar mechanisms.

One drawback of the computerized system is that people are now forced to go to *Tehsil* for availing the services. We should therefore focus on decentralized delivery systems through the rural telecentres which have been set up and somehow convince the Ministry of Land Resources to ensure their complete roll-out. In Karnataka, there are now 800 centres, and out of a total of 2 crore existing records, 1.2 crore are going through the decentralized system. Initially, there was an opposition to the levy of a user fee for obtaining RTC. Now, nobody, including the senior political leaders who were vehement about the fees being too high, are talking about it. In order to make the system effective, public access to ICT infrastructure is becoming very important and the Department of Information technology (DIT) will have to help the departments in this respect.

One of the central ministers said, "Bhoomi is garbage in and garbage out." I am sure he was pointing at the inconsistencies and defects in the manual land records data which was digitized to create Bhoomi database. We, as administrators, should have the courage to take such criticisms in the right spirit and take corrective actions.

The time has now come when we should talk about consistency of land records with respect to spatial data. I have no hesitation in saying that the land records in Karnataka do have errors. Now that we are digitizing both land records and spatial data, on comparing the two, we find that initial data itself had defects. We have to see that this data, i.e., spatial data and non-spatial data, are consistent and the IT tools will help achieve this to a very large extent. Quality of data is very important for land records. The first important point is to see if the data is correct.

What is also important is to see not just that mutation is handled online but also that spatial data is updated. While all land records across the country talk about non-spatial data, can we be assured that spatial data would automatically get updated? Hence the importance of the concept of pre-mutation system (PMS) in which one could measure the land before the land is registered. PMS is prevalent in many countries and it is necessary that we graduate to that level where the land is measured before it is sold, and then, both spatial and non-spatial data are updated together. We should also ensure that registration and land records systems should be fully integrated. There is no justification why our citizens have to register their land and still keep on running to the land records system for mutation. Both being electronic systems, why can't we exchange data? Why can't registration trigger our requests on land records and start mutation? I am sure it is prevalent in many states. Needless to say, if it has to happen very effectively, the registration system should start using the land records system's electronic data records to ensure a 100 per cent computerized and automated system. I believe, these are some of the small intermediations which would help the system improve in the coming days.

> While all land records across the country talk about non-spatial data, can we be assured that spatial data would automatically get updated?

I will explain the approach taken by Karnataka. The Government of Karnataka amended the Land Revenue Act. Measurement of land was made mandatory before it was sold—If a particular piece of land was not measured, it shall not be registered. We brought an amendment to the Karnataka Land Revenue Act which stated that if any registration was to be reported by the Sub-Registrar or an inheritance case was to be reported by a family, a sketch shall be obtained and given for the purpose of mutation. We also issued a circular notifying that it is the responsibility of all the government officers to follow the amendments carried out in the Karnataka Land Revenue Act. This circular and the amendment went to the Division bench of the High Court which held that the state government has the right to amend the Karnataka Land Revenue Act and that it is also the responsibility of all the government officials to follow the regulations of the State Act which is required for a proper maintenance of the land records.

> We should also ensure that registration and land records systems should be fully integrated. There is no justification why our citizens have to register their land and still keep on running to the land records system for mutation.

The next obvious question would be: How to make the sketches? Who has the power to make the sketches? The Karnataka Land Revenue Act brought the concept of licensed surveyors. The idea was to use the private sector, let them go to the field on a user charge (Rs 600 per copy), measure the property, and then give the measured property record to the government surveyor who would authenticate the data mathematically that the sketches and polygons reflected the right area. This sketch would then become one of the documents to be given to the Sub-Registrar before he registers. Once this sketch is formed, administrative guidelines are issued. One of the guidelines says that if the 11-E sketch (pre-mutation sketch) has to be made, the one who is requesting this should be the owner as per the Bhoomi database. If he is not the owner, 11-E sketch shall not be made. On the pre-mutation sketch, both the owner and the seller sign and it becomes an annexure to the sale deal. After getting registered, this sketch comes back to Bhoomi and is electronically converted at the centralized data centre. After every registration, the Sub-Registrar sends the data electronically to the Bhoomi database, and mutation starts.

One more thing that happens is an Integrated Bhoomi Mutation process where Bhoomi generates both the non-spatial and spatial updated records. The spatial updated record is generated from the pre-possession sketch that already has the required data. Thanks to the 3,500 licensed surveyors that we can carry out 5 lakh mutations per year generating Rs. 30 crore. This 30 crore goes to the 3,500 licensed surveyors. Appropriate software is now used to exploit the power of technology; exchange of data between the Sub-Registrars and Bhoomi now creates synchronization between the spatial and non-spatial data.

Are there any challenges to the system of the licensed surveyor scheme? The answer is certainly, 'Yes'. The challenge now requires to generate a human resource of 4,000-5,000 and train them over a period of time because if they create inaccurate spatial data, it could result in legal problems, increasing with time.

Every land record including all the 5-10 lakh sketches which have been created is available on the internet and can be accessed through the 1,000 telecentres in Karnataka. There are certain small law changes which can still be brought about to help reasonably achieve a nearly ideal system.

Designing e-Governance Applications

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Technology has the great potential to make interaction between governments and citizens a much more satisfying experience by drastically improving the service delivery of government agencies. However, this improvement is dependent on how well the e-governance system is designed. Design of a new product or service is greatly influenced by the user requirements and user feedback as these determine its acceptability. The feedback of the consumer, in turn, is based on his/her experience of using the same or similar product in the past.

The end objective in most of the e-governance projects are confined to the well-known pain areas of government service delivery, i.e., reduction in processing time, waiting time at the counter, number of trips to be made to the government office, and the bribe to be paid to avail the service.

Since e-governance services are being implemented for the first time in India, and the end-users have had no previous experience of the same or similarly provided services, the expectation levels or users' requirements are not known. This becomes the biggest handicap for the designers/planners of e-governance services. Today, there is no methodology available for conducting stakeholders' consultation on the requirements or priority of e-governance services. Thus, the end objective in most of the e-governance projects are confined to the well-known pain areas of government service delivery, i.e., reduction in processing time, waiting time at the counter, number of trips to be made to the government office, and the bribe to be paid to avail the service.

At the same time, it would not be right to conclude that the people do not have any clarity on what type of e-governance services they want and what should be the features of the same. The clue comes from extensive use of ICT by private sector organizations which have not only reduced the cost of business but have also given the end users a better experience. For example, people today can access their bank accounts 24x7. The processing time on the counters has come down drastically wherever it is not possible to provide the service remotely. Today, consumers can pay bills through ATM or Internet-based system or through pre-paid cards, apart from conventional office counters. The innovative use of ICT by private sector for service delivery has put pressure on the government and public sector agencies to provide similar experience to people.

The absence of mechanism for conducting stakeholder's consultation while designing an e-governance project has been the main factor for not setting the objectives in quantifiable terms.

Measuring the success of a project requires setting up of quantifiable objectives and milestones before the start of a project. These are based on past experience and new user requirements. The absence of mechanism for conducting stakeholder's consultation while designing an e-governance project has been the main factor for not setting the objectives in quantifiable terms. Most of the e-governance projects, including MMPs, do not have quantifiable objectives set before implementation of the project, which could be used to measure the relative success of the project. Thus, the impact assessments have been confined to 'then' and 'now' comparison on selected cost and quality parameters such as:

- Cost of availing services (number of trips, cost of trips, wage loss, service charges, cost of documentation, bribes paid, waiting time, total processing time, etc.)
- Quality of service (location of centres, working hours, attitude of functionaries, problem resolution and complaint handling, confidentiality of data, etc.)
- Quality of governance (awareness of citizen charter, delivery time *vis-à-vis* time frame mentioned in the citizen charter, level of corruption, accountability of officials, percentage of error in services provided, etc.)
- Comparison with manual system.

Such impact assessments conducted on a large sample in a scientific manner do provide invaluable result for further refining the design of the subsequent e-governance projects. Thus, the question which arises next is about how to improve the framework of assessment and how to improve the experience of the service seeker in terms of mode of interaction, ease of interaction, total time of processing, wait time at the counter, ease of tracking the status of request, delivery of services, awareness of people about the project, etc.

Ease of online operation and modes used to provide this experience to people are two critical success factors.

Many users have experienced difficulty in dealing with online systems and that has led to increase in use of intermediaries as has been reported in some of the projects. This brings in focus the need of user friendliness of the application software. Intelligence built in the application form to do logic check, calculations, auto populate data, etc., reduces the chance of error and consequent delays involved in referring back the matter to the applicant. This also enhances the experience of the applicant leading to higher acceptability.

> Automation of back-end process plays a crucial role in monitoring application processing and related matters like dissemination of status, maintenance of 'first in first out' (FIFO), etc. If the process is not automated at the back-end, then status updation becomes manual which then becomes an additional job for officials.

Many services require submission of supporting documents along with the application. For instance, passport application needs to be supported with residence proof – Election Photo Identity Card (EPIC) or ration card. The prescribed supporting documents are issued by government agencies like election department (EPIC), food and supplies department (ration card), etc. With large scale automation of various departments, should we not put in place a mechanism for auto-checking the data from the issuing authority's database? For instance, the applicant can provide the ration card number and the application software will check the name, address, etc., from the database of the Food & Supplies Department. This can happen only when data exchange is allowed between various databases or data from various databases is compiled at one place for each individual.

> With increase in the number of e-governance services and increased familiarity of people with ICT-based service delivery, both by government as well as private sector, it should be easier to conduct stakeholders' consultation while designing new e-government services. That will not only bring out the correct requirement but also the priority of services to be covered.

Automation of the back-end process plays a crucial role in monitoring application processing and related matters like dissemination of status, maintenance of 'first in first out' (FIFO), etc. If the process is not automated at the back-end, then status updation becomes manual, which then becomes an additional job for officials. This additional job is not a priority for anybody. That leads to incorrect dissemination of information on the status of application, which takes away the transparency of the system as it forces people to physically contact the departments thus providing scope for malpractices.

Part-automation of the process at the back-end has not led to the desired improvement as has been seen in the case of the Passport project. People have to go to the Passport Office even if the application has been submitted electronically as the processing is done manually and only the application can be submitted online followed by a hard copy of the application along with the supporting documents. On the other hand, MCA21 project has shown that full automation of back-end process reduces the contact between the applicant and the government agency drastically.

Keeping the applicant informed of the status of his/her application is one of the important parameters of user satisfaction. Application tracking should be made possible using various means like Internet, landline telephone (IVRS), cellphone (SMS) or call centre to ensure a wider reach. This can be done by having numeric unique acknowledgement number for the applications and by providing computer-telephony interface to the database, which in turn gets updated after completion of a milestone by a process controlled application software. This interface can also be used to proactively interact with applicants using SMS to intimate the status of application, requirement of additional document, or readiness of the agency to deliver the service.

Delivery of service to the customer is the final step which needs to be provided at the right place in the shortest possible time. Most of the services required by people are in the form of paper-based products like land records, birth certificate, etc. For all paper-based products, delivery at applicant's home is the best option to cut down the interface between the user and the government agency. This also helps in verifying the correctness of address shown in application.

Sustained awareness programme on new projects is very important as has been shown by income tax application. A very good project may not take off well if users are not made aware of the same. Also, accessibility to good quality helpdesk makes it easier for people to avail the new ICT-based services.

These are some of the factors which if taken care of, will lead to a higher satisfaction of end users and a higher acceptability of the new system. With increase in the number of e-governance services and increased familiarity of people with ICT-based service delivery, both by government as well as private sector, it should be easier to conduct stakeholders' consultation while designing new e-government services. That will not only bring out the correct requirement but also the priority of services to be covered. Involvement of civil society and conducting consultation in a scientific manner are important to get the best result.

Secondly, quantifiable objectives should be set before the project starts so that the achievements during implementation of the project could be measured against the same. In other words, targets should be set in terms of total processing time, waiting time at the counter, number of trips to be made, cost of transaction, number of hours of availability of service, modes of service delivery, and other such parameters. The final result should be compared with the target set and satisfaction level of users measured on a year-to-year basis to maintain minimum service levels.

e-Registration and the Way Ahead: Work Done in Maharashtra

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This workshop seeks to discuss the systematic assessment studies of citizen impact of e-governance projects relating to land records, registration, and transport across 10 states in the country. This is a wonderful exercise which brings forth the advantages accrued and the gaps that need to be attended to. The study concludes: "Computerized systems seem to have benefited immensely – Number of trips reduced by 1-2 trips, waiting time cut by 20-40 per cent, direct costs cut by Rs. 60-110, reduction in corruption...." However, the study also talks about two major areas of concern.

The first is the "stand-alone" nature of these projects. No state reports the integration of the Revenue Department where land records are maintained, the Survey Department where maps of land parcels are maintained, and the Registration Department where deeds of sale/purchase of land are registered and maintained.

The second important gap highlighted is that these e-governance projects have not led to any significant transformation in the working of the government organizations and processes, which should be the key objective of an e-governance project.

It is in the context of these two significant findings that it is important to talk about the SARITA (e-Registration) project in Maharashtra, its impact on citizens, and the next- generation reforms leading to automatic mutations and cadastral measurements. SARITA worked on restructuring agency processes significantly to give maximum benefit to citizens. Further, the Revenue Department in Maharashtra is now working on the integration of its three wings – records, survey, and registration – at the field level. The documentation of this effort is also relevant because Maharashtra was not covered in this impact assessment study.

> No state reports the integration of the Revenue Department where land records are maintained, the Survey Department where maps of land parcels are maintained, and the Registration Department where deeds of sale/purchase of land are registered and maintained.

SARITA (e-REGISTRATION)

Governance : Governance seems to be the real solution to the problems of low credibility and poor performance in the government. Governance involves providing the most needed services of a good quality at the least cost, with these services being accessible to those who most need them and thereby tries to restore the trust of the citizens in the government. e-governance adds ICT to governance. It is a tool for good governance, and also an excuse for a full review of processes which is the essence of governance. It is with this basic understanding that the Department of Stamps and Registration in Maharashtra was computerized in 2001.

The Department: The Stamps and Registration Department of Maharashtra is a small department with only about 3,000 staff, but a very high citizen interface of 7-8 million per year. It is an efficient department (less than 1% is cost of recovery) and fetches good revenue to the government (Rs. 8,000 crore in 2007-08). But it was plagued with a poor image and extreme client dissatisfaction due to delays, discretion, harassment, and corruption.

The Process of Reform

Problem identification was the crucial first step, carried out by a series of intensive consultation with all the stakeholders. The problem statement that emerged was the foundation of all reforms. The objectives were to create a simple, uniform, consistent, high quality computerized system of registration working on predetermined time standards. What was important was to develop a comprehensive change strategy and implement it.

> e-governance adds ICT to governance. It is a tool for good governance, and also an excuse for a full review of processes which is the essence of governance.

Change Strategy

Cosmetics – The cosmetic changes included standard seating arrangements across the state to have a corporate look, Sub-Registrars brought to the forefront as team-leaders, and a neat-clean-green office look to signify the beginning of change.

Government process reengineering (GPR) –Transformation of the way in which business was transacted for over 150 years in the Department was the most critical factor in the success of the project. This started with defining what constituted a document that was ready for registration to cut discretion, a limit of 24 hours to return the registered document in the manual process, and a written explanation if the registration and return were not done in time. Another important step was to devise a more transparent property valuation table for public usage.

Computerization through PPP –A comprehensive software to cover the entire process was made by C-DAC with a lot of domain input from the Department. The key challenges of cost to government and a low skill set in the departmental staff were met by bringing in a private partner. The partner installed the furniture and hardware in all the offices and provided manpower for data-entry and scanning. The partner was paid out of the service fee charged to citizens and was appointed after a very transparent bidding process. The process was divided into six well-timed steps totaling 30 minutes. If there was a delay in the steps to be carried out by the private partner, a proportionate penalty was auto-calculated and deducted from his payment. If the delay was due to the government staff, the system generated notices and ensured a follow-up action. The system was implemented across all 400 offices in the state in February, 2001, and continues till date.

Impact Assessment

Internal Assessment

Increase in the number of documents by over 20 per cent in the first year signifies the willingness of people to come into the net of a system that delivers on its promise of a "30 minute turnaround time."

- Highly increased citizen satisfaction was noted in the "Remarks book (s)" kept in all offices, letters received, write-ups in newspapers, etc.
- Drastic drop in the number of anti-corruption cases was seen in the Department from almost six every year to less than two.
- Single-trip mission with a 30-minute turnaround guarantee was enforced. This is evident from the fact that delay penalty had to be levied in less than 2 per cent of the documents being registered every year. The adherence to delivery time was the most significant issue in public perception.

ISO 9000:2001 audit: The entire Department was audited and an ISO certificate obtained against the service standards and processes set out in the citizens charter. Follow-up audits done by the external auditor every six months gave similar results.

> e-governance projects have not led to any significant transformation in the working of the government organizations and processes, which should be the key objective of an e-governance project.

External Assessment 1

A user perception survey was conducted by Jonathan Caseley for the India Service Delivery Report, World Bank, 2005. His findings are reported in *Reinventing Service Delivery in an Indian State*: *Reforms at the Department of Registration and Stamps in Maharashtra.* The significant findings for Maharashtra are:

- The number of people who used help (touts) to register their documents dropped to 40 per cent.
- 75 per cent users classified the behaviour of the staff as "polite."
- 93.5 per cent users stated that they did not have to pay extra fees or bribes to register their documents.
- All users surveyed stated that it took under 30 minutes to register and get their documents back, excluding the document preparation time.

External Assessment 2

The report of the World Bank, Reforming Public Services in India, World Bank, 2006, prepared by Vikram K Chand further looks at the SARITA project. Following are the key findings:

- The SARITA project is much more than mere computerization or simplifying transactions. It involves a transformation of the way in which business was being done in the Department with faster and more transparent procedures and new systems of monitoring.
- Clearly, Maharashtra's Stamp & Registration Department has been turned around. The perception of corruption is low; staff is mostly polite; most deeds are registered within the time limit.

Reforms worked because of staff buy-in through consultation, business process changes before computerization, an effective public-private partnership, and the right performance management.

The Next Steps: Automatic Mutations and Cadastral Surveys

Mandate

- One-stop shop for citizens to avail services of registration, land records, and survey departments
- Transparent and speedy process with a service fee to introduce value-for-money concept
- To ensure a 'first in first out' system to cut discretions
- Seamless integration of services to ensure that deed registration is followed immediately and on the spot by recording of mutation and issue of notices for mutation and land measurement for updation of cadastral maps.

Methodology

(a) Location: Registration office is used because buyers and sellers are both present and these offices are already computerized.

(b) SETU centres (CFC) work as the public face of all the three land departments as they are a functioning public-private partnership model.

(c) Software: Registration department database to be used. SARITA software is used with some modifications.

(d) Hardware: One computer with peripherals is provided extra at each Sub-Registrar's office with one data entry operator and a runner to facilitate the manual work between the three departments.

(e) The Process:

- Extra scrutiny sheet is filled up at the time when clients come for registration to capture extra details like names of other stakeholders.
- Unique token number is generated.
- 'Party' (buyer-seller) details are captured from SARITA.
- Fee calculation from SETU Computer goes back to SARITA system for consolidated receipt generation.
- Receipt for registration includes the standard government fees for mutation and land measurement fees for sending mutation and measurement notices by registered post to other landowners and the service fee (Rs. 50) for extra services being provided.
- At the end of registration, mutation notice is autogenerated along with the notices for land measurement and demarcation.
- Since the mutations are recorded on the computerized system, monitoring for timely certification and record updation are ensured.

> The SARITA project is much more than computerization or simplifying transactions. It involves a transformation of the way in which business was being done in the Department with faster and more transparent procedures and new systems of monitoring.

Current Problems in the System

- Not a very sophisticated system.
- Is an immediate mutation system and not on-line mutation. On-line mutation can happen in the next three months with the new SARITA II being developed.
- Cannot generate mutation numbers for places covered by concurrent jurisdiction of two or more subregistrars.
- Has received some resistance from the Survey and Registration Departments.

Citizen Benefits

- Mutation generated at the time of registration.
- Mutation number given.
- Notices issued immediately and served.
- Notices issued to all other parties whose names are in the Record of Right by Registered Post.
- Date for land measurement and demarcation given at that stage itself with notices issued to all the concerned persons.
- Record updation on land record as well as survey site facilitated.
- No need for citizens to approach any other government office or functionary.
- FIFO ensured to cut down delay, harassment, and corruption.

Impact Assessment

The system was tried out in one circle office comprising eight villages for about three months for a proof of concept and to work out user charges as it had to be done on a PPP model. Subsequently, the results were presented to the government and an approval for charging a user fees of Rs. 50 per transaction was taken. The system was then implemented in 38 Sub-Registrars' offices in Pune division covering 190 Circle offices (each covering 8-10 villages) and about 40,000 mutations were successfully generated.

The third party impact assessment was carried out through interviews and exit interviews of all the stakeholders including the citizens.

Results

The results have been excellent with very high citizen satisfaction, willingness to pay even higher fees, and the database being seen as benefit by all government departments. Feedback has been received for further modifications that are being incorporated in the next versions.

The Future

The future lies in a complete and seamless integration of the land records, survey, and registration departments to move as close to the Torrens system as possible. The record of right documents must contain the map of the land in addition to area, crop, encumbrances, and ownership details. Backward linkage on the registration system would enable the RoR information of the land to be displayed the moment the land number is entered for the registration process. This would act as a check against fraudulent transactions. Forward linkages would ensure online mutation recording the moment the document is registered. On-the-spot initiation of the measurement process would ensure that the cadastral maps are also always updated.

The Revenue Department in Maharashtra is currently working in this direction. A committee has been constituted for planning and implementation. The software which is the new version of SARITA is being written by the NIC. The Registration Department has initiated a bidding process to get new partners with a new hardware and to work on the new software. Hardware is being provided to the Survey and Land Records Departments so that all three are ready at the same time to take the next step, TOGETHER.

e-Governance and Corruption: The RTO, Ahmedabad Story

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A lot of discussion has taken place on e-governance initiatives in various state governments. It is considered to be a panacea of all evils. While many e-governance projects have met with huge success and have changed the experience of citizens, a large number of projects are running short of expectation.

While the findings of the study on e-governance are very interesting and significant, I would like to throw some more light on them, based on my personal experience at RTO Ahmedabad. The main learning from my experience is as follows:

> It is a popular belief that government employees are corrupt. The experience at RTO Ahmedabad shows that corruption is employer-independent. Given a chance, employees in the private sector are equally corrupt.

Computerization alone does not improve services unless capacity is enhanced

- Between October 24, 2008 and November 25, 2008, I made four visits to RTO Ahmedabad to get myself photographed for the issue of driving license. Out of them, two visits were made on November 25, 2008. Paperwork was complete and photography was the only activity remaining. On each occasion, I found at least 150-200 people in queue, waiting for their turn to be photographed and agents actively offering their services in lieu of a certain amount. Agents call it a VIP service wherein the citizen may get his/her work done in 10-15 minutes on payment of certain (unofficial) charges.
- The question then is: Why is there such a large queue for photo-shoot? The answer is quite simple. There are two persons for taking photographs. If each camera takes three minutes per applicant, then the total capacity of the system is 60 applicants per hour. This results in a capacity of 540 persons per day (assuming nine hours work per day). Allowing for the idle time, the capacity will get further reduced. One needs to ask, 'Is the capacity enough to serve a large number of people who visit RTO everyday?' A computer with web-camera costs not more than Rs. 25,000. Why RTO does not open eight to ten additional windows to facilitate smooth photography of the applicants?
- A sample of observations made at the RTO office shows that between 8.30 a.m. and 9.00 a.m., on an average, around 50 persons collect token numbers and stand in the queue. Similar arrival rate of 50 persons in half-an-hour was observed up to 11.00 a.m. After 11.00 a.m., the arrival rate drops to 50 persons per hour which goes on till the token window closes down at 4.00 p.m. With a capacity of the RTO office to handle 60 persons per hour, it is obvious that throughout the day, there would be long queues for obtaining smart card.

The available capacity can be managed better

As RTO Ahmedabad works on first-come-first-serve basis, applicants consider it worthwhile to arrive as early as possible to stand in the queue to get photographed. The queue starts building up by 08:30 in the morning. When the RTO officials are aware of the capacity of the system (say, 60 per hour), would it not be a better proposition to give an approximate time to each applicant in advance (as it has been introduced by the Regional Passport Office)? This will save the valuable time of so many applicants. Assuming that each applicant earns at least a minimum wage per day, it would save at least Rs. 50 per applicant which may result in a savings of Rs. 25,000 per day (assuming 500 applicants per day).

> Rent-seeking behaviour is a result of lack of capacity and infrastructure, and therefore, once the infrastructure is built, corruption will reduce as a natural consequence.

Anti-corruption drives may result in more corruption

During my third visit, I found that the agents were a little more discrete in attracting customers and that their charges had increased compared to the previous visits. The reason given for the increase was strange. As a result of a tiff between the agents and the security guards, the latter were instructed to strictly follow the rules. A new step was added whereby each applicant was given a token number. The same sequence was to be followed while getting oneself photographed. As it was more difficult now to get it done out-of-turn, the agents increased their fees accordingly. I should, however, give due credit to such drive due to which overall the number of applicants who jumped the queue by paying extra money has reduced. Thus, although the overall performance has improved, yet much better results can be achieved.

Privatization is not the panacea for corruption

Photo-smart card at RTO Ahmedabad is an outsourced service. It is a popular belief that government employees are corrupt. The experience at RTO Ahmedabad shows that corruption is employer-independent. Given a chance, employees in private sector are equally corrupt. Rent-seeking behaviour is a result of lack of capacity and infrastructure, and therefore, once the infrastructure is built, corruption will reduce as a natural consequence.

Issues in the Design of Training Programmes on e-Governance

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The impact that an e-governance initiative can make depends very much on not only the relevance of the initiative, but also the capabilities of the officers who are involved with the initiative during the various phases of its life cycle. While training programmes wholly devoted to e-governance, particularly aimed at the higher levels of government, are not very common, exposure to e-governance concepts is given often as part of other government training programmes. While there have been some isolated efforts at offering programmes entirely devoted to training top level government officials in the field of e-governance, there is no systematic study related to their impact assessment and on how to improve and roll them out in different parts of the country. I would highlight some drawbacks in the existing training programmes on e-governance and derive conclusions for their improvement. The views expressed are based on my experience in coordinating training programmes on planning and implementation of e-governance, and in participating in workshops on capacity building for the same. Some of the observations apply, not only to e-governance training, but to management training programmes in general.

Requirements Specification

In designing the syllabus of programmes on e-governance, one of the following strategies is found to be adopted:

- The programme faculty, based on their experience in conducting similar programmes in other domains, decide the objectives, topics to be covered, and the target audience.
- A representative of the government interacts with the faculty to help them decide the content of the programme to suit the type of participants likely to be sponsored for it.
- The group of faculty meets with a sample of the participants likely to attend the programme, and shares with them its first cut design. The participants in turn give their feedback on the preliminary design, which the faculty take into account while finalizing the list of topics to be covered by the programme.
- A group of experts from various organizations offering training work together to develop the overall outline of such a programme in a workshop.

The above approaches are necessitated because of the following practical limitations that the designers of training programmes in this area encounter:

- The complete list of participants is difficult to know much in advance
- Even if a few participants are known to have been nominated well in advance, the participants may not be able to articulate their needs and translate them into a list of topics to be covered during the training.

An ideal way of designing such a programme would be to base the design on a study of the skill sets needed by the different levels of government officials working in planning, implementing, and managing e-governance systems. For this purpose, a sample of e-governance projects could be chosen, and the activities performed by the people involved with them at various levels and during the different phases of their life cycle could be studied. The study could be conducted through group discussions, structured interviews, and direct observation of operations. The activities performed by the officials can then be mapped into skill sets, and the skill sets into training topics. The two main advantages of this method are: first, the approach is more objective and rigorous than the other existing practices; second, several different programmes for different levels of management could be simultaneously designed with the above approach. The disadvantage is that the method requires more resources than the existing methods.

> The impact that an e-governance initiative can make depends very much on not only the relevance of the initiative, but also the capabilities of the officers who are involved with the initiative during the various phases of its life cycle.

Selection of Participants

The method adopted in selecting participants in e-governance training programmes consists of announcing the programme objectives and outline of contents through a public advertisment, or through a notice circulated to the various government departments. The applicants send in their applications at their own initiative or based on the advice of their respective heads of the departments. The programme participants are short-listed from the applicant pool, based on an interview or a review of the applications submitted. Following are the major lacunae in this process:

- The desired applicant profile is not well-defined in the announcement inviting nominations/applications. Phrases such as 'senior officers with a strong interest in e-governance' do not help much in getting the right candidate for a programme.
- Even if the 'who should apply' section in a programme brochure is well-defined, the nominating authorities may not take it seriously, and might nominate a wrong candidate, simply because she or he is 'available.' Sometimes, a department does not respond to such a notice either because its head does not see any immediate need for e-government skills for her/his department or because she/he lacks an adequate understanding or appreciation for such training.
- Even the interviewing process for the final selection may not yield the desired results, because the officer in charge of selection might be governed by considerations like obtaining a certain targeted number of participants, or achieving a balance between participants belonging to different departments.

Such a process might end up selecting a participant mix, which is too heterogenous for effectively conducting the programme. Further, the objective of the seleced applicants might be totally incompatible with the objectives of the programme.

Some programmes admit a participant only if she/he has a designated role in an ongoing e-governance initiative. This practice certainly overcomes the problems mentioned above. However, in the government sector, even if an officer is currently working on an e-governance initiative, there is no guarantee that she/he will not be transferred suddenly to some area or project which does not have anything to do with e-governance. Thus, defining the desired participant profile sharply and for the selectors to obtain the right set of participants remain a challenge for the programme designers.

Lack of Trainers

It is far easier to teach structured topics than the unstructured ones. Further, it is easier to find trainers for structured topics than for the unstructured ones. For example, there are more programmes available on topics like database management and HTML than on leadership and change management. This poses a special problem for e-governance programmes aimed at higher levels of management such as secretaries of departments, because such high level officers are concerned with unstructured topics like identification of opportunities for e-governance, analysis of stakeholder needs, government process redesign, cost-benefit analysis of proposed computer applications, managerial communication, change management, and negotiation. It is often stated that e-governance is more about governance than about 'e'. If trainers for higher levels of management in this area are not easily available, the organizers can solve the problem by using unconventional methods like remote instruction with the help of video-conferencing technology.

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Commitment of Participants and their Sponsors

Lack of commitment to participate in a training programme on the part of a participant or her/his department manifests itself in several different ways:

- A participant is frequently disturbed during the programme by requests from her/his department for handling some urgent work, for which nobody else in the department is considered suitable.
- A participant discontinues from the programme for a variety of reasons like finding an opportunity to go for an important conference or coming across another rare and attractive prospect for career advancement.
- The department does not supply the data that the participant wants for the course project.
- A participant takes interest only in the topics that are directly relevant to his/her present work, and is indifferent to topics whose immediate relevance is not apparent.

Such incidents and inconsistencies in priorities in the same government arise because of the misalignment among the objectives of the different governmental hierarchies, multiple objectives governing their actions, diffused responsibilities, and the sheer enormity and complexity of the government itself. Institution of a reward and penalty system is not a satisfactory solution for the commitment problem mentioned above. The objective behind a training programme and the seriousness required to conduct it should be appropriately communicated to all relevant levels in the government. A close monitoring of the programme to spot the problem areas by the concerned officials also helps improve the system significantly.

> When the participant group does not have the required homogeneity and is not adequately motivated, and when there is a strong dissonance between the objectives of the programme and those of the participants, the delivery of the programme loses its focus.

Involvement of Heads of Departments

A general complaint about e-governance programmes is that a participant, upon completion of the programme, does not necessarily get to work on an e-governance project. In several cases, the concerned head of the department does not have any clue about the skills imparted to a participant of such a programme, and is therefore not clear as to what to expect from her/him. A partial solution to this problem would be to train all levels of officers in a department, including the head of the department. The kind of programme offered to a head of the department need not be as exhaustive as that offered to a junior officer at the next level. Such programmes should be pitched at an appreciation level, and should not be of a very long duration.

Conclusion

If the above problems are not sorted out suitably, a training programme on e-governance may tend to be suboptimal in its effectiveness and impact. When the participant group does not have the required homogeneity and is not adequately motivated, and when there is a strong dissonance between the objectives of the programme and those of the participants, the delivery of the programme loses its focus. In trying to cater to the needs of a diverse group of participants, the programme may not satisfy anybody, and might turn out to be superficial and ineffective. It is therefore imperative for designers of such programmes to base their design on a comprehensive understanding of the needs of the target group, and to choose other programme parameters accordingly.

Learning for Future Implementation of e-governance

Subhash Bhatnagar

This study has several implications for future implementation of e-government initiatives in the country. Most projects covered in this study have not led to any significant transformation in the working of government organizations and processes which should be the key objective of an e-government project. In many of the projects, even simple process reforms such as simplification and rationalization of forms, putting in place an appointment and queue management system, post-inspection instead of pre-inspection, automated workflow enforcing a first-come first-serve discipline, and documenting the submission of an application and reasons in case the application is rejected, have not been undertaken. The quality of design and process reform in these systems can partly be attributed to the objective and the approach underlying the initiative—whether the focus is on back-end computerization or delivery of value to citizens.

In order for a system to deliver significant value to all its stakeholders, it is important to involve stakeholders in the design of the application. Data on attributes of service delivery that were considered important by the users of each project indicates that users' perception of what is important varies with projects and states.

In order for a system to deliver significant value to all its stakeholders, it is important to involve stakeholders in the design of the application. Data on attributes of service delivery that were considered important by the users of each project indicates that users' perception of what is important varies with projects and states. Baseline surveys can help agencies understand such attributes. This can enable sharper targeting of benefits that can be delivered, and the required features or process reforms can then be incorporated in the design of the e-government project. Computerized service delivery in India is in the early stages of evolution. For example, in most states, land record computerization has been limited to the issue of RTC. Mutation, which is a more complex process, has been computerized in just five states. No state in India has integrated the functioning of three related agencies—revenue department where land records are maintained, survey department where maps of land parcels are maintained, and registration department where deeds of sale/purchase of land are registered and maintained. Similarly, though all the three national projects provide services through portals (unlike the state level projects where the mode of service delivery is mostly assisted service centres), MCA21 is the only one that provides end-to-end online delivery of all its services.

Even basic computerized delivery has not reached the entire population in the twelve states covered by the study. In most of the states, computerized delivery has not reached beyond the *taluka* level. In half the states, half the districts still operate the services in a manual mode. There is a long way to go even in the case of the three services covered by this study – expanding e-services to 15 other states where very little has happened so far and covering all the districts and taking services to sub-*taluka* levels in the twelve states chosen for the study. Despite the limited computerization that has been achieved, results show that perceptible benefits have been delivered to citizens. This indicates the need for expanding the coverage of computerized service delivery and expediting the implementation of e-governance.

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The number of trips required for availing service is abnormally high in a few states. Often information about the required documents is not publicized well. Users need to make a trip to the agency just to determine the requirements. In some states, the number of supporting documents that are required to avail a service has not been cut down after computerization. For example, in the case of property registration in Orissa, several documents are required as proof of ownership of a property that is being transferred whereas in other states this requirement has been trimmed. There has to be a balance between ensuring that a system prevents fraudulent transactions and the burden that extensive checks can take place on people who are honest. At times users make unnecessary trips as they are unable to get their work done on a given day because of long queues. Whenever there is a mismatch in demand for service and capacity to handle the service request, the system of orderly queues breaks down. This can also happen because of equipment breakdown. Very often, there is no specified order in which service requests should be processed. Such opportunities are used by touts to get work done by paying speed money. In other cases, functionaries have unnecessary discretion to delay or deny a service without assigning a reason. They abuse their discretion in all these cases to seek rent.

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One of the objectives of creating a portal (as has been done in the national projects) is to simplify the process to an extent that individuals can access the service themselves without seeking assistance from intermediaries. In income tax and passport, users have the choice to use the manual channel or the portal. Both these agencies have not been able to encourage a significant proportion of individual users to use online services because the perceived benefits for individual users of online services are marginal. Greater efforts are needed to make large number of users aware about the new mode of delivery and the manner in which it can be used. However, awareness can only help to bring users to that service delivery channel once. It cannot guarantee sustained use of the system unless the system is also designed in such a way as to deliver satisfactory outcome. Procedures need to be simplified to deliver concrete benefits and clear guidelines should be provided to encourage their use by the actual end users and reduce users' dependence on middlemen/ intermediaries.

A large difference is seen in the performance of the best and the worst state in case of each of the three computerized applications. A wide variation in the impact on users is also seen across the three national projects. In both cases, variation is on account of differences in the extent of computerization and the process reform undertaken in implementing these systems. Given the fact that the processing steps in the delivery of the three services can be very similar across states, it can be concluded that each state has chosen to design its application without learning from best practices elsewhere. Future projects need to be conceptualized and designed more holistically, offering end-to-end online services, duly emphasizing process reforms and incorporating learning from good practices elsewhere.

None of the assessed projects had made any kind of baseline assessment of the existing manual system before replacing it with a computerized system. The study underscores the importance of conducting baseline surveys of users of the existing system before conceptualizing a new system to replace it. Client focus can be sharpened by assessing the service delivery performance of an existing system through dipstick surveys or assessment studies such as this one. The format for a detailed project report should specifically contain a section on discussing concrete value that is expected to be delivered to different types of users, based on the framework used for the assessment reported here. The results of this study can be used as a benchmark for future projects to target benefits that will at least equal the best amongst the surveyed projects.

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The exercise of assessing impact should not be seen as a one-time activity. Every project that has reached a mature state of service delivery must constantly be monitored and subjected to assessment such that it can be further improved and evolved to deliver greater benefit. It must also be kept in mind that since national projects are likely to be unique in terms of services delivered, geographical scale and scope, targeted beneficiaries etc., the attributes of a delivery system that are perceived to be important by the users should be understood prior to the conduct of an assessment.

In the first phase of impact assessment, it was important to understand and establish the extent of impact of e-government projects. In the next stage, it is necessary to understand the reasons for impact or non-impact of these projects. Future assessments can attempt to do this through follow-up studies of successful and not-so-successful projects. This understanding will help to conceptualize and design future projects in such a way as to harness the full potential of technology, process reform, and integration of data across the concerned agencies.

*Once a new **technology** rolls over you, if you're not part of the steamroller, you're part of the road.*

— Stewart Brand